



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

**APEC Economic
Policy Report 2016
Annex A**

APEC Economic Policy Report Case Study

China: Structural Reform in the Retail Services Sector

INTRODUCTION: OBJECTIVES AND METHODOLOGY

The study documents and assesses the process and impact of structural reform in the retail services sector in China and the flow on effects into other goods and services sectors and across the entire economy. The structural reforms involved were initially policy-driven as a result of market-opening commitments on China's accession to the WTO. Commencing in an experimental manner in 1992 and phased in fully after WTO accession in 2001, these reforms centred on opening up to commercial presence of foreign retailers.

The reforms had far reaching impacts of various kinds not only on local small and medium-sized retailers (SMEs) but also on growth and employment across the retail sector more generally. Major effects were experienced by SME goods suppliers accessing the new and increasingly efficient domestic business-to-business (B2B) supply chains for produce of all kinds into the retail sector. Chinese consumers also benefitted by way of greater choice of consumer goods at lower prices, in wider geographic regions, with more attractive embedded services and higher product quality.

The story does not end there. Ongoing radical structural reform in the retail sector is underway everywhere in the world as consumers increasingly shift from "bricks and mortar" towards online electronic retail (e-tail) platforms. While e-tail has a higher penetration rate in some other APEC members, the sheer number and rapid increase of Chinese consumers gives special significance to this transition to electronic commerce (e-commerce) in China, Chinese online services providers such as Alibaba are rapidly proving highly competitive not only in China but in the global markets. In this very dynamic traditionally business-to-consumer (B2C) sector, other disruptive technologies such as the sharing economy, consumer-to-consumer (C2C) transactions and 3D printing (3DP) are already presenting additional challenges impacting on the retail value chain, generating both threats and new opportunities for services providers. This ongoing technology-driven structural change presents new regulatory challenges of its own, and is driving major new flow-on effects in other sectors such as financial services (especially electronic and mobile payments systems) and transportation. Unlike traditional retail, which is focused on goods transactions, e-tail involves transactions in both goods and services - and a wider variety of potential regulatory rethink.

The study points to some successful strategies in sequencing and managing policy and regulatory reform in the retail sector over a period which has seen China both open up to the rest of the world, reconsider its regulatory approach in the face of technological transformation, and respond in new ways to take advantage of emerging domestic and global market opportunities. Consideration is given to potential next steps in the reform process against the background of intensifying technological change and its evolving impact on business models in the distribution services sector.

Methodological elements include value chain mapping as a means to help identify the backward and forward flow of regulatory reform impacts across many sectors of the economy. Quantitative analysis is based on sectoral and firm level data from China's national accounts, OECD/WTO Trade in Value-Added (TiVA) data, and the OECD and World Bank Services Trade Restrictiveness Indices (STRI).

1. GLOBAL TRENDS IN RETAILING

1.1. TRADITIONAL ROLE OF RETAIL

Distribution services are a dynamic high value-added downstream activity, occupying - in value chain terms - a strategic position along the pathway to market, connecting goods and services to final consumers. In what has traditionally been a B2C market, virtually every good makes its way through distributors; wholesalers, retailers, commissioned agents and franchisers who provide the domestic infrastructure for reaching final consumers.

Figure 1.1.1: Traditional Retail Value Chain



The value added in the distribution stages can greatly exceed the value added in production; the value created in distribution accounts for example for 70 percent of the total value for textiles and over 75 percent for food products, according to UNCTAD¹. A well-developed efficient retailing system supports the welfare of all economies through, inter alia lower consumer prices and greater choice and availability of products.

In some economies, including a number of developing economies in the APEC region, retail is the largest industry in terms of both share of output and employment. Even for OECD economies, studies in the 1990s suggest the sector accounts typically for around 13-17 percent of employment, 25-30 percent of business activity and 8-17 percent of GDP. Within distribution, the bulk of these contributions come from retail rather than wholesale.²

Once a sector comprised typically only of SMEs, dependent on their suppliers, the retailing sector has seen, since the 1990s, a rapid process of market concentration, as well as vertical integration of wholesale and retail, resulting in retailers now figuring among the largest national firms (Walmart, Carrefour, Tesco, Aldi etc.). Even though the role of modern retail increases as economies develop, SMEs retain nevertheless an important role.

The recent concentration experienced in the sector globally, plus a progressive expansion of retailers' own-label products, has significantly shifted the balance of power in consumer goods distribution from the supplier to the retail chain. Add to this the innovation associated with IT-enabled retail systems, and retailers have emerged as the lead firms in increasingly "buyer-driven" supply chains. Integrated logistics and supply chain management methods have also enabled the adoption of "just-in-time" demand-pull supply systems - systems which have linked reordering with real-time purchases. This has enabled the adoption of "lean retailing" practices, allowing big reductions in inventory holdings and in the capital tied up in those holdings.

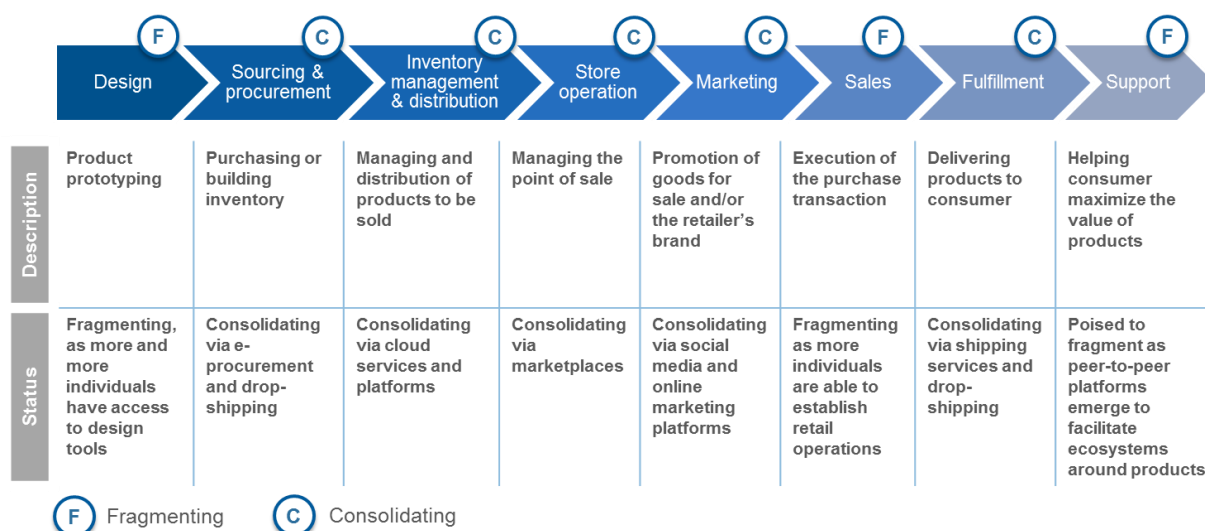
¹ UNCTAD, 2013, Global Value Chains and Development; Investment and Value-added Trade in the Global Economy, Geneva

² See for example OECD, 2000 Employment Outlook, Paris

These various developments have led to what is generally called Modern Retailing or Organised Retailing, in which order acquisition, order execution, promotions and launches, transport and payment processes are all done very differently from the way they are handled by the traditional “mom and pop” stores. Figure 1.1.2 highlights the growing importance in many stages of the transforming retail value chain of telecommunications and ICT services.

Figure 1.1.2: Evolution of the Modern Retail Value Chain

The traditional retail value chain – consolidation and fragmentation



1.2. INTERNATIONALIZATION OF RETAIL

From the mid-1990s, the transformed modern retail firms of a small number of OECD economies began a period of sustained international activity – as exporters of retail expertise, chiefly via mode 3 (commercial presence) but also via mode 1, in particular franchising.³ The late 1990s saw a rapid increase in retail FDI, largely by European and US retailers and primarily into East Asia, Latin America and Central and Eastern Europe.

By the late 2000s, multinational retailing had become substantial; 8 of the world’s top 15 retailers derived over 50 percent of their sales outside their home economy and on average they traded in 18 different host markets, with several leading firms operating in as many as 30.

Within retail, it is food and fast moving consumer goods that account for the biggest sales. And it is the retailers of these items, loosely described as “grocery” that are also leading the globalisation push. If leading global retailers are ranked on the basis of their annual international sales (rather than on total annual sales), then by 2008, all but one of the top 10 largest retailers were “grocery” retailers – the exception being Ikea. After the “grocers” come the specialty “hardline and leisure” retailers (1/3 of the top 20) and then the home improvement, office, toys and electronics retailers (56 of the top 250 retailers). Next come the “fashion goods” retailers; despite being the group with the highest percentage earnings from global activity,

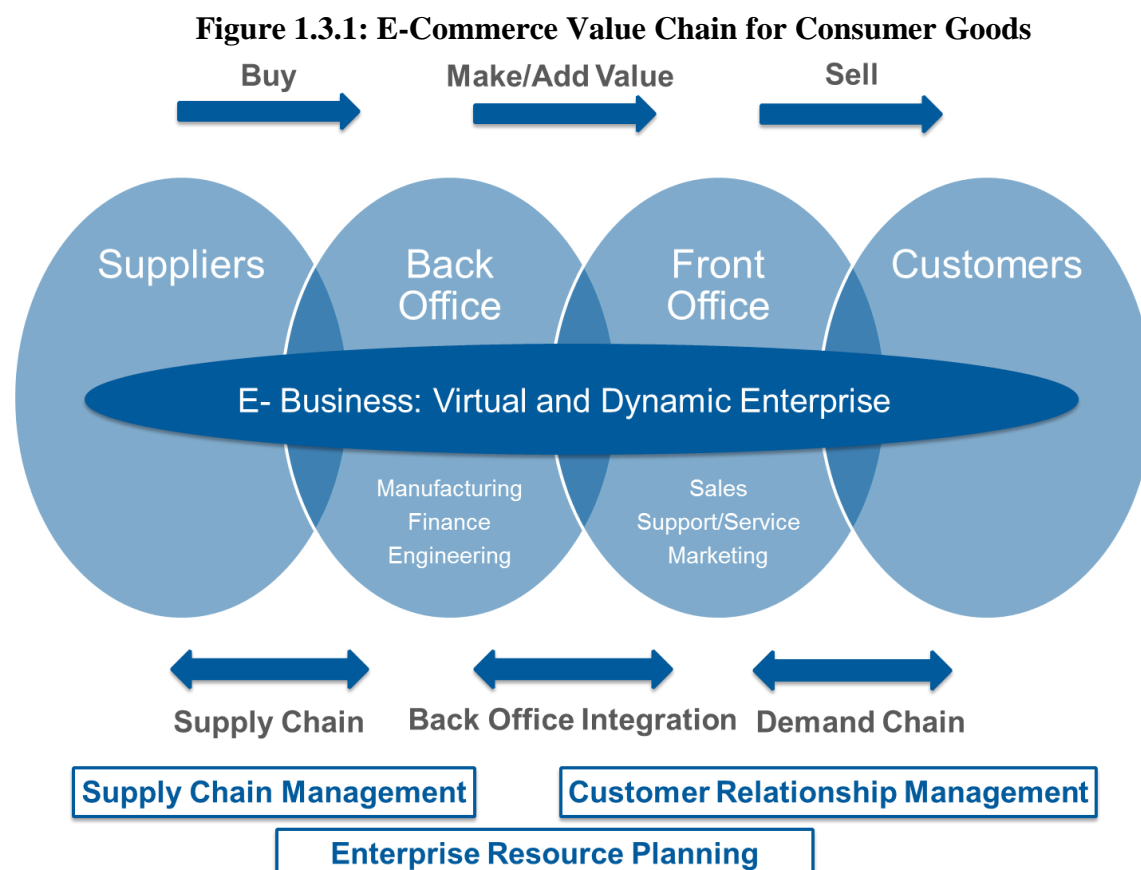
³ Franchising is generally considered as Mode 1 (cross-border) supply of services rather than Mode 3 (commercial presence) because it involves no investment of capital by the foreign franchisor but rather a cross-border (electronic) provision of brand and associated business model and technology.

none of these, not even LVMH, H&M etc., have sufficiently large international sales to put them in the top 20 group.

One study (Dawson 2007) which looked at the top global 100 retailers, showed the average number of economies in which they operate has increased from 2.8 in 1986 to 5.5 in 1996 and 10 in 2004. A study of Deloitte’s largest 250 retailers, showed that in 2005, international sales accounted for less than 15 percent of total sales; by 2008 this had increased to 23 percent. The globalisation process has also seen the emergence of some large transnationals which in addition to expanding their network of stores in emerging markets, have also put into place extensive networks of regional and global sourcing.

1.3. FROM RETAIL TO E-TAIL

Ongoing radical structural reform in the retail sector is underway in all parts of the world as consumers increasingly shift from “bricks and mortar” towards online “e-tail” platforms and “omni-channel” retail. Market research firm eMarketer projects e-commerce sales to exceed USD3.5 trillion within the next five years. The web accounted for more than 7 percent of global retail sales in 2015 and is expected to grow beyond 12 percent by 2019. According to eMarketer, the fast-growing Asia-Pacific market fueled a 25 percent year-over-year increase in global e-commerce in 2015. Much of that growth is sourced from consumers in rural areas making online purchases from mobile phones. This is discussed in detail in the next section. The essential point to note here is the associated dramatic shift in the nature of and extent of new players in the e-tail value chain.



1.4. POTENTIAL DISRUPTION FROM 3D PRINTING

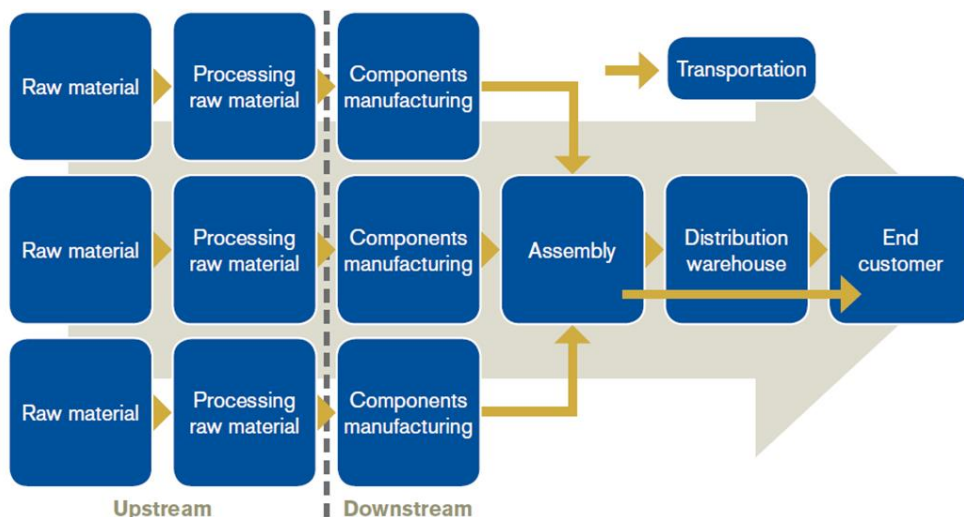
3D printing (3DP) is potentially highly disruptive of both traditional retail as well as e-tail of consumer goods. 3DP is a technology that builds physical objects directly from 3D computer-aided design (CAD) data and adds different materials, layer-by-layer, with the help of a 3D printer. With 3DP certain stages of manufacturing are bundled into one and certain transportation of goods is replaced by transmission of data.

In 3DP, the creation and transfer of the CAD-file is the essential component and the main difference between 3DP and traditional manufacturing. There are almost no economies of scale so complexity is almost cost-free. The cost-advantage of manufacturing large quantities is removed and allows for profitable printing of smaller numbers. Additionally, the cost-disadvantage of making complex goods is reduced as 3DP makes it almost as easy to design complex items as it is simple ones. These features allow for moving manufacturing (printing) closer to the consumer (near-shoring) and for more adaption to the individual’s needs.

3DP changes the production process by removing the need for intermediate goods beyond the “ink” and by allowing manufacturing to move closer to consumers. Intermediate goods are replaced by CAD-files, hereby adding a central digital input (a service) to the process. The goods components of consumer goods value chains are likely to be made shorter; the services components however might become much longer? Business interviews conducted with Li and Fung Ltd in Hong Kong, China suggest that one consequence is that the large scale retailers will outsource the design stage rather than the making or manufacturing stage in the procurement of merchandise.

3DP will therefore allow for new companies, to enter the value chain. This includes SME designers of CAD-files and companies running platforms where these files are created and traded and new producers (that start producing goods on a small scale for niche markets). Different types of firms are already emerging, such as print shops and “FabLabs”, where customers can have items developed and printed. On the input side, new “ink” producers are also emerging. Figures 1.4.1 to 1.4.3 illustrate the likely evolution of the value chain.

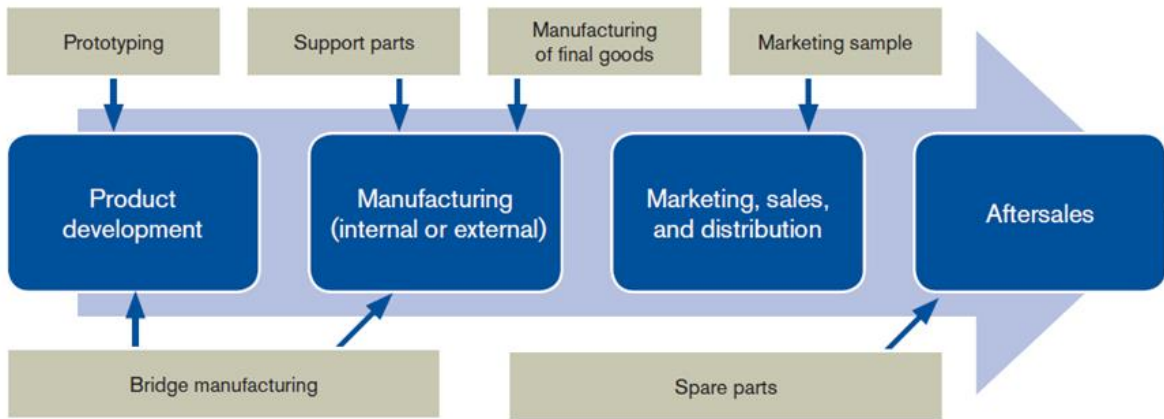
Figure 1.4.1: Traditional simplified manufacturing value chain, pre 3DP



Note: From assembly the product can be distributed directly to end customer or more commonly to the customer via distribution centres.
 Source and Graphics: National Board of Trade Sweden

Source: Swedish National Board of Trade “Trade Regulations in a 3D printed World”

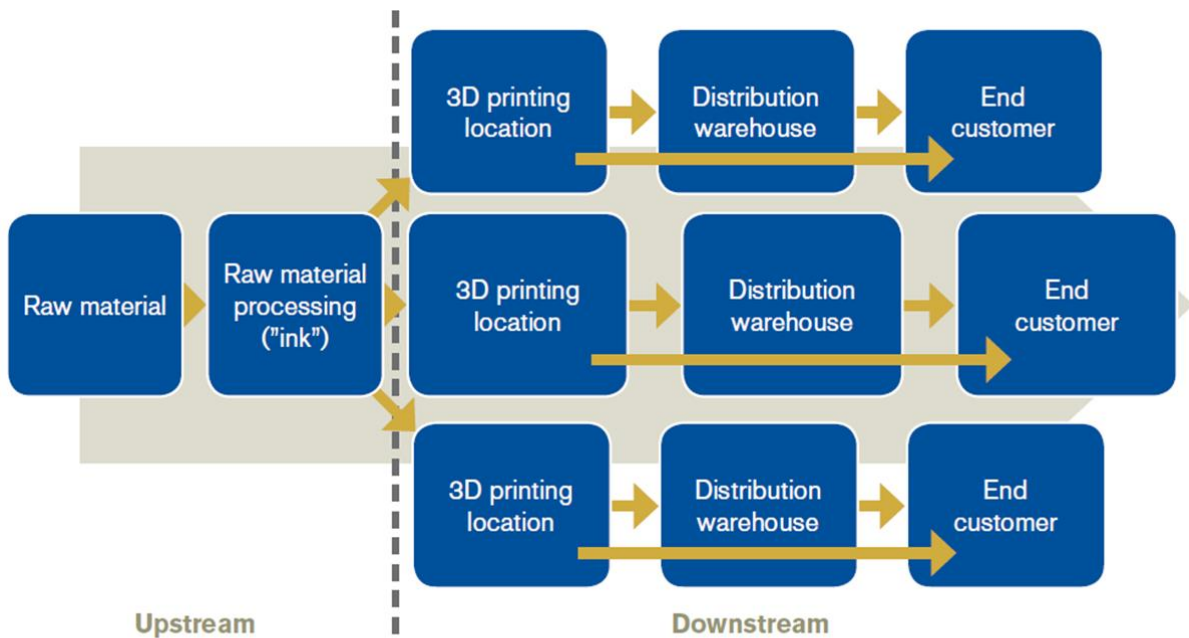
Figure 1.4.2: Insertion of 3DP into the goods production chain



Source: Additively.com Graphics: National Board of Trade Sweden

Source: Swedish National Board of Trade “Trade Regulations in a 3D printed World”

Figure 1.4.3: Mapping the new 3D printed goods value chains



Note: From 3D printing location, the printed good can be shipped directly to end customer or via distribution centre.

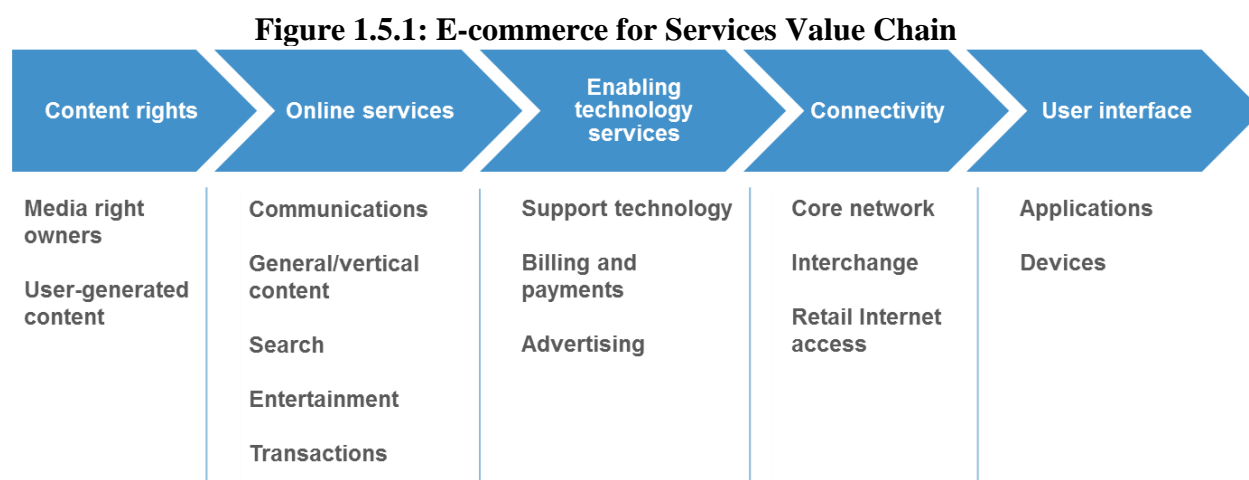
Source and Graphics: National Board of Trade Sweden

Source: Swedish National Board of Trade “Trade Regulations in a 3D printed World”

Another anticipated consequence is that by 2025 there will be much reduced cross-border trade in goods. This means a significant alteration in the cross-border components of the retail value chain is likely to take place. Numerous domestic regulatory challenges are likely to arise, including with respect to the interpretation of the borderline between what is a good and a service under the WTO.

1.5. E-COMMERCE, INCLUDING CROSS-BORDER, FOR SERVICES

As is the case for all trade in services, measurement of cross-border e-commerce in services is problematic. And the need or not for regulation is another hot topic. The point to note here is simply that the value chain again is morphing, and new corporate players are participating. Figure 1.5.1 illustrates the nature of the evolving value chain.



1.6. BARRIERS TO TRADE IN RETAIL

Globalisation has not been without its challenges. Trade barriers exist in the retail and other distribution sector and these have been prevalent in all parts of the world: typical barriers are listed in Box 1. In some cases, local industry and consumer stakeholders have lobbied governments to retain these barriers chiefly due to concerns about increased imports of goods from foreign suppliers into the local retail supply chains.

Box 1: Typical barriers to trade in retail and other distribution services

- restrictions on investment in certain sectors or with respect to certain goods or services;
- foreign ownership caps;
- limitations on ownership, location, and store size;
- limitations related to special sales, prices, and operating hours;
- burdensome authorization/licensing procedures, discriminatory inspections;
- lack of transparency with regard to rule of law; and economic needs tests.

In general, global experience is that despite the penetration from global retailers, including their success in progressing from urban niches of predominantly relatively wealthy consumers to smaller cities and rural towns and to serving the relatively poorer consumer, and despite their success in adapting and broadening their product range even into fresh food, the reality is that while the traditional/informal sector has been squeezed, the process of opening up to modernisation of the sector has not meant loss of all national retailers.

On the contrary, global firms rarely dominate the local market in any of the emerging markets. This is only partly the result of regulatory intervention. Indigenous retailers have been successful in emulating imported innovations and best practices and strong resistance has been

shown by the informal retail channels which retain their popularity, including wet markets and street markets.

The global giants are also under pressure from the next tier of globalised retailers which perhaps have greater cultural “embeddedness” and institutional familiarity or deeper experience with local real estate and land-use zoning practices, enabling them to expand their regional footprint; for example firms like Shoprite or DairyFarm.

The huge recent growth of cross-border e-commerce platforms has further radically altered the nature of trade in retail services.

On-line web-based retail and payments platforms such as eBay and PayPal have opened up major new export opportunities for SME retailers, who benefit from the removal of the “middleman”. Of the firms doing business on eBay – many with fewer than 5 employees – 97 percent of those with more than USD10,000 in annual sales sell their goods internationally. Ebay estimates that if the logistics costs associated with order fulfilment were reduced, SMEs could experience a 60-80 percent increase in cross-border e-commerce sales, equivalent to a USD4.8 to US6.4 billion in trade.⁴

Larger retailers have their own websites, but also use platforms such as eBay. Multi-channel retailing (“bricks and clicks”) seems to be the route that even the largest global retailers now prefer to take. This makes sense, as consumers clearly prefer choice. Some business stakeholders also claim however that multi-channel retailing is partly a business response to barriers to trade imposed on retailers, a way of hedging against different forms of protection.

Indeed the list of trade barriers to e-tail differs significantly from that set out in Box 1 with respect to retail. In essence this is due to the evolution described above in the retail value chain and the need to take new components of the value chain into account. Naturally the list of barriers needs to include a variety of additional elements in relation to the functioning and regulation of the local internet economy which impact on the manner in which foreign retailers can enter and participate in the various aspects of the e-tail market. This includes all kinds of restrictions affecting both retailer and consumer access to search engines, to e-commerce platforms, to e-payment and m-payment systems as well as restrictions affecting digital content and freedom of data flows. The list also needs to be expanded to restrictions impacting on transport and logistics which similarly can have the effect of limiting foreign access to the e-tail market.

One thing that is quite clear is that online platforms for international e-commerce are now here to stay. And Asia has become a market leader. In the global market, Alibaba for example is now larger than both Amazon and eBay combined. New opportunities for SMEs are arising, as consumer uptake of e-commerce continues to disrupt traditional retail. Business pressure for further market opening is therefore strong.

⁴ World Economic Forum (in collaboration with Bain & Company and the World Bank). 2013. Enabling Trade: Valuing Growth Opportunities, Geneva. Chapter 33.

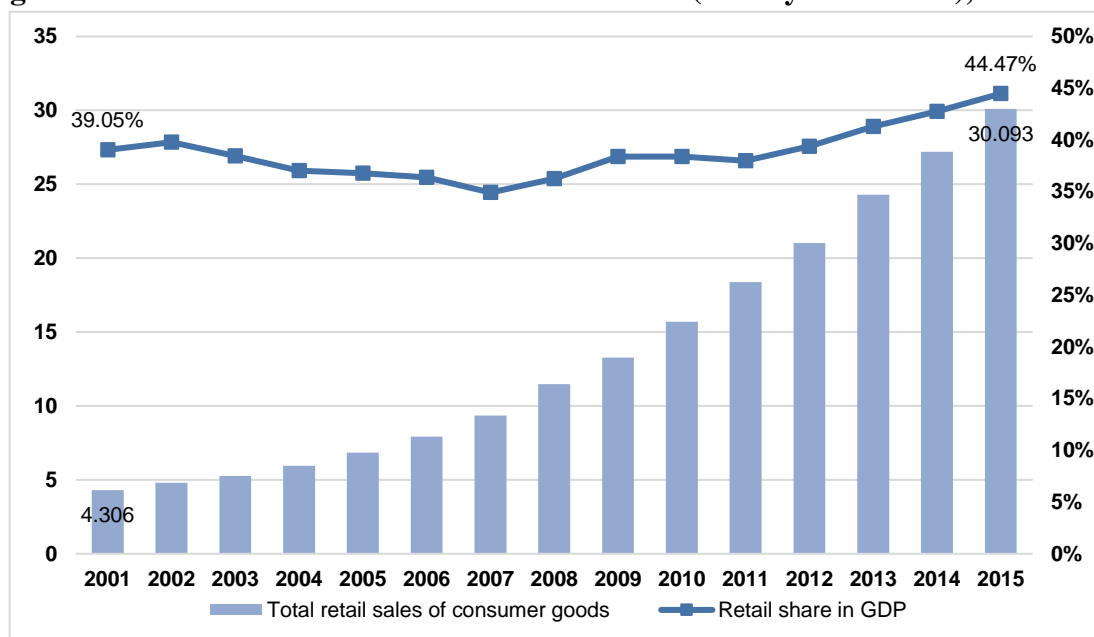
2. DYNAMICS IN THE RETAIL SERVICES SECTOR IN CHINA

2.1. GROWTH AND TRANSFORMATION

Over the period 2001-15, China's total retail sales of consumer goods has increased nearly seven fold. Growth has been slowing from the very rapid nominal rates experienced in the middle of this period, which peaked at 23 percent per annum in 2008 (Figure 2.1.1). For 2015, total retail sales (including restaurants and catering) grew in real terms by 10.6 percent to reach 30.1 RMB yuan trillion (USD4.6 billion).

To put this in perspective, total retail sales now amount to nearly half (45 percent) of China's GDP. Urban areas account for 86 percent of sales (25.9 RMB yuan trillion), up by 10.5 percent; rural areas account for 4.2 RMB yuan trillion, growing at 11.8 percent.⁵ Subtracting out restaurants and catering (3.2 RMB yuan trillion or USD491 billion and up 11.7 percent), retail sales of consumer goods were 26.9 RMB yuan trillion (rising at 10.6 percent in nominal terms).

Figure 2.1.1: Total Retail Sales of Consumer Goods (RMB yuan trillion), 2001-2015



Source: National Bureau of Statistics of China using real rather than nominal GDP

⁵ **Total Retail Sales of Consumer Goods** includes: (1) commodities sold to residents for daily use and building materials for construction/repair of houses; (2) office appliances and supplies sold to institutions; (3) food and fuels sold to canteens (4) grain and non-staple food, clothing, daily articles and fuels sold to military personnel; (5) **consumer goods sold to foreigners, overseas Chinese, and Chinese compatriots during their stay in China PRC**; (6) Chinese and western medicines, herbs and medical facilities purchased by residents; (7) newspapers, books and magazines directly sold to residents and social groups, new and old commemorative stamps, special stamps, first-day covers, stamp albums; (8) consumer goods purchased and sold by second-hand shops; (9) stoves and heating facilities and liquefied gas sold by gas companies to households and institutions (10) commodities sold by farmers to non-agricultural residents and social groups. Excluded are: raw materials, fuels, equipment, tools sold to enterprises, institutions and state farms for production purposes; commodities sold to trade establishments for re-selling; commissioned sales at second hand shops; operational income of urban public utilities; stamps sold at post offices; income of water, power, gas production and supply companies from supply of their products; and sales of commodities among farmers.

It is worth noting the persistently marked geographical concentration of retail sales in the eastern and coastal provinces. In 2001, the eastern and coastal region provinces accounted for nearly 60 percent of total retail sales of consumer goods. By 2013 this had dropped 8 percentage points with the difference made up by growth of 5 percentage points in the central region and 3 percentage points in the western region. In 2013, the top four provincial retail sales were all still in the eastern region however, namely Guangdong, Shandong, Jiangsu and Zhejiang, with the shares growing for both Shandong and Jiangsu. Household incomes are generally lower in the central and western regions and the development of large retail chain operators has lagged considerably behind.

Most domestic retailers remain region-focused in China. Apart from a couple of home electronics players such as Suning and Gome, very few of the Top 100s domestic retailers achieve national footprints in China. Most domestic retailers, such as the Dalian Dashang Group Co. Ltd in Liaoning Province and Anhui Huishang Group Co. Ltd in Anhui Province, focus on their respective regional markets, partly because of big regional differences in consumer tastes but also because of ongoing supply chain inefficiencies and reliance on local government support.

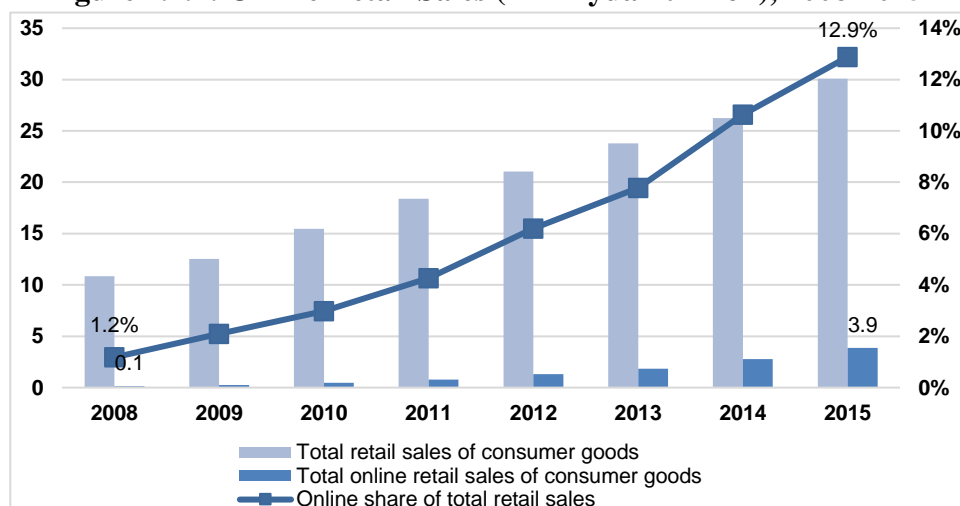
Table 1: Regional and Provincial Share of Consumer Retail Sales (%), 2001-13

Region	2001	2013	Region	2001	2013	Region	2001	2013
Eastern region	59.8	59.0	Western region	13.0	13.5	Central region	27.2	27.5
Guangdong	11.5	10.7	Sichuan	4.3	4.4	Henan	5.0	5.2
Shandong	7.2	9.4	Shaanxi	1.7	2.1	Hubei	5.0	4.6
Jiangsu	7.3	8.8	Chongqing	1.8	1.9	Hunan	3.8	3.8
Zhejiang	6.5	6.4	Yunnan	1.7	1.7	Anhui	2.9	2.8
Liaoning	5.2	4.5	Guizhou	1.0	1.0	Heilongjiang	3.1	2.6
Hebei	4.5	4.4	Gansu	1.0	0.9	Jilin	2.3	2.3
Beijing	4.1	3.5	Xinjiang	1.0	0.9	Shanxi	1.7	2.2
Fujian	3.8	3.5	Ningxia	0.3	0.3	Inr Mongolia	1.4	2.2
Shanghai	4.7	3.4	Qinghai	0.2	0.2	Jiangxi	1.9	1.9
Guangxi	2.4	2.2	Tibet	0.1	0.1			
Tianjin	2.1	1.9						
Hainan	0.5	0.4						

Source: National Bureau of Statistics, China

Meanwhile as shown in Figure 2.1.2, China's online retail sales, now the world's largest e-commerce market in volume terms, increased more than 30 fold over 2008-15, to reach 3.9 RMB yuan trillion (USD589.6 billion), nearly 13 percent of total retail sales of goods.

Figure 2.1.2: Online Retail Sales (RMB yuan trillion), 2008-2015

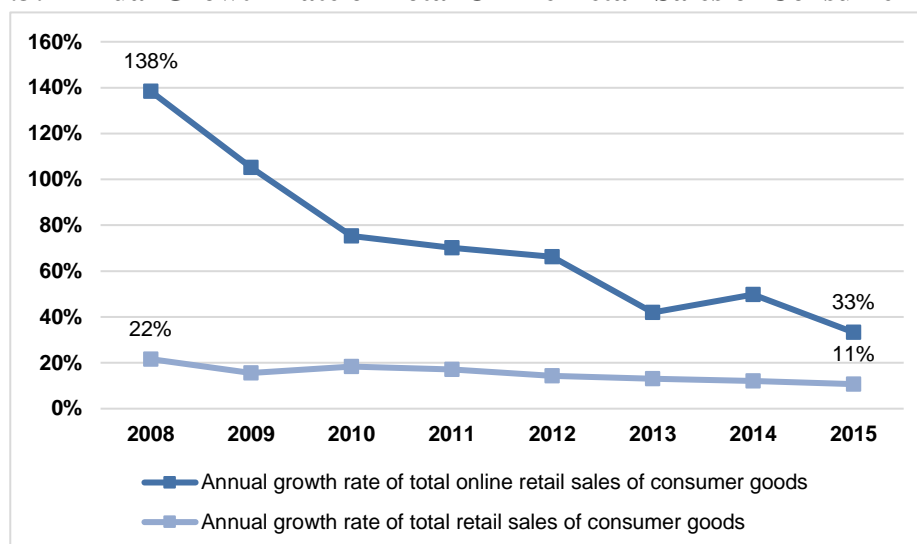


Source: National Bureau of Statistics of China

Figure 2.1.3 tracks the rate of growth in total and online retail sales since 2008. In 2008 and 2009, online retail sales more than doubled, starting from a small base with growth declining to 33 percent in 2015, still nearly three times faster than total retail sales growth in 2015.

Online retail sales of physical goods, which account for the bulk of these sales (3.2 RMB yuan trillion or USD493 billion) experienced an annual increase of 32 percent and now exceed 10 percent of total retail sales of consumer goods, compared with just over 1 percent in 2008. In 2015, online retail sales of virtual products and services were approaching 20 percent of total online sales at 634.9 RMB yuan billion (USD96.5 billion), growing at 42.4 percent per annum.

Figure 2.1.3: Annual Growth Rate of Total Online Retail Sales of Consumer Goods (%)



Source: National Bureau of Statistics of China

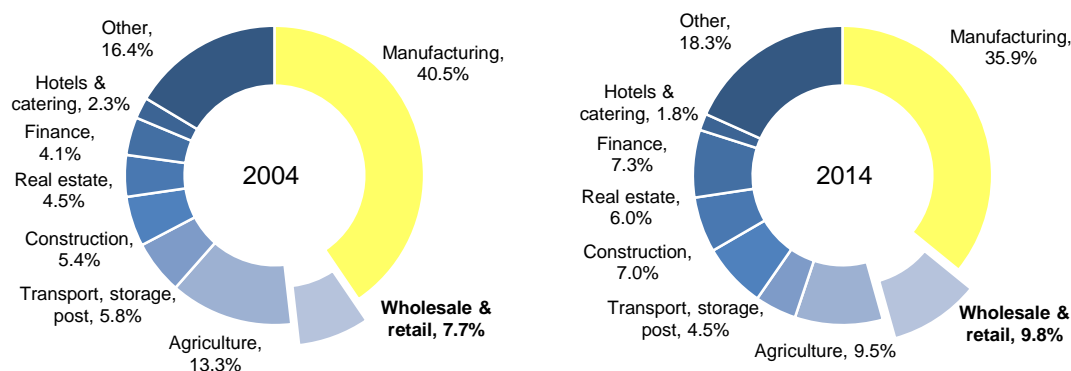
Facing the challenge of an increasing switch in consumer preferences and mounting competition from internet retailing, store-based retailers suffered in 2015, and a number of stores have closed across various distribution channels, ranging from hypermarkets and apparel and footwear specialist retailers to department stores. Earlier over-expansion, which intensified homogenization rather than differentiation, together with rising operational costs associated with rental and labour, also played a role in store closures.

Traditional grocery retailers are particularly hit, with the availability of groceries having spread to a wide variety of distribution channels, especially internet retailing. Compared with grocery retailers, non-grocery retailers performed relatively better in 2015, thanks to continuous outlet expansion and penetration into lower-tier cities with huge potential demand. Many brands preferred to open stand-alone stores in order to promote the shopping experience, with wider ranges of products and more professional services.

The market is clearly changing very fast. Competition has intensified as consumers' shopping habits, and particularly their behaviour in terms of the purchasing and payment decision, has similarly rapidly evolved. Consumers are looking for enhanced convenience, security and quality, as well as innovative products and services. Internet retailing and mobile m-commerce are playing an increasingly important role, not only for non-store based retailers, but also for traditional store-based retailers in China. Online-to-offline (O2O) practices and even omni-channel retailing is now widespread.

Meanwhile the sector continues to grow. In terms of industry value-added share to GDP, the wholesale and retail services sector combined contributed a share of 9.5 percent in 2014, up from 7.7 percent in 2004 (Figures 2.1.4 and 2.1.5).

Figure 2.1.4: Share of Wholesale and Retail in GDP (%), 2004-2014



Source: National Bureau of Statistics of China

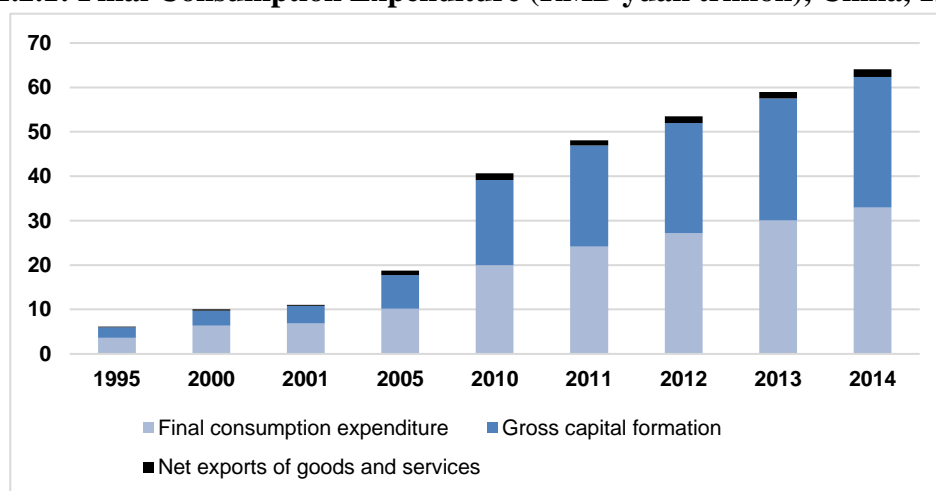
2.2.DRIVING FORCES

China’s retail sales of consumer goods have grown at an impressive rate over recent decades, driven by robust economic development, changes in household consumption structures associated with income growth and urbanization and rapid technological changes in the sector. Policy reform and liberalization of the sector has also played a vital role; the policy aspects are discussed in the next section while the focus here is on the key factors of income and consumption growth, urbanization, internet and the age of digitization.

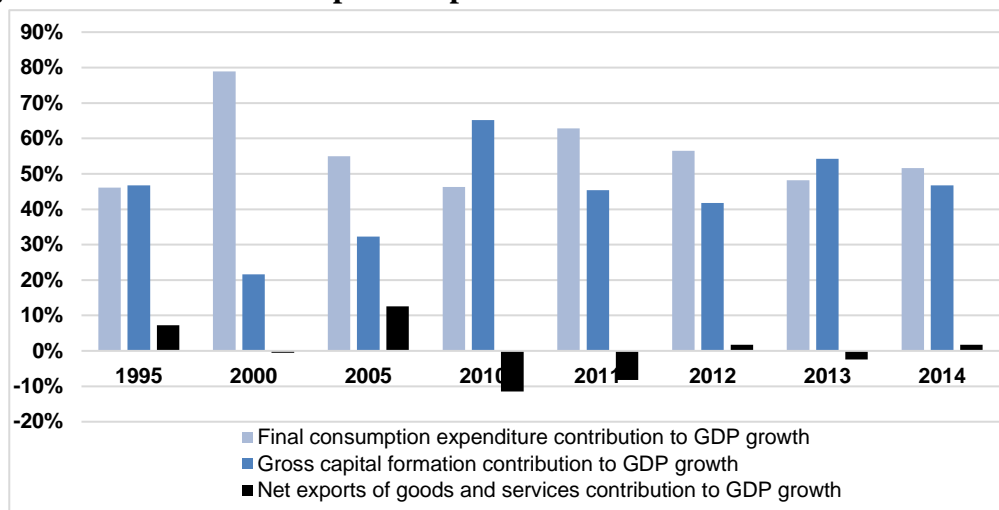
2.2.1. Consumption

As highlighted in Figures 2.2.1 and 2.2.2, in 2014, consumer spending was the dominant driver of the Chinese economic growth, with the contribution of consumption to GDP exceeding the combined contribution of investment and net exports. In 1995, the contribution from final consumption expenditure to the growth of GDP was 46.1 percent; in 2014, final consumption expenditure contributed 51.6 percent of the growth in GDP.

Figure 2.2.1: Final Consumption Expenditure (RMB yuan trillion), China, 1995-2014



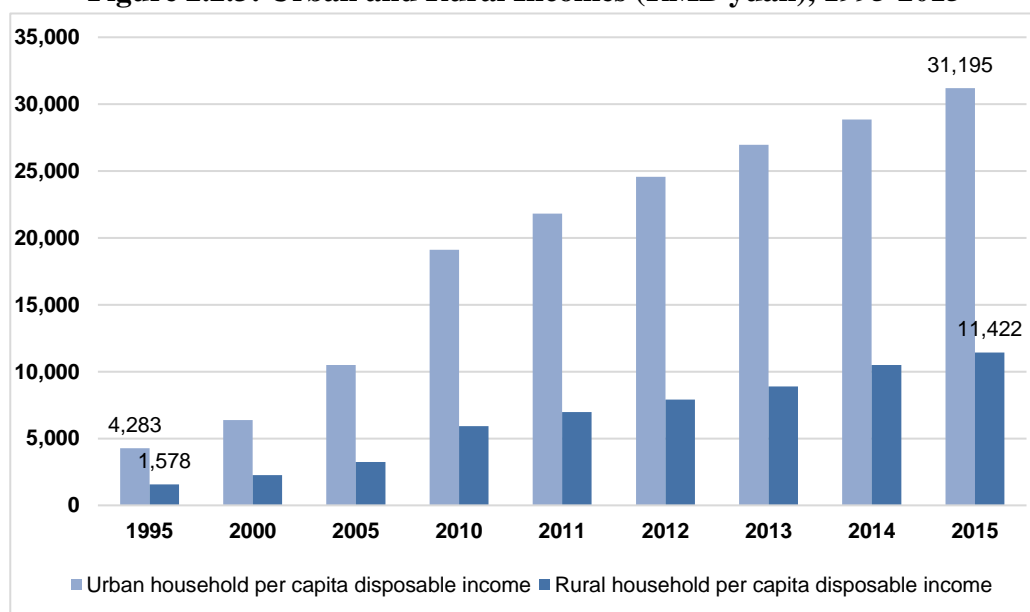
Source: National Bureau of Statistics of China

Figure 2.2.2: Final Consumption Expenditure Contribution to GDP Growth (%)

Source: National Bureau of Statistics of China

2.2.2. Household Income

The Chinese consumer market is in the midst of a transformation that offers tremendous new opportunities. The rise of upper-middle-class and affluent households act as the drivers of consumption growth and household disposable income is on the rise. As Chinese consumers become more affluent, consumer spending is expected to increase further.

Figure 2.2.3: Urban and Rural Incomes (RMB yuan), 1995-2015

Source: National Bureau of Statistics of China

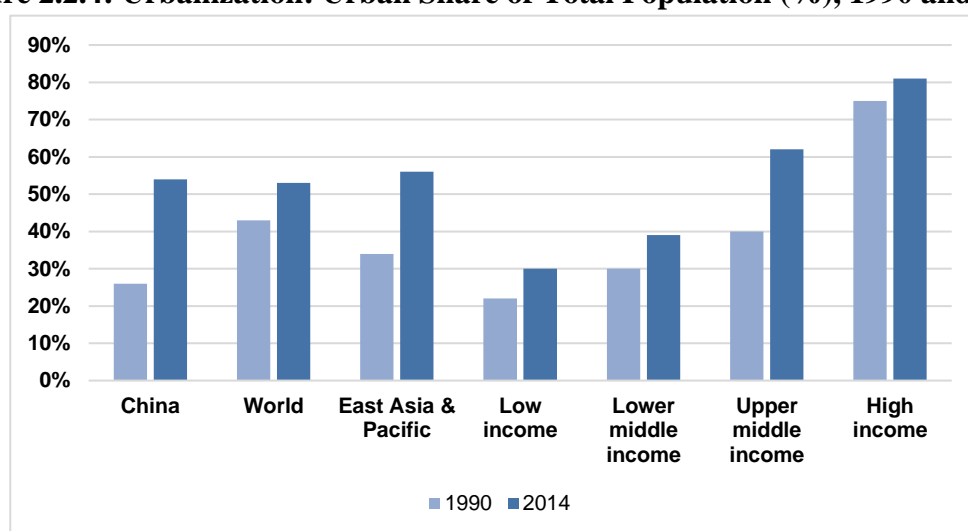
Annual per capita disposable income of urban households in China increased nearly 8 fold from 4,283 RMB yuan in 1995 to 31,195 RMB yuan in 2015. Annual per capita disposable income of rural households in China increased somewhat more rapidly over the same period from 1,577.7 RMB yuan in 1995 to 11,422 RMB yuan in 2015. Per capita disposable income for urban households remains around 3 times more than rural households.

The rising middle class' increased disposable income, and altering lifestyles are driving retail demand. China's consumer economy has been powered by the ascent of hundreds of millions of people from poverty to an emerging-middle class, which includes households with annual disposable income of US\$10,001-16,000, and to the middle class, with incomes of US\$16,001-24,000. Consumption growth will be driven by the dramatic rise of upper-middle-class households (US\$24,001-46,000) and affluent households (over US\$46,000).

2.2.3. Urbanization

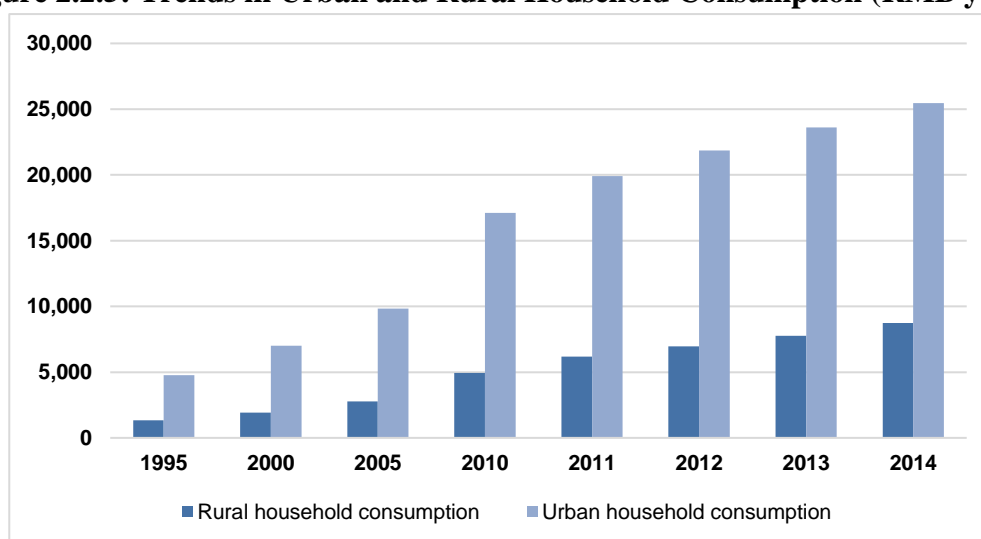
Urbanization is bringing big new opportunities to the retail industry due to significant changes in the consumption capability and structure of urban populations, especially in the third and fourth-tier cities. In 1990, the urban share of China's population was 26 percent, well below not only the world average of 43 percent, but also the East Asian average of 34 percent (Figure 2.2.4). In 2014, the urban share of China's population amounted to 54 percent, slightly higher than the world average of 53 percent and approaching the East Asian average of 56 percent.

Figure 2.2.4: Urbanization: Urban Share of Total Population (%), 1990 and 2014



Source: World Bank World Development Indicators

Figure 2.2.5: Trends in Urban and Rural Household Consumption (RMB yuan)



Source: National Bureau of Statistics of China

In 1995, average annual rural household consumption expenditure was 1,344 RMB yuan while urban household consumption was 3.5 times larger at 4,769 RMB yuan. By 2014, rural household consumption had reached 8,744 RMB yuan with average urban household expenditure just under 3 times more at 25,499 RMB yuan. The consumption expenditure differential is decreasing, but slowly (Figure 2.2.5).

2.2.4. Internet and the age of digitization

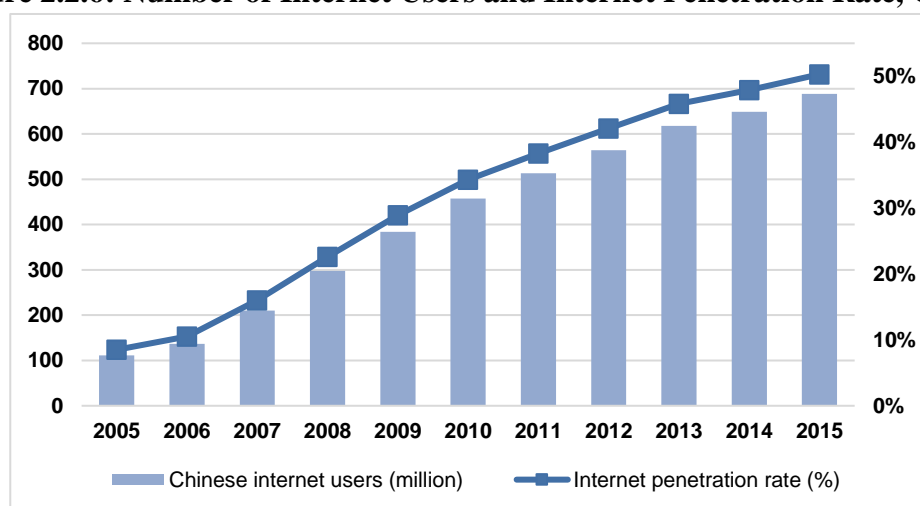
Radical shifts in the business uptake of new information and communications technologies, especially mobile internet-based applications and strides forward in internet penetration means online retail has become the engine of China's retail services sector. This is also the case in much of the rest of the world. An added factor perhaps in China was the fact that modern retail was a relative latecomer to China and expansion beyond the eastern part of the economy was incomplete, even while new technologies were altering consumer options. As was shown in Figure 2.1.2, B2C e-commerce sales grew over 20 percent in 2012 to reach beyond USD1 trillion for the first time.

None of this would be possible of course without related technological change in financial services, both e-banking and mobile payments processes. Nor would it be possible without radical shifts in consumer goods logistics and delivery systems. Financial services and logistics are not the only sectors impacted by the trend to e-tail. Nor is the internet the only disruptive technology in play as already discussed above.

The internet has delivered extraordinary economy-wide productivity gains and enabled many different markets to function more efficiently. Extending internet access increases market efficiency by reducing barriers to entry, reducing transaction costs, and increasing transparency. SMEs are able to reach a broader market if they take advantage of these benefits. There is abundant evidence for this in the retail sector in China with major increases in internet usage by both consumers and suppliers.

According to a survey by the China Internet Network Information Center (CNNIC), at end 2015, internet users in China numbered 688.3m, up 39.5m over the year. At 195m, rural netizens accounted for 28.4 percent of the national total, up by 17m from end 2014. The overall internet penetration rate rose to 50.3 percent, up 2.4 percentage points from end 2014.

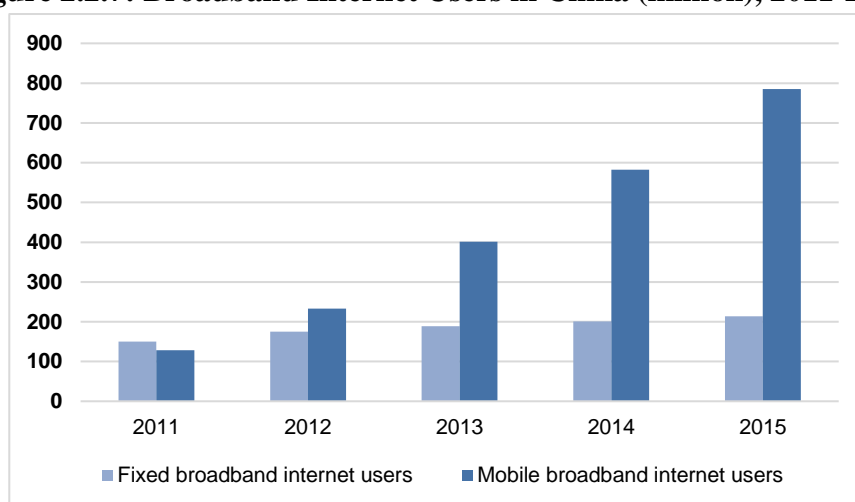
Figure 2.2.6: Number of Internet Users and Internet Penetration Rate, China



Source: China Internet Network Information Center (CNNIC)

As of December 2015, the number of mobile internet users in China reached 620m, an increase of 63m from end 2014. Mobile netizens accounted for 90 percent of the total netizen population, up from 85.8 percent in 2014 (Figure 2.2.7). The mobile phone has become the standard device for internet access by new internet users (71.5 percent, up more than 7 percentage points from end 2014). Of new internet users in 2015, 46 percent were under the age of 19 and 46.4 percent were students.

Figure 2.2.7: Broadband Internet Users in China (million), 2011-2015



Source: National Bureau of Statistics of China

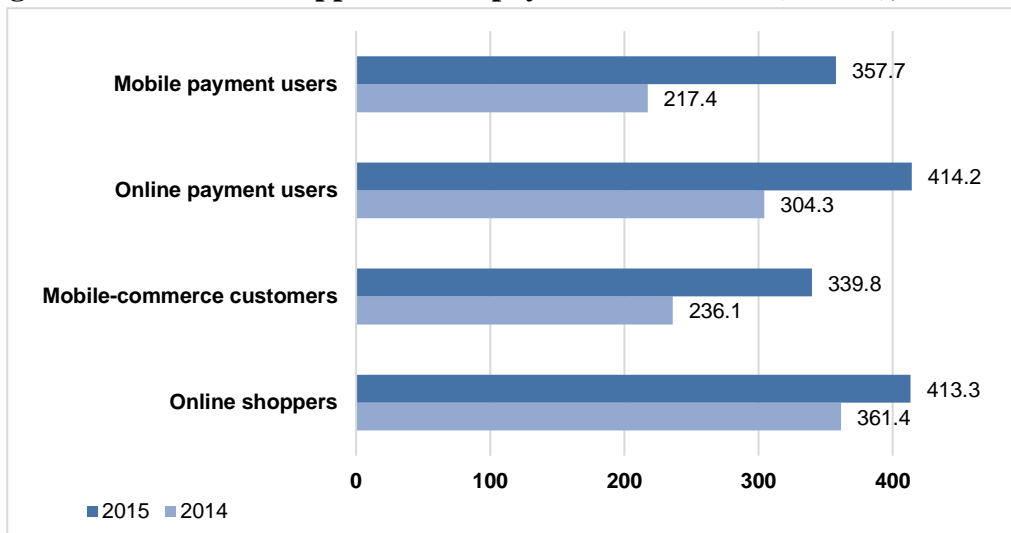
Chinese companies are similarly widely employing internet-based tools for communications, information acquisition and release, internal management systems and the provision of commercial services. A growing number of them have applied systematic, integrated internet tools to the entire business process, from R&D, purchase and sales, financial management, customer relations to human resources management, turning use of the internet from a single supportive instrument to an integrated platform right across the management and transformation of the company's supply chain.

According to CCNIC, as of December 2015, 95 percent of Chinese companies used computers for their office work and 89 percent were internet users; 86 percent accessed internet via fixed broadband and 24 percent via mobile broadband; 32.6 percent were engaged in online sales, 31.5 percent in online purchase and 33.8 percent launched online marketing and promotional activities.

In 2011, there were 150m fixed broadband internet users and 128m mobile broadband internet users in China. There has since been a marked shift to mobile internet. In 2015, there were 213m fixed broadband users, 1.4 times more than in 2011 and 785m mobile broadband users, over 6 times more than in 2011.

Online platforms are now key retail services channels in China. By December 2015, China had 413m online shoppers, a yearly increase of 51.8m or more than 14 percent. Meanwhile, the number of mobile online commerce (m-commerce) customers grew by 44 percent over the year to 340m; and usage of m-commerce increased from 42 to 55 percent.

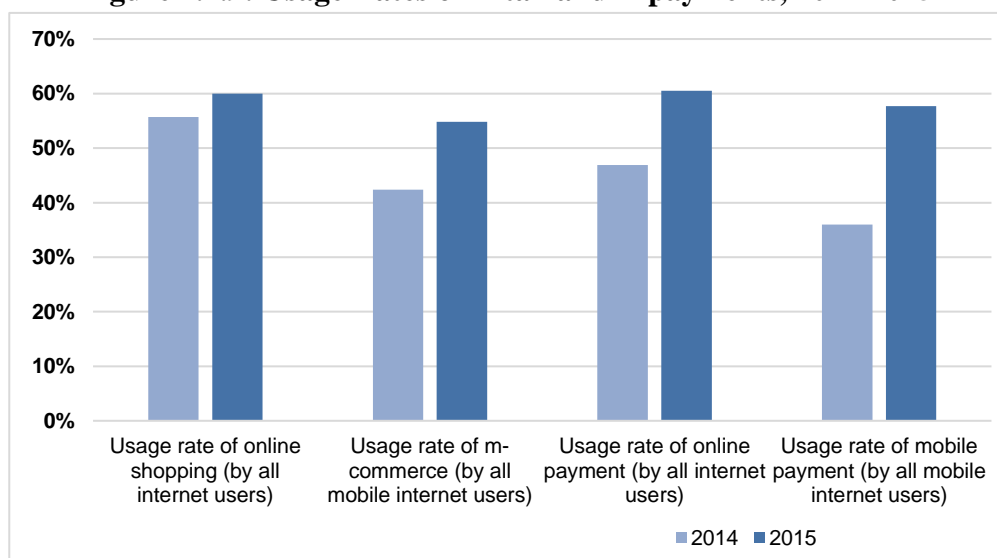
Figure 2.2.8: Online Shoppers and E-payment Customers (million), 2014-2015



Source: CNNIC

To pursue the trend to large-scale deployment of e-business services, all economies need the support of innovative electronic payment and shipping solutions to leverage a higher volume of on-line transactions. 2015 saw rapid development and accelerating popularization of e-payment processes. By December 2015 China had 416 million e-payment users, an annual increment of 112 million or 37 percent. The utilization ratio of online payments increased from 47 percent to over 60 percent over the year to December 2015. Mobile payments saw dramatic growth of 64.5 percent in 2015, covering 358m users; the usage rate of mobile payment increased from 36 to 58 percent (Figure 2.2.9).

Figure 2.2.9: Usage Rates of E-tail and E-payments, 2014-2015



Source: CNNIC

In recent years, e-payment companies have vigorously expanded internet and mobile internet channels, making initial opening offers of transactions free of intermediation fees, to both businesses and consumers in an effort to encourage use of mobile payment services and diversify mobile payment scenarios. On one hand, e-payment companies have “subsidized” both businesses and consumers to encourage more physical businesses to launch a mobile

payments service. On the other, e-payment companies have supported and enabled foreign currency payments to expand their reach into overseas payments markets.

The growth of e-payment channels has also introduced new prudential risks as third-party payment tools tend to be exploited for cash-out. With e-payment systems, consumers or businesses can make payments via WeChat or Alipay or a credit card online without the need of a Point-of-Sale device, making payments easier and potentially less transparent. As online business forms diversify, it is becoming increasingly difficult to oversee the cash-out of credit cards online. Know-Your-Customer information has become critically important.

In early 2015, eight credit companies including Zhima Credit, Tencent Credit and Lakala Credit obtained consumer credit business licenses from the central bank. Under the consumer credit regulatory system that is under construction in China, bad credit behaviour will be recorded and the consumption of the person in question will be restricted via e payment, forcing consumers to maintain good personal credit reputations and improving the e payment environment for online credit consumption.

Traditional bricks-and-mortar retailers are meanwhile themselves necessarily adjusting to customers increasing preferences for online and mobile shopping and paying. Following the emergence of omni-channel shopping experiences, traditional and internet-based retail channels have started to integrate, offering more seamless shopping experience to consumers. The capital markets continue to show active interest in the retail sector, both online and traditional. As modern retail emerges in China, an integrated approach seems most likely. While investment in online retail start-ups has seen strong venture capital and private equity interest, the number of acquisitions in traditional retail has also been growing.

3. STRUCTURAL POLICY REFORM IN CHINA'S RETAIL SECTOR

China's distribution system has been evolving from a rigid, centrally controlled allocation system to a more flexible one driven by market demand since the implementation of the "open-door" policy. The new market-driven system has allowed both more local entrepreneurs and more foreign enterprises to enter into China's distribution business.

China opened its distribution sector on a trial basis in July 1992. Entry into the WTO brought gradual liberalization of wholesale and retail services and associated gradual transformation from a semi-open market to a fully open market to the world. Way ahead of reforms in other services sectors, China's WTO commitments (set out in Appendix 1) called for phased removal of almost all trade barriers in distribution services by the end of 2004.

Regulatory reforms included deployment of chain franchise systems, easing of commercial trade (exports and imports of goods), removal of limitations on foreign capital investment, abolition of quantitative restrictions on numbers and size of companies, numbers of store outlets and sales volumes.

On entry to the WTO, China made significant commitments, on a 5 year transition basis, on distribution services - providing market access and national treatment advances in all four modes, including commissioned agents, wholesaling, retailing and franchising. China also agreed to phase out restrictions on foreign firms' establishment of joint ventures (JVs).

The transition period expired in 2005, and in that single year, according to MOC data, a total of 1,027 foreign firms were granted approval, three times the total number approved during the 12 previous years. The contracts, worth USD1.82 billion, involved the opening of 1,660 shops covering 4.7m square meters. Most of these firms were in wholesale; only 187 were in the retail sector, including Walmart, Staples, B&Q, Carrefour, Auchan, Metro and OBI.

3.1. EVOLUTION OF THE REGULATORY FRAMEWORK – PRE-WTO

The process began in 1992. Prior to that date, foreign investors were prohibited from setting up either joint ventures or wholly foreign-owned enterprises to conduct retail or wholesale business in China. Foreign-invested manufacturers however were allowed to sell certain percentages of the products they produced in China on the Chinese market.

In July 1992, the State Council formulated Provisions on Foreign Investment in Retailing, permitting Beijing, Shanghai, Tianjin, Guangzhou, Dalian and Qingdao, as well as the five Special Economic Zones of Hainan, Shenzhen, Zhuhai, Shantou and Xiamen, to allow foreign investment in retailing on a trial basis. Wholly foreign-owned enterprises were prohibited but JVs were allowed. All retail projects were required to be submitted by local governments to the central government for examination and approval, and the qualifications of both the Chinese and foreign parties required examination by the State Administration of Internal Trade. The scope of the business license was limited to retailing general domestic and imported merchandise with a prohibition on acting as import and export agencies. Agreements could not exceed 30 years and imported merchandise could not exceed 30 percent of the JV's total retail sales for any year. Foreign equity was limited to 49 percent.

In June 1995, another major step forward took place. For the first time, retail and wholesale sectors were listed by the State Council on the Directory for Foreign Investment, though under the "restricted" category. By the end of 1995, 14 retail JVs had been approved; 5 from Hong Kong, China; 4 from Japan; 3 from Thailand; and 1 each from Singapore and Malaysia.

By the end of 1997, there were 20 approved joint ventures in retail. But local provincial and municipal authorities were reported as having approved close to 300, competing with one another for foreign investment. Given the disorderliness, **in mid-1998**, the central government issued an *"Urgent Circular on Prohibiting Local Governments from Approving Foreign Invested Retail Companies"*. The nearly 300 retail operations were required either to restructure to conform to the 1992 Provisions, or face closure at the end of that year. Tax authorities and Industry and Commerce Administration bureaus were instructed to examine the approval procedures and structure of all retail joint ventures. To stay in business, these companies were required to meet the following criteria:

- Promised foreign investment had materialized and the firms were under sound management.
- No wholesale business was being undertaken.
- Chinese partners held over 51 percent of equity share. In chain store or warehousing businesses, the Chinese partner had to hold majority control.
- Partnership agreements did not exceed 30 years in coastal regions or 40 years in inland and western parts of the economy.

In June 1999, the State Council issued *Provisional Rules on Foreign Investment in Retailing & Wholesaling*, providing a somewhat more open regulatory environment, essentially designed to help accelerate introduction of modern management expertise in China's retail industry. The Provisional Rules stipulated, for the first time, the conditions under which foreign investors could form joint ventures, cooperatives or wholesale companies in China's 4 cities directly-administered under the central government, 5 Special Economic Zones (SEZs) and all the capital cities of provinces and autonomous regions.

3.2. EVOLUTION OF THE POLICY FRAMEWORK - WTO ACCESSION

Prior to 2003, the regulatory agency which had oversight responsibility for distribution services was the State Economic and Trade Commission (SETC) a department of the State Council in charge of domestic trade. In 2003, the former Ministry of Foreign Trade and Economic Cooperation (MOFTEC) and SETC were combined into one ministry – Ministry of Commerce (MOC), consolidating responsibility for domestic and foreign trade in one body which also had responsibilities with respect to implementation of WTO commitments, competition policy including anti-counterfeit, attraction of foreign investment etc.

MOC became the supervisory body for all distribution services in China; while provincial, municipal, autonomous region, and city-level government departments administering commercial affairs continued to monitor distribution services within their jurisdictions.

The previous approval procedures initially remained in place; all applications had to be approved by the central government but these procedures were quickly seen to be ineffective. Many foreign retailers had initially entered the Chinese market by gaining preferential treatment from local governments, and bypassing the central government. Before China's WTO accession in 2001, as many as 300 foreign retailers had opened stores in China but only

56 of them had received official approvals from the central government. Many local governments had been eager to make deals with the foreign retail giants for they welcomed the prestige, tax revenue, buying power and employment the foreign companies would bring to the localities. The extent of such circumvention of regulatory requirements was such that the central government had difficulty monitoring local government activities in the sector.

After China's accession to WTO, the central government effectively delegated full authority to provincial-level governments and the new measures simplified and sped up the approval process. If the following conditions were fulfilled, the MOC could authorise the respective provincial-level governments to carry out the examination and approval procedure:

- The distribution channels do not involve television, telephone, mail, internet and vending machine;
- If the size per store was below 3,000m²: the number of such stores operated by the foreign investor did not exceed 3 in the province and 30 in the whole Chinese Mainland;
- If the size per store was below 300m²: the number of such stores operated by the foreign investor did not exceed 30 in the province and 300 in the whole Chinese Mainland;
- The commodities distributed by the foreign investor did not include books, newspapers, periodicals, pharmaceuticals, automobiles, salts, tobaccos, pesticides, mulching films, processed oils, grains, vegetable oils, sugar and cotton.

The MOC committed to a timetable for the approval process. Upon receiving all the required documents, the provincial-level governments had to examine the documents and pass them to the MOC within one month. The MOC was required to make decisions within 3 months and give explanations in case of disapproval.

By delegating part of the authority to the local government and simplifying the approval procedures, the central government aimed to end the above circumvention activities, and enable the distribution sector to develop in a more orderly fashion.

Since restriction by direct administrative measures and procedures is contrary to the spirit of the WTO, the government also enacted laws and regulations to guide a more balanced development of distribution services, and these laws had to be applied to both local enterprises and foreign enterprises. Table 2 sets out the key regulatory steps impacting on non-resident activities in China's distribution sector.

Table 2: Regulations governing non-resident activities in China's distribution sector

Effective date	Rules and Regulations	Highlights
July 1992	Trial Procedures Relating to Foreign Invested Commercial Enterprises (FIEs)	Allowing foreign investors to enter China's retail sector by means of joint ventures (JV); 6 cities plus 5 Special Economic Zones (SEZ) were opened for establishment of 1 or 2 JVs.
Sept 1996	Trial Procedures on the Establishment of Pilot Sino-foreign Trade Equity Joint Ventures	Allowing JVs to engage in import and export in Shanghai & Shenzhen as well as wholesale distribution of imports, but not allowed to engage in domestic trade. Majority Chinese shareholding required and minimum capital requirement of the JV of RMB 100m.
1999	Measures Concerning Pilot Projects for FIEs ("The Pilot Projects")	Expanding the pilot areas to all provincial & autonomous regional capitals, municipalities and independent planning cities. Terminating the restrictions on wholesale operations.
1 June 2004	Administrative Measures on Foreign Investment in Commercial Areas	Ending the practice of "The Pilot Projects" in the commercial sector. Lifting restrictions on geographical location, ownership structure and number of stores.
15 Oct 2006	Administrative Measures on Retailers' Promotion Activities	Regulating retailers' promotional activities in areas such as pricing, advertising content, return or exchange of goods, after-sales services and safety issues, etc.
15 Nov 2006	Management Rules on Fair Transaction between Retailers and Suppliers A key step towards healthier relationships between retailers and suppliers; enhancing supply chain efficiency in the long run.	Applying to retailers with annual sales over RMB 10 m and their respective suppliers. Preventing retailers charging suppliers additional fees unless agreed by the parties concerned and specified in the contracts. Requiring retailers to pay for all ordered items, even if not sold; with payment made no later than 60 days upon receipt of goods. Also protecting retailers' interests; eg by prohibiting suppliers from practicing tie-in selling.
1 May 2007	Commercial Franchise Management Regulation	Stipulating the rights & responsibilities of both franchisors & franchisees, establishing a comprehensive legal framework for franchise contract. Reinforcing information disclosure requirements for franchisors; regulating marketing & advertising during franchisee recruitment.
1 May 2007	Administrative Measures on Information Disclosure for Franchise Business	Elaborating in detail the information disclosure requirements stipulated in the regulation.
1 May 2007	Administrative Measures on Filing Franchise Business	Spelling out clearly the filing requirements & procedures for franchise business.
1 May 2007	Administrative Measures on Food Safety	Clarifying food wholesalers and retailers' responsibilities in safeguarding food safety.
1 Jan 2008	NPC promulgated the Corporate Income Tax Law	Levelling the playing field for FIEs and domestic enterprises by standardizing the tax rate at 25% for both; unifying preferential treatments and deductions
1 Aug 2008	Anti-Monopoly Law	Forbidding monopolistic market conduct and curbing administrative monopolies.
2009	Legislation for City Commercial Development Plan	Addressing market irregularities and fostering a more orderly business environment.

Table 3 summarizes the requirements for foreign investors pre and post-WTO.

Table 3: Requirements for Foreign Entry into China's Distribution Sector

Requirements	Pre-WTO accession		Post-WTO accession	
	Wholesale	Retail	Wholesale	Retail
Average annual revenue of previous 3 years	USD2.5b	USD2b	No limit	No limit
Total assets of foreign investor	USD300m	USD200m	No limit	No limit
Registered capital of JV	RMB 80m	RMB 50m	RMB 0.5m	RMB 0.8m
Foreign shareholding	49%	49% to 65% (Note 1)	100%	100%
Trading rights and scope of business	Only products produced in China;	Except for JV trading companies in Shanghai Pudong & Shenzhen & JV retail companies in certain pilot cities, foreign companies were not allowed to distribute products produced overseas.	Wholesale distribution allowed (excluding salt and tobacco)	All domestic and imported products by 2007
Import value	30% of sales of JV	30% of sales of JV	No limit	No limit
Geographical restriction--Pilot cities	4 Municipalities	4 Municipalities	No limit	No limit
Geographical restriction--Provincial capitals	5 SEZs	Capital cities of all provinces & autonomous regions, independent planning cities	No limit	No limit
Approval Authority	Central Government	Central Government	Provincial	Provincial

Source: WTO documents GATS/SC/135, 14 February 2002, GATS/SC/135/Corr.1, 20 February 2003, and GATS/SC/135/Corr.2, 30 November 2004.

Significant subsequent regulatory changes have taken place including in response to the rise of e-commerce with all the associated implications for infrastructural needs both physical and digital including the regulatory framework for e-payment systems, e-banking, and government support for e-business. These are considered in a later section.

3.3. POLICY REFORM TIMELINE

Figure 3.3.1: Structural Reform Summary Timeline

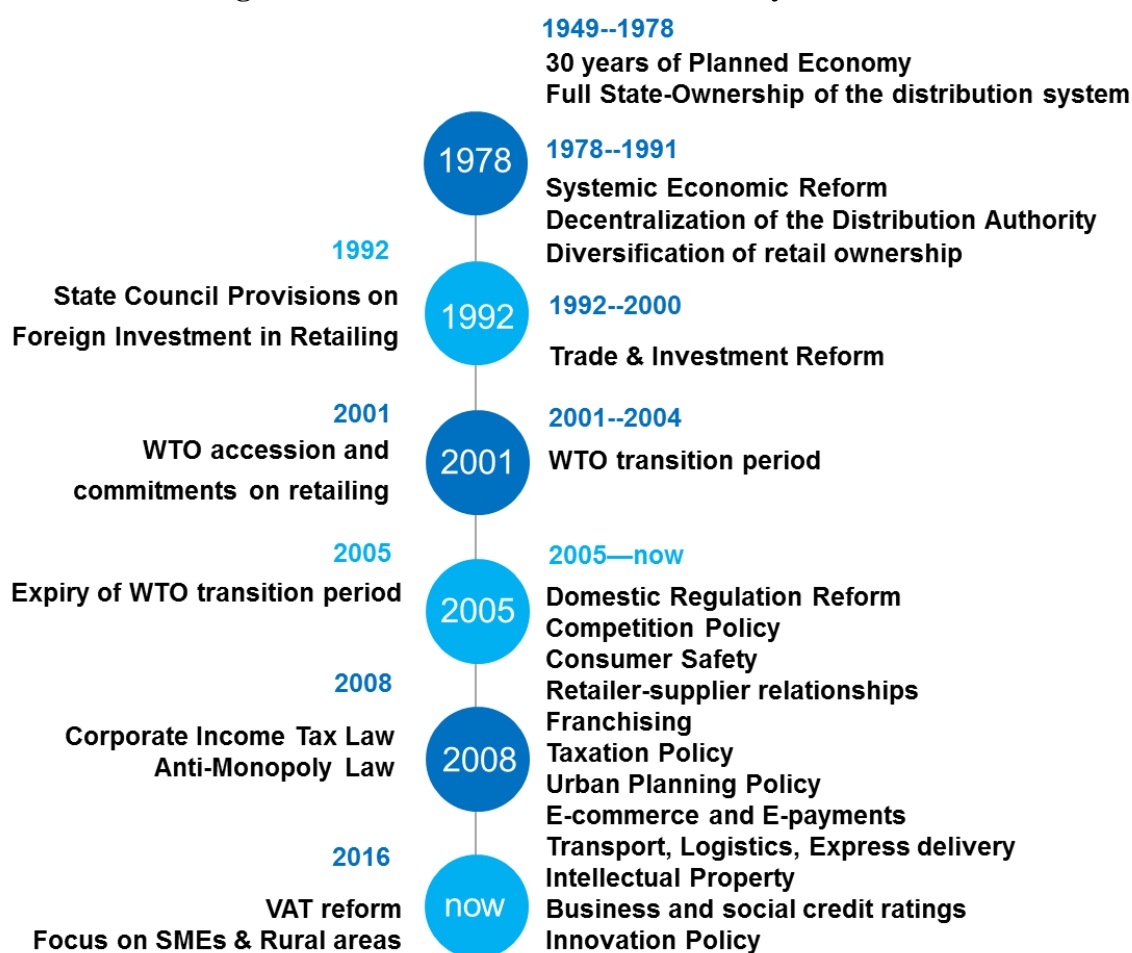


Table 4: Structural Reform Timeline

Year	Policy area	Types of structural reform	Impact
1949-1978	30 years of Planned Economy	Full State-Ownership of the distribution system. Retailers were all SOEs.	No competition. No private domestic or foreign retailers present.
1978-1991	Systemic Economic Reform Shift from planned economy to market-based economy; introduction of competition	Decentralization of the Distribution Authority Diversification of retail ownership: Government gradually withdrew from direct involvement in the retail sector, gave up its monopoly in procurement of commodities, and relaxed price controls.	State-ownership declined and domestic private enterprise increased. No foreign retailer presence, either as sole owner or joint venture.
1992-1994	Investment Policy Reform in SEZs First, limited, move to open the retail market	July 1992: State Council Provisions on Foreign Investment in Retailing permitted foreign retailers to engage in majority Chinese-owned JVs but limited to establishment of stores in 5 SEZs and experimental cities like Beijing and Shanghai. Approval authority was	15 foreign retailers entered Chinese market in 1992.

Year	Policy area	Types of structural reform	Impact
	to entry of foreign retailers and associated foreign products (trade policy)	decentralized to provincial governments. Each city could have 1-2 foreign retailers (Shanghai had 4). Other cities were forbidden to accept foreign retail investment. Chinese partners had to have at least 51% ownership and could not be wholesalers. No more than 30% of imported products.	
1995-1998	Investment Policy Reform Second move to open up	1995: State Council listed retail and wholesale sectors on the Directory for Foreign Investment in the "restricted" category. JV and 51% Chinese equity restrictions were retained. But foreign retailers could now operate chain stores in Beijing and could partially enter the wholesale sector. Licenses were limited to 30 years.	Increased number and scope of business of foreign retailers operating in China.
1999-2000	Trade & Investment Policy Reform: Foreign retailer entry conditionally allowed beyond the SEZs. Third move to open up	1999: State Council issued Provisional Rules on Foreign Investment in Retailing & Wholesaling; Foreign retailers' allowed in all provincial capitals, municipalities and autonomous regions; JVs only but majority foreign equity allowed. Foreign ownership allowed in both wholesaling and retailing. Franchising prohibited and import of goods by retailers was limited to 30% of annual sales in China.	Increased number and scope of foreign retailers operating in China.
2001-2004	Trade liberalization: WTO commitments on market entry & national treatment in distribution services including wholesaling & retailing	WTO commitments on retailing under all 4 modes of supply: Quantitative, geographical, equity and incorporation restrictions on the establishment of JVs by foreign companies to be phased out. China agrees to gradually liberalize retailing of all but a few commodities within 5 years of accession.	By the early 2000s, distribution was 1 of China's most open sectors to foreign competition with an influx of foreign companies investing in hypermarkets, convenience stores & specialty stores.
2005	Trade liberalization: expiry of WTO transition period	Under China's WTO commitments, starting from 11 Dec 2005, quantity and percentage share restrictions applying to commercial presence in retailing in the regions, quantity were removed.	By end 2005, over 300 foreign retailers had entered the market
2006-2013	Reform of Domestic Regulations in the Retail Sector (some delivering a more level playing field for foreign services providers)	Competition Policy 2006: MOC issued regulations on Foreign Mergers and Acquisition of Enterprises in China. Not specific to retailing but applying equally to retailing – foreign M&A required approval from MOC & National Bureau of Industry and Commerce Administration 2008: NPC passed the first Anti-Monopoly Law on 30 Aug 2007 which came into effect in 2008. The Law is now being revised and	Walmart's acquisition of Chinese e-commerce platform was approved subject to competition policy restrictions

Year	Policy area	Types of structural reform	Impact
	(More recent domestic regulatory reforms 2014-2016, including in specific industry sectors related to the retail value chain, are covered in Section 5 but not listed in this indicative time-line table)	updated including to take account of internet-based industries.	
<p>Consumer Safety May 2007: Administrative Measures on Food Safety introduced by MOC to clarify food wholesalers' and retailers' responsibilities in safeguarding food safety. The measures call on food wholesalers and retailers to establish 5 management systems to monitor product safety along the supply chain. Feb 2009: Food Safety Law approved by NPC effective June 2009, to strengthen food safety monitoring and supervision from farm to table includes tougher safety standards and improvement in substandard product recall.</p>		Enforcement of safety regulations has benefitted consumers; as enforcement becomes more stringent, retailers can expect higher compliance costs which might impact on prices	
<p>Retailer-supplier relationships 2006: Administrative Measures on Retailers' Promotion Activities, Management Rules on Fair Transaction between Retailers and Suppliers</p>		Interests of consumers & different market players are better protected but still huge room for improvement	
<p>Franchising 2006: State Council Commercial Franchise Management Regulation, coming into effect in May 2007, establishing a comprehensive legal framework for franchise contract, stipulating rights & responsibilities of franchisors & franchisees, reinforcing information disclosure requirements for franchisors and regulating marketing/advertising activities during franchisee recruitment. MOC is the supervisory body; provincial, municipal, autonomous region, and city-level government departments administering commercial affairs monitor franchise activities within their jurisdictions.</p>			
<p>Taxation Policy March 2007: PNC Corporate Income Tax Law, coming into effect in Jan 2008, standardized the tax rate at 25% and harmonized the preferential tax treatments, tax deductions and tax holidays applying for foreign and domestic enterprises.</p>		A level playing field now exists with foreign firms no longer enjoying more favourable tax treatment	

Year	Policy area	Types of structural reform	Impact
		<p>Urban Planning Policy MOC introduced a system of nationwide City Commercial Development Plans, to bring commercial development of cities in line with overall urban planning and reduce duplicative investment. All major cities are required to design a Commercial Development Plan, taking into account overall development, population distribution, consumption demand trends, transportation systems and environmental requirements. All new retail store openings should comply with the Plan.</p>	<p>The plan has important implications for rationalization of China's retail sector. Almost all cities have compiled City Commercial Development Plans; approved plans can be found on the MOC website.</p>
		<p>E-Commerce 2010: MOC Circular on Issues Concerning Examination and Approval of Foreign-Invested Projects Selling Goods via the Internet allows approved/registered foreign-invested manufacturing & trading enterprises to conduct direct sales via their own Internet platform without additional registration/approval.</p>	<p>A level playing field (national treatment) now exists for foreign-owned companies to make direct sales via e-commerce</p>
		<p>Modernization of Transport and Logistics Aug 2012: State Council Opinions on Further Reformation of Distribution Sector and Acceleration of Development of the Distribution Sector, to facilitate modernization and digitization of the distribution system, improve supply chain efficiency, reduce the ratio of total logistics cost to GDP, and enhance the competence of large-scale distribution enterprises.</p>	<p>Strengthened urban-rural transportation networks, improved in-town delivery, improved logistics facilities and higher degree of digitization in the distribution sector.</p>
		<p>Aug 2013: State Council Opinions on Accelerating Development of the Distribution Sector aim to strengthen enforcement of market supervision and create a sound market environment for distribution</p>	<p>Improved business environment with reduced business costs and stronger IP protection.</p>

4. STRUCTURAL IMPACT OF POLICY REFORMS

4.1. MARKET ACCESS IMPACT

By the early 2000s, the distribution services sector had become one of China's most open sectors to foreign competition with an influx of foreign companies investing in hypermarkets, convenience stores and specialty stores. There were 6,338 new foreign retail and wholesale enterprises in 2007, an increase of 36 percent per annum.

In 2007, FDI into the sector reached USD2.7 billion, up by nearly 50 percent per annum. By 2008, China's wholesale and retail services absorbed USD4.4 billion, ranking 4th highest among the services sectors with more than 40 of the world's top 50 multinational retail giants entering the Chinese market. By 2013, this had more than doubled to USD11.5 billion, accounting for 9.8 percent of total FDI inflows into China, before dropping to 7.9 percent in 2014.

Figure 4.1.1: Inward FDI in China's Distribution Sector (USD billion), 2006-2014



Source: National Bureau of Statistics of China

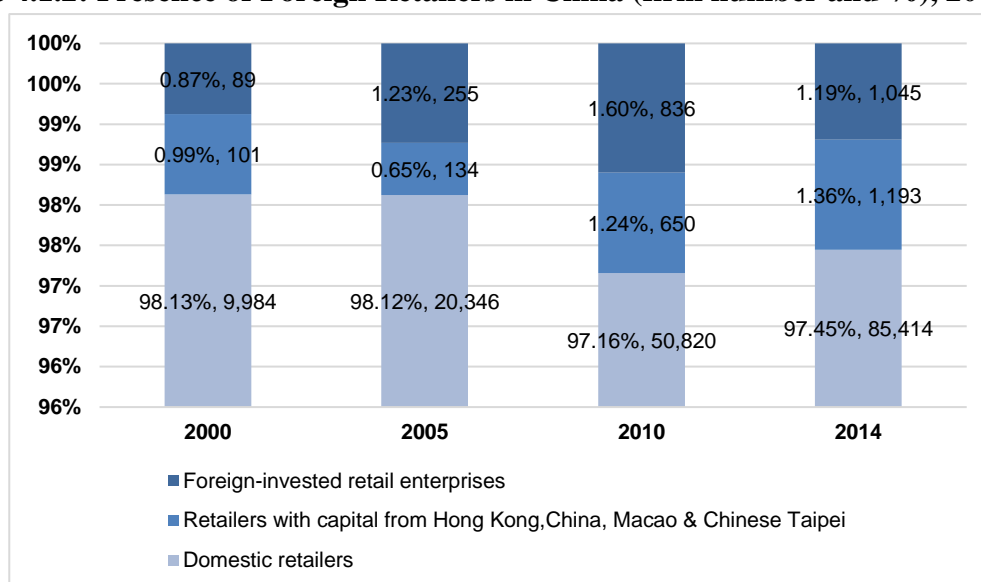
According to data from CB Richard Ellis, in 2007 90 percent of the Top 250 global retailers had a presence outside their economy of origin, and by 2007, 40 percent of them (excluding local Chinese players) had set foot in China. One year later in 2008, 93 percent of the Top 250 global retailers had a presence outside their economy of origin and 42 percent of them had set foot in China. By 2008 China had become the 6th most internationalized retail market, up 3 places from the 9th in 2007.

Every year the China Chain Store and Franchise Association (CCFA) releases its own ranking of “the top 100 retail chain operators” in China (the Top 100s). There were 15 foreign retailers among the top 100s in 2007, accounting for 18 percent of the total sales of the top 100s. Their sales were up by 28 percent per annum, outperforming their rivals on the list which enjoyed average sales growth of 21 percent in 2007.

By 2008, there were 19 foreign retailers with 4,613 stores, up by 13 percent per annum, and growing more rapidly than the total store numbers for the Top 100s (11 percent). This represented 6 percent of the total number of stores and these stores achieved 20 percent of the Top 100s total retail sales. Ranked 6th in 2008, Carrefour was the leading foreign retailer.

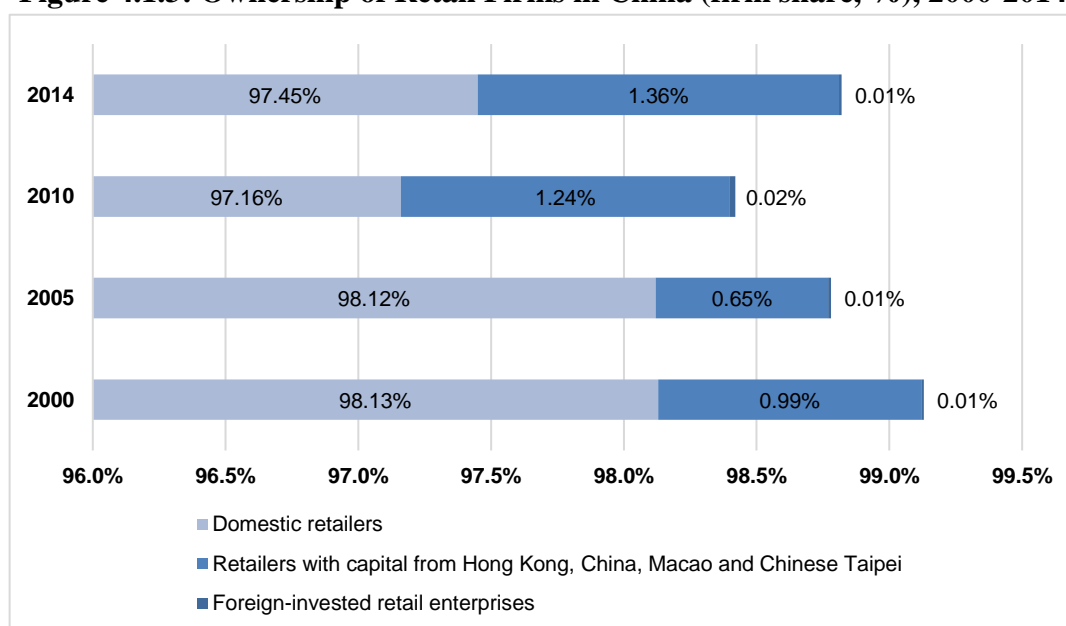
Over the whole period from 2000 to 2014, the total number of foreign retailers increased from 89 to 1,045. Interestingly this growth in numbers was commensurate with the increase in numbers of domestic retailers (Figure 4.1.2). However the number of retailers from Hong Kong, China, Macao and Chinese Taipei increased much more dramatically, from 101 in 2000 to 1,193 in 2014, registering a relative increase in the number of such firms from just under 1 percent of firms in 2000 to 1.4 percent in 2014.

Figure 4.1.2: Presence of Foreign Retailers in China (firm number and %), 2000-2014



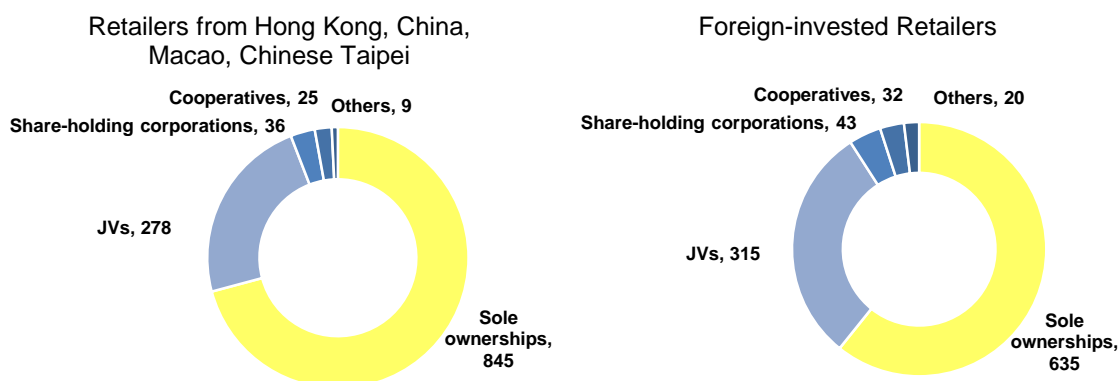
Source: National Bureau of Statistics of China

Figure 4.1.3: Ownership of Retail Firms in China (firm share, %), 2000-2014



Source: National Bureau of Statistics of China

Figure 4.1.4: Retailers from Hong Kong, China, Macao, Chinese Taipei and Foreign-invested Retailers (firm number), 2014



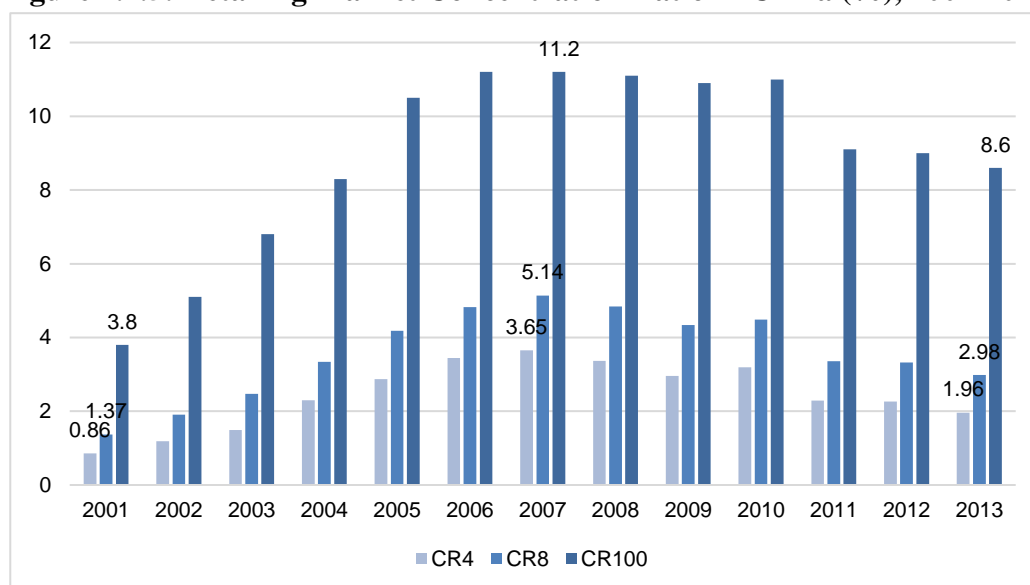
Source: National Bureau of Statistics of China

Since 2006, domestic retailers have effectively held onto their share of both total sales and total purchases by retail firms. In 2006, domestic retailers accounted for 89 percent of both total sales and purchases by retail firms, with sales and purchases by firms owned by Hong Kong, China, Macao and Chinese Taipei accounting in both cases for another 3 percent and foreign retailers for 8 percent. By 2014, domestic retailers share of sales were steady at 89 percent. Firms owned by Hong Kong, China, Macao and Chinese Taipei accounted for an increased share of 5 percent at the expense of foreign retailers accounting for 6 percent.

An impact study by the CCFA, covering 27 cities, confirms that foreign firms accounted for 23 percent of stores in big shopping outlets, but still only for a mere 6 percent of the total number of firms and 6 percent of total retail sales. The reality is that foreign retailers have not gained a dominant market share, though they have performed particularly well in the hypermarket format; prominent players include Carrefour, Walmart, RT-Mart and Tesco.

It is worth considering the changes during this period in China's retail market structure and concentration. The standard tools for measuring market concentration include concentration ratios (CR), which measure of the total output produced in an industry by a given number of firms in the industry and hence illustrate the degree of market control. The most common concentration ratios are the CR₄ and the CR₈, ie the market share of the 4 and the 8 largest firms; ratios range upwards from perfect competition at 0%.

Based on annual rankings released by CCFA, Figure 4.1.5 shows total sales of the Top 100s accounted for 3.8 percent of total retail sales of consumer goods in 2001, CR₈ took a share of 1.8 percent and CR₄ accounted for just under 1 percent. Market concentration intensified dramatically in the first half of the decade but still remained very "low" at a peak in 2007. After the global financial crisis, concentration ratios have dropped back again and in 2013, the CR₁₀₀ was 8.6 percent, dropping further to 6.9 percent in 2015. This evidence suggests that retail remains highly fragmented and the concentration of the retail market remains low.

Figure 4.1.5: Retailing Market Concentration Ratio in China (%), 2001-2013

Source: CCFA, National Bureau of Statistics, China

4.2. OTHER POSITIVE IMPACTS

The adoption by foreign firms of multiple retail formats (hypermarkets, supermarkets and discount stores) has meant **greater opportunities for a wider number of market segments, including lower income groups.**

While investment was largely been focussed on the wealthier, more highly urbanized eastern and coastal regions, there has also been large-scale foreign retail investment into the poorer central and western regions of China, promoting **local growth in under-developed areas.** The entry of foreign firms had, moreover, a “huge catfish effect” with heightened competition in the retail market generating perceived improvements in the **general level of quality** of local Chinese retail enterprises.

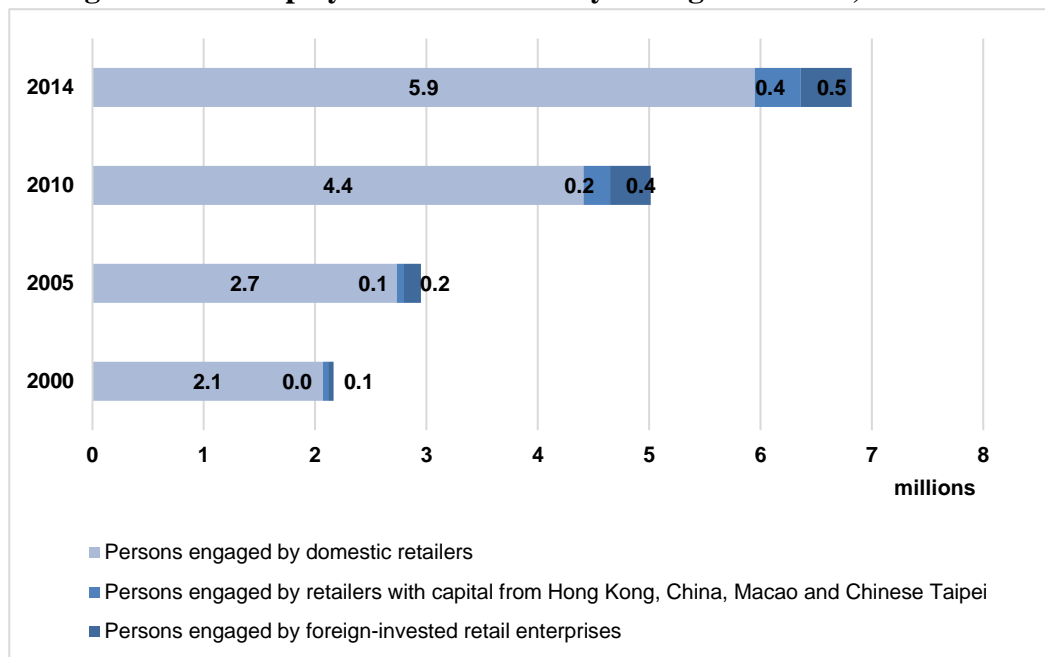
Foreign retailers also proved to be critical role models in demonstrating the improvements in overall **business efficiency offered through innovation.** Most local Chinese enterprises have now followed suit by setting up more efficient modern satellite systems and commercial networks, adopting Bar Code technology and implementing widespread Point-of-Sale Management, Electronic Data Interchange, Management Information and Global Positioning Systems. Application of IT and e-commerce and other improvements in business and marketing management has helped local firms make up their “late-comer disadvantage” more quickly than would otherwise have been possible.

In addition to this beneficial transfer of technology, the experience of watching the process of inward foreign investment through cross border mergers and acquisitions has been an important **source of reference** for domestic Chinese retail businesses as they implemented a “going out” strategy of their own.

Liberalisation of distribution services has also created jobs. Retail draws employees primarily from the lower economic strata and provides training, job security, good wages and often the first opportunity for management experience.

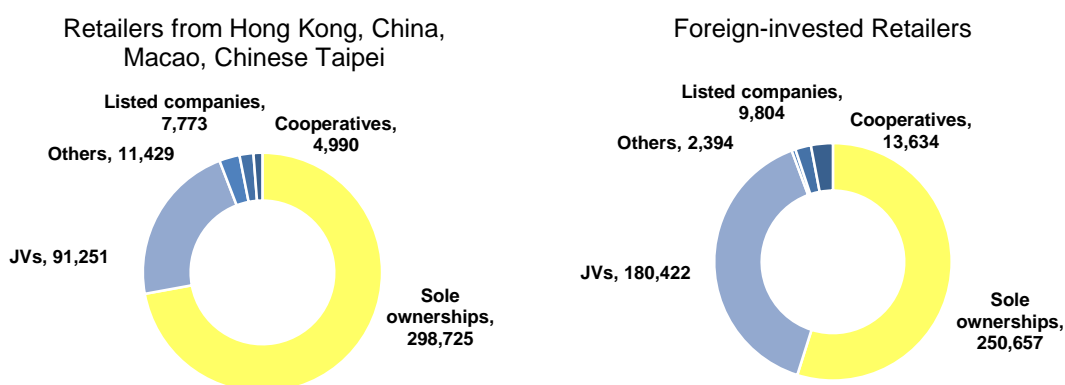
As many as 2.5m people were engaged by retail firms in China in 2000 (Figure 4.2.1). But by 2014, the number had grown to 6.8m, including a relatively high number of management personnel. 87 percent were employed by domestic retail firms. Another 6 percent were employed by firms from Hong Kong, China, Macao and Chinese Taipei (414,168 jobs). Foreign retailers employed another 7 percent (456,911 jobs).

Figure 4.2.1: Employment Generated by Foreign Retailers, 2000-2014



Source: National Bureau of Statistics of China

Figure 4.2.2: Persons Employed by Retailers from Hong Kong, China, Macao, Chinese Taipei and Foreign Retailers, 2014



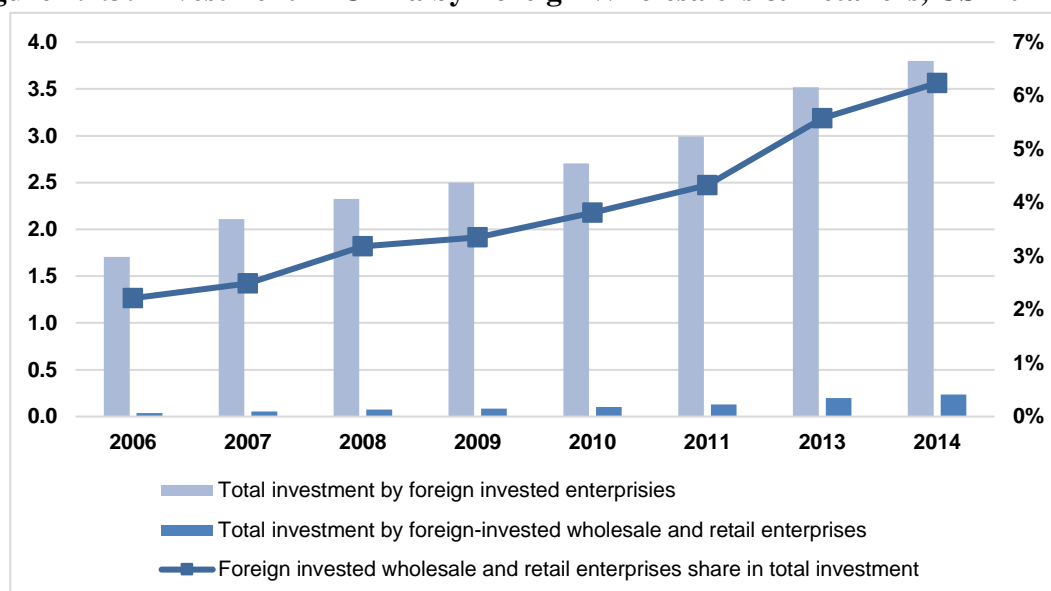
Source: National Bureau of Statistics of China

Figure 4.2.2 shows the detailed breakdown of employment by corporate type of foreign retail firm. In 2014, among the 1045 foreign retailers in China, there were 635 solely owned firms, 315 joint ventures, 43 share-holding corporations, 32 cooperatives and 20 others (Figure 4.1.1). Of the 456,911 employees of foreign retailers, well over half were employed by solely-owned firms, with joint ventures being the second highest employer. Of the 414,168 employees in retail firms owned by Hong Kong, China, Macao and Chinese Taipei, nearly two-thirds are employed by solely-owned firms.

Very importantly the opening up of the distribution sector has also impacted positively upstream on **local merchandise producers** who have benefitted from a wide variety of opportunities including foreign retail firms' linkages to offshore markets. The opening up to foreign retailers had the effect of attracting major new procurement opportunities for Chinese producers. More than 40 of the world's top 50 retail groups now purchase over USD1.5 trillion in China, through procurement centres which account for 60 percent of total procurement in Asia.

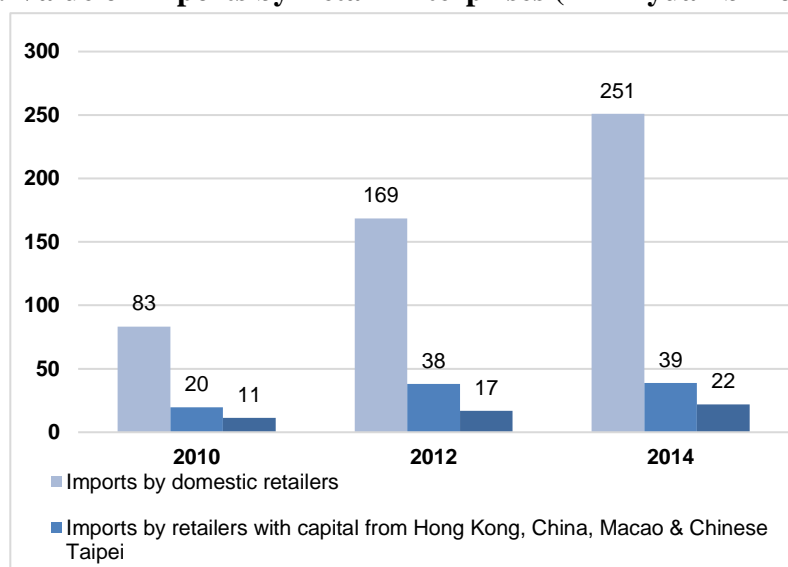
Foreign retailers have also **increased domestic investment** in China. As shown in Figure 4.2.3, the total stock of investment by foreign wholesalers and retailers increased from USD37.8 billion to USD236.8 billion by 2014. The share of wholesale and retail services in total investment by foreign firms increased from 2.2 percent in 2006 to 6.2 percent in 2014.

Figure 4.2.3: Investment in China by Foreign Wholesalers & Retailers, USD trillion



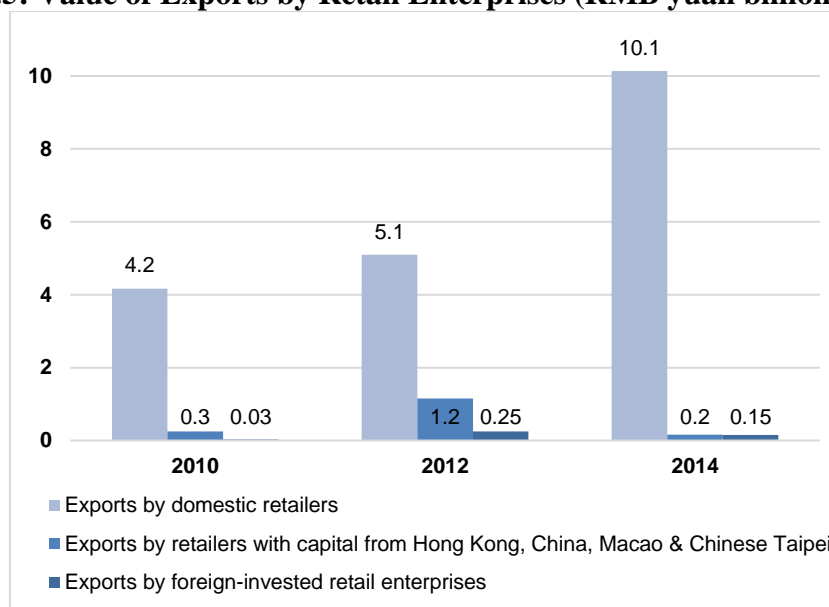
Source: National Bureau of Statistics of China

It is worth noting also the impact on **trade flows**. China's retail firms are growing net importers, with the deficit increasing from 109.7 RMB yuan billion in 2010 to 301 RMB yuan billion by 2014 (Figures 4.2.4 and 4.2.5). Total imports by retailers stood at 114.2 RMB yuan billion in 2010, with domestic retailers accounting for 73 percent, firms from Hong Kong, China, Macao and Chinese Taipei for 17 percent and foreign retailers for 10 percent. By 2014, total imports by retailers reached 311.6 RMB yuan billion, with domestic retailers importing a larger share just over 80 percent, firms from Hong Kong, China, Macao and Chinese Taipei and foreign retailers each importing around 10 percent of the total.

Figure 4.2.4: Value of Imports by Retail Enterprises (RMB yuan billion), 2010-2014

Source: National Bureau of Statistics of China

Foreign retailers are insignificant players in China's export business. In 2010, total exports of retail firms in China stood at 4.5 RMB yuan billion. Firms owned by Hong Kong, China, Macao and Chinese Taipei participated in the export business, accounting for a 6 percent share – foreign retailers accounted however for less than 1 percent of exports. By 2014, exports had skyrocketed to 10.4 RMB yuan billion. Firms owned by Hong Kong, China, Macao and Chinese Taipei retailers accounted for a reduced 1.5 percent and foreign retailers for a small increased share at 1.5 percent.

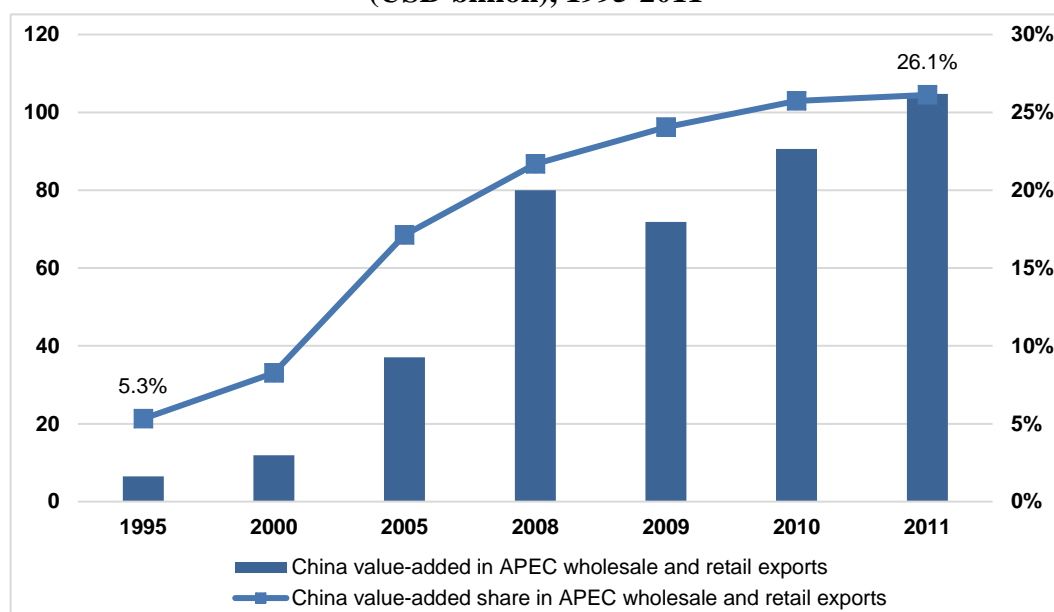
Figure 4.2.5: Value of Exports by Retail Enterprises (RMB yuan billion), 2010-2014

Source: National Bureau of Statistics of China

On the other hand, international retailers have evidently acted as very important “export gateways” for local Chinese MSE suppliers; in 2014, Walmart for example sourced US18b worth of Chinese goods for sale in the United States market alone. It is also worth observing the strong growth in China's value-added share of exports of retail (and wholesale) services from the APEC region, from 5 percent in 1995 to 17 percent by 2005 and 26 percent in 2011,

confirming that opening up via WTO commitments has helped grow the distribution sectors' overall export performance.

Figure 4.2.6: China's share in APEC Region Gross Retail and Wholesale Exports (USD billion), 1995-2011



Source: OECD-WTO TiVA database 2015

4.3. INSIGHTS FROM TRENDS IN TRADE IN VALUE-ADDED

The new OECD/WTO Trade in Value Added (TiVA) data goes beyond the traditional balance of payments data to show the trends of value added content embodied in traded goods and services. It breaks down and measures the domestic and international components of an industry value chain, showing how industries interact along the chain to produce the final traded good or service.

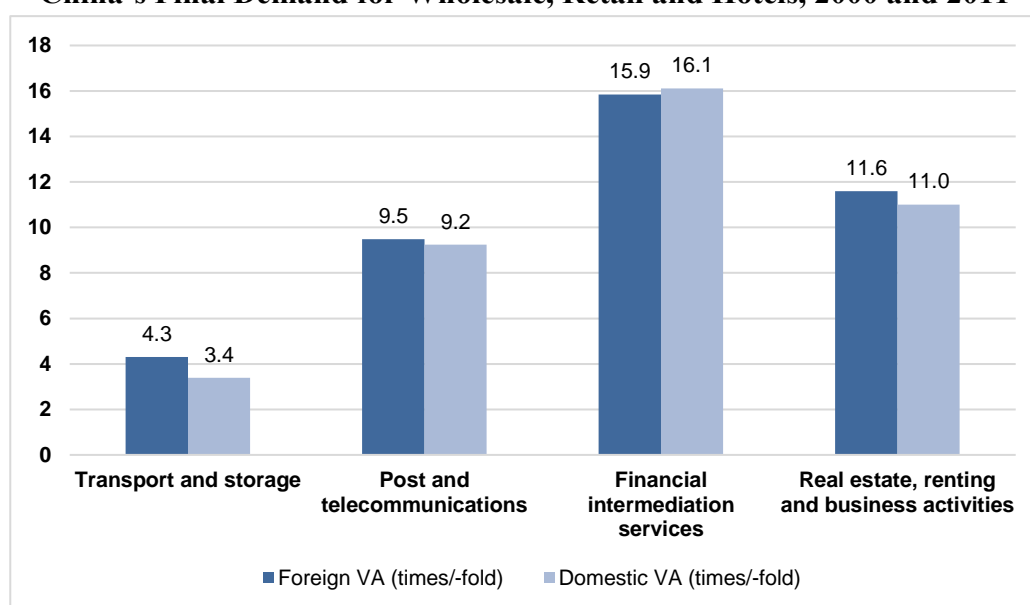
The TiVA data covers retail only in an aggregated industry group where it is combined with wholesale and hotels. This limits the applicability to the retail sector of the policy conclusions which might follow from analysis of this data. Appendix 3 nevertheless provides a detailed analysis of the trends in value added in the aggregated industry grouping wholesale, retail and hotels. Based on 2011 data, what stands out of particular interest is summarised below:

- The wholesale, retail and hotels sector is the largest services sector contributor to the total value-added of China's exports of manufactured goods (12.2 percent, followed Business services 6.6 percent and Transport & Telecommunications 5.6 percent).
- Although the retail, wholesale and hotel sector also ranks number 1 in terms of contribution of China's domestic value-added to gross exports (contributing around 13.5 percent, followed by ICT and electronics (11 percent) and textiles (7.5 percent), it is not particularly export-driven. Foreign final demand accounts for 30 percent of total domestic value added in this sector and this has dropped 5 percentage points since 2008
- The foreign value added share of gross exports of this sector is very small and has seen no significant increase since WTO accession.
- Some local services upgrading has taken place within this sector, with other domestic services intermediates contributing more to exports. There has also been a small but steady

decline over 2008-2011 of imported inputs going into exports of wholesale, retail and hotels.

- Taken together, these findings provides important signals that China is moving upward in the value-chain as domestic services providers integrate upstream.
- Financial intermediation stands out as one services sector where growing local value added participation in the wholesale, retail and hotel sector is apparent.
- Foreign value added is growing slightly in some other services inputs into the sector such as Post and telecommunications, Real estate, renting and other business activities and Transport and Storage.

Figure 4.3.1: Increase in Key Services Sector Domestic and Foreign Value-Added in China's Final Demand for Wholesale, Retail and Hotels, 2000 and 2011



Source: OECD-WTO TiVA database 2015

It is also relevant to the discussion of reform in the retail sector, and recent developments in e-commerce, to note that in 2011, only 10.5 percent of China's total final domestic consumption reflects foreign content with as little as 2.1 percent from Europe, 1.4 percent from NAFTA, 3.4 percent from East and Southeast Asia, 0.7 percent from South and Central America and 3 percent from other regions.

4.4. MEASURES OF SERVICES TRADE RESTRICTIVENESS

The OECD Services Trade Restrictiveness Index (STRI) provides policy makers and regulators with a means of measuring progress in structural reform in services and of benchmarking against best practice. The OECD STRI is calculated on the basis of a regulatory database that contains comparable, standardised information on trade and investment relevant policies in force. STRI indices take values between zero and one, one being the most restrictive.

Retail ranks consistently amongst the most open services sectors in all regions of the world, with the overall level of restrictiveness ranging from 0.02 to 0.4. The sample average is 0.13. The APEC region average is 0.17. Typical contributors to the global restrictiveness results are set out in Box 2.

According to the OECD STRI, and illustrated in Figure 4.4.1, China still has a relatively high degree of restrictiveness among APEC members, with a score of 0.311. Detailed STRI indices for China are provided in the Appendix.

Box 2: Services Trade Restrictiveness Index for Distribution Services

Restrictions on foreign entry significantly contribute to the restrictiveness results for almost half of the economies covered by the STRI (60 out of the 103 economies covered).

Although most economies allow close to 100 percent foreign ownership for greenfield investments as well as acquisitions, a high level of restriction is attributed to impediments such as screening of investments, limitations on board members and managers, economic needs test for licensing, and restrictions on acquisition of land.

Restrictions also exist on form of entry, ownership, regulatory and sector specific operational limits such as limitations on multi-brand stores, the number of outlets, locations of the store, and the type of products sold. Foreign equity restrictions are found in 2 economies in the OECD sample set.

Some economies require that the distribution of certain products, such as alcohol beverages at the retail level and wholesale level, is reserved for statutory monopolies. In 1 economy foreign invested retailers and wholesalers are not allowed to sell tobacco. 5 economies have no restrictions on foreign entry.

A range of idiosyncratic **domestic regulations** also occasionally impede market entry.

Many developing economies do not have formal regulations for retail activities. The STRI database shows that in 23 percent of economies covered, a license is not required, and 30 percent of economies indicate there is no regulatory authority for retail. It is not clear how far this lack of formal regulation translates into openness. Openness can be deceptive when complicated multi-layered licensing processes and other behind-the-border restrictions are in place.

Several economies have discriminatory measures in relation to consumer credit and public procurement. Regulations on pack sizes of pre-packages and labelling provisions beyond information requirements are also observed in a few economies, although almost half of the economies included in the STRI database do not have any restriction in this policy area. Other discriminatory measures include local sourcing requirements for multi brand retail trading which are found in 1 economy.

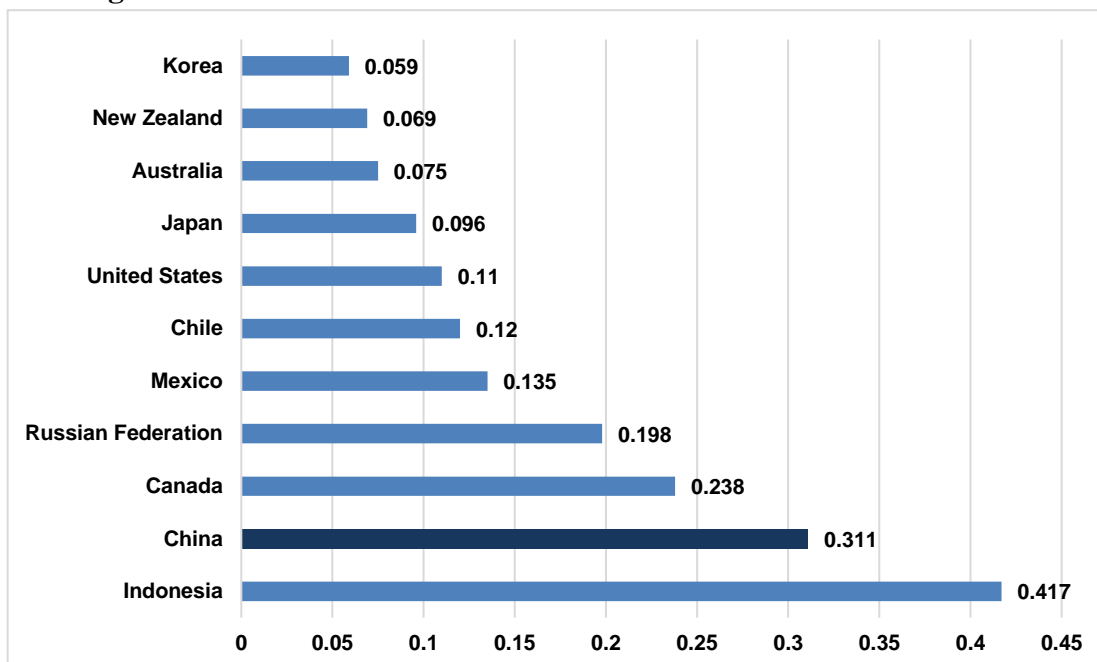
Restrictions on the **movement of people** have the biggest contribution to the indices in 8 economies in the data set.

Barriers to competition also have a substantive impact on many economies and are the most significant restrictions in 9 economies. Restrictions on business practices, such as shop opening hours, seasonal sales periods and price regulations, are prevalent. In addition, two-thirds of economies have minimum capital requirements.

The market structure of distribution services is changing rapidly with the emergence of e-commerce and multi-channel retailers. The STRI covers only some of the issues with respect to these new types of services providers. Restrictions that impede e-commerce and multi-channel retailers warrant closer attention as developments in this area continue to advance.

Source: OECD

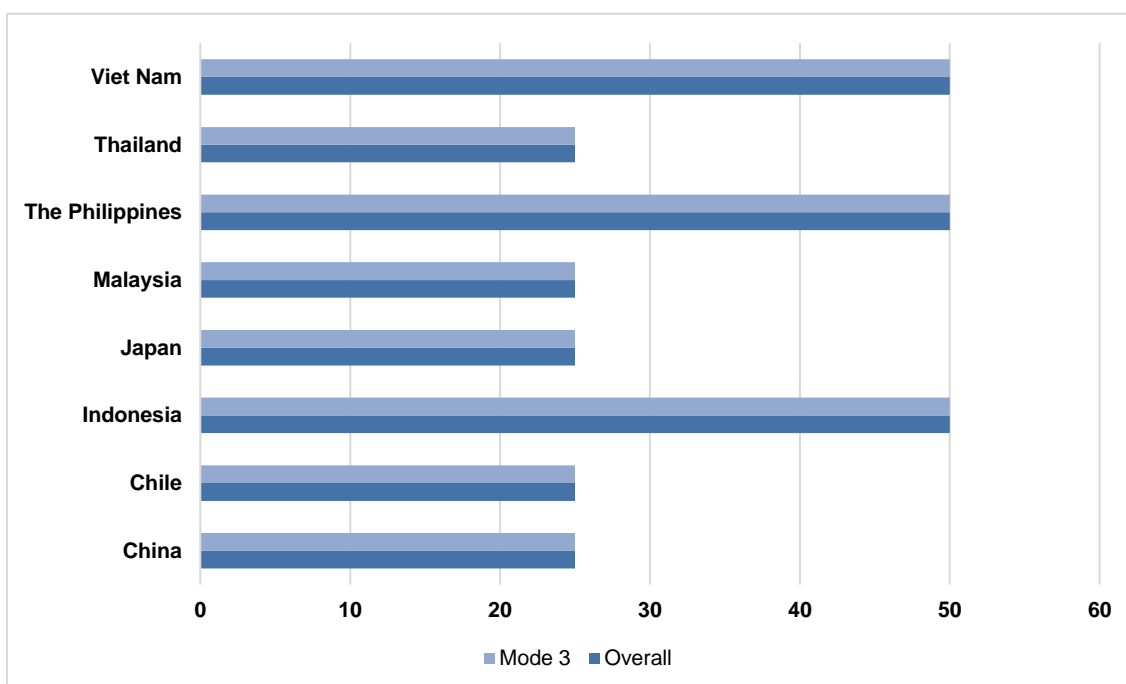
Figure 4.4.1: OECD STRI for distribution services of APEC members



Source: OECD Trade Policy Papers No. 173

While China’s policy and regulatory regimes affecting the distribution sector cannot yet therefore be described as regional best practice, the market opening experiences of China, and the many positive impacts along the value chain, hold important lessons for other APEC economies with even higher STRI in the distribution sector. According to the World Bank measure (Figure 4.4.2), China has the same score of 25 for both overall retailing and for mode 3 (commercial presence). This is on a par with Thailand, Malaysia, Japan and Chile, lower than Viet Nam, The Philippines and Indonesia.

Figure 4.4.2: World Bank STRI in Retailing



Source: World Bank STRI database

Moving beyond traditional retail to measuring restrictions specifically in e-tail, would require of course an additional examination of regulatory barriers affecting the evolving value-chain. As discussed earlier, a full study would need to take into account restrictiveness also with respect to telecommunications services, ICT services, financial services, transport, logistics and express delivery services.

4.5. OTHER QUALITATIVE FACTORS TO CONSIDER

In addition to reform of many of the regulatory impediments picked up in the STRI, the Chinese government has taken a number of other steps to promote transformation of the retail sector, to facilitate innovation, to remove domestic chokepoints along the value chain and to expand consumer choice. Not all of these pro-competitive policy stances are necessarily picked up in the legislative and regulatory data-base compiled by the OECD.

For example, the government has traditionally encouraged retail enterprises to expand their scale through acquisitions and mergers, contracting and equity investments in order to achieve greater competitiveness. Central government policy has also guided small and medium retail enterprises to modernize, in particular to actively apply modern distribution technology, as well as marketing and management techniques.

Implementation of State Council policies on “promoting the development of distribution” and “invigorating distribution and expanding consumption options” has helped ease chokepoints in domestic and international retail supply chains and diminish domestic market fragmentation.

Both the 12th and 13th Five-Year plans introduced by the MOC have included promotion of multi-channel retailing chains and multi-format extension. By encouraging increased scale and a higher degree of horizontal firm-level integration, MOC has facilitated efficiency gains in the traditional retail value chain in China as well as the e-commerce value chain.

Legislative developments are also noteworthy. Recent developments include the “Price Law”, “Anti unfair Competition Law”, “Anti-Monopoly Law”, “Direct selling regulations” and “Regulations on the Administration of Commercial Franchise”. New Departmental-level rules include “Foreign Investment in Commercial Fields”, “retailers-suppliers fair trade management approach” and “retail sales behaviour management approach”. The Anti unfair Competition Law is now being revised and is expected in its next iteration to also cover the internet-based industries including e-tail and e-payments.

5. NEW BUSINESS AND REGULATORY CHALLENGES AND FURTHER STRUCTURAL REFORM

The retail landscape is becoming more complex and dynamic and new business models, as well as new regulatory challenges are emerging.

5.1. TECHNOLOGICAL AND CONSUMER PREFERENCE CHALLENGES FACING TRADITIONAL RETAILING

Chinese consumers' attitudes toward products and brands are changing, and individual consumer behaviour is more pluralistic. A decade ago, packaged consumer goods had only a handful of optional sales channels: supermarkets, convenience stores, hypermarkets and traditional small and large retailers. Now, consumers demand more product and brand choice, with different sizes, packaging, and sales methods. And e-commerce and m-commerce is providing more numerous options with respect to payment and delivery processes.

These shifts call for a rethinking by retailers to the traditional go-to-market approaches. The more knowledgeable about customer needs and preferences the retailer is, the smarter and more focused retailers can be in managing their own value chain to effectively deliver both variety and value for money to the consumer. As retailers move to cover more retail channels, they need to simplify trade terms and promotional spending. Adapting to the fragmentation of marketing channels has stimulated many companies to innovate in managing more digital merchandising and communications paths. Data and analytics capabilities now play an important role in managing costs in today's consumer environment. Retailers increasingly focus on key capabilities such as building a comprehensive dataset of sources on consumer, brand, product, and competitive behaviour and developing analytical skills, tools, and routines to use the data in ways that are critical for the specific business.

In the more competitive environment, consumers tends to be more price sensitive with price often being a determining factor in the choice of retail channel. Convenience is also cited as a key consumer motivator, together with growing desire for a wider range of varied products including unique, individual or bespoke items. The shopping experience itself is increasingly important, including the ease of payments and delivery processes. Online retailing is becoming important for brand positioning and consumers are spending more online.

5.1.1. Consumer responses to innovative media messaging

Consumers' use of media has fragmented with the rise of digital content and the proliferation of online devices. Each channel - from the web, mobile, and social sites to radio, TV, and print - has its own technical requirements, audience appeal, and economics, needing specialized attention. But at the same time, media campaigns need to be closely coordinated for effective consumer messaging.

Chinese consumers are becoming highly interacting online, visiting web forums and discussing and researching brands on the internet, either via their PCs/tablets or on the go, via their mobile smart phones. Digital media therefore is playing an increasingly significant role as it enables brands to interact with both existing and potential consumers. Social media is popular, with many consumers turning to celebrities, influential bloggers and also their own social online

communities for direction and pointers on what to buy. Consumers actively engage with online campaigns, post online product reviews and provide direct feedback.

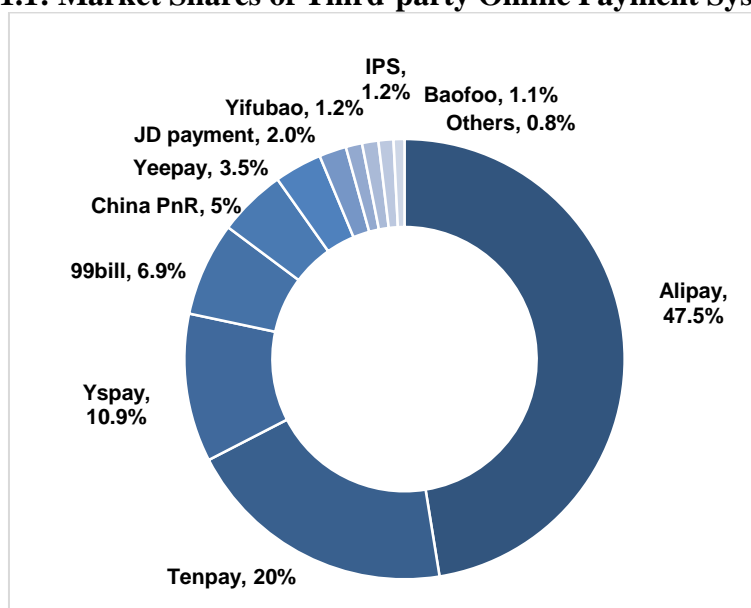
With almost instantaneous feedback and easy-to-use interfaces, social media platforms such as Weibo (microblogging website – akin to a hybrid of Facebook and Twitter with a market penetration similar to Twitter in the United States, launched by Sina Corporation in 2009 and with over 100 million users per day in 2016) and WeChat (stand-alone messaging app launched by Tencent Holdings in 2001 with over 700 million active users in 2016) are identified by Chinese consumers as the top choice for information, followed by friends and word-of-mouth. Online consumers under 35 are more likely than older shoppers to rely on peer opinions, either in user reviews, or via word-of-mouth. As consumers spend more on products that receive reviews from trusted and familiar sources, Brands need to be able to fully integrate social media platforms as part of their overall retail strategy in China.

5.1.2. Consumer responses to online payments systems

Consumer preferences are shifting towards transparency and flexibility as they are looking for better, more proactive solutions around life events. The online payments market has grown in importance in recent years as a result of the boom in e-commerce and consumers have shifted from paper based payment mediums to online payment mediums. China's third-party online payment platforms confronts increasing fierce competition.

Third-party online payment platforms are facing increasingly fierce domestic competition. In 2015, the gross market value of China's third-party online payments totalled 11.8 RMB yuan trillion, 47 percent more than the previous year. Alipay held a 47.5 percent share of the total market. Tenpay had gained a 20 percent share due to its open cooperation platforms and comprehensive set of financing scenarios including through WeChat and QQ with integrated online mobile options. JD, with 7 payment-based businesses, had ramped up its efforts to develop third-party online payment options for e-commerce and achieved a market share of 2 percent.

Figure 5.1.1: Market Shares of Third-party Online Payment Systems, 2015



Source: iResearch 2016

The three major payment services providers are China UnionPay, Alipay, and Tenpay. UnionPay, established in 2002 with approval of the State Council and the People's Bank of China, has been the only inter-bank network in the market, and is the largest credit card scheme in the world by number of cards issued. UnionPay is a vital part of the payments mix, and particularly important for reaching shoppers who do not have an Alipay or Tenpay account. In June 2016 China moved to implement reforms announced as a result of a WTO ruling in 2012 that it was discriminatory to bar foreign e-payments processors from handling RMB Yuan – denominated transactions. This opens the market to foreign credit cards such as Visa and Mastercard, officially ending Union Pay's monopoly

Alipay is the largest single payments platform in the market, with around a 48 percent share and an even bigger slice of the fast growing mobile pie. Its dominance is due to its integrated linkage with online shopping platform Taobao, founded by Alibaba Group in 2003 and now one of the world's top 10 most visited websites. Tenpay is integrated with Tencent QQ, an instant messaging software service that includes not only group and voice chat but also shopping, gaming and microblogging. Tenpay has 20 percent of the market, with most transactions originating from their own webstores such as WeChat webstore.

Chinese consumers are becoming more familiar with foreign brands, and they have access online to price information for products selling overseas. There has been an evident preference, when they find foreign retailers offering what appear to be the same luxury products in China but at much higher prices, to buy those products overseas, or purchase them through "daigou" agencies whereby overseas Chinese make purchases "on behalf of" residents. Many foreign retailers have recently found themselves at a tipping point, facing high tariffs on luxury products, competition from undetected counterfeit products purchased online, reluctance to design products specifically catering for the China market and a slowdown in sales growth. Retailers targeting the mid- to high-end markets are facing particular challenges.

China's new e-commerce law implemented in April 2016 seeks perhaps to respond to some of these as well as a range of other consumer protection issues but in ways which have drawn much response from stakeholders.

In May 2016 a State Council Circular on IP infringement and shoddy products introduced a crack down on on-line sales of shoddy products, especially popular foods, medicine, agric. goods, household appliances, construction materials, auto parts and children's products. It also calls for establishment of a tracing system for fake goods traded through cross-border e-commerce, including online piracy and infringements, especially in on-line literature, music, videos, games, comics and software.

New differentiated "parcel taxes" have also been introduced on foreign goods purchased online. And the publication of a "positive List" of cross-border e-commerce goods that have central government approval for import (including a broad range of fashion, footwear, toys, cosmetics, and home appliances, as well as more sensitive items such as infant formula) has begged a number of questions about goods not on the list. Cross-border e-commerce is now a hot topic in China.

5.2. ONGOING AND POSSIBLE FUTURE DIRECTIONS FOR POLICY AND REGULATORY REFORM IN CHINA

The Chinese government has been very supportive on the development of the retail sector, playing an important role as the economy moves towards a consumption-driven economy. In recent years, a number of new rules and regulatory guidelines have been issued to promote retail development. Other regulatory changes are foreshadowed, including in response to the technological and consumer preference driven developments highlighted above.

5.2.1. Consumer Protection Law

One of the most significant initiatives was the promulgation of the new Consumer Protection Law in March 2014. This aimed to provide more comprehensive rights for consumers in a rapidly evolving business context and with changing consumer behaviour. It has heightened obligations and liabilities of retailers and expanded protection of online consumers, enabling them to return products purchased online within seven days without explanation. Moreover, the new law provides that businesses need to respond to a consumer complaint within seven working days instead of two to four weeks, as required under the previous legislation. Penalties imposed for contravention have increased from 1-5 times the earnings to 1-10 times earnings. If no earnings arise from a transaction, the penalty has been increased from the previous 10,000 RMB yuan to up to 500,000 RMB yuan. In addition, compensation for the consumer has increased from 100 percent to 300 percent of the given sales price.

Food safety has also seen recent policy focus. In May 2016 the State Council issued a Plan to tighten supervision on food safety, calling for improved laws and regulations on food safety, including the Quality and Safety Law for Agricultural Products. Heavier criminal sanctions were imposed on fake products & an origin tracing system will be established to root out illegal actions. Tightened supervision planned on overseas sources of food and agricultural products. Standards for construction and operation of cold chain logistics will be improved to ensure higher standards of food safety.

5.2.2. Online Payments Regulation

The Chinese government has granted over 200 licenses to domestic non-bank third party payment services providers in order to expand the payments ecosystem and promote the development of the online payments industry. This will help to bring greater choice and competition to the domestic payments market.

Policy measures that enable development of open and market-driven electronic payments solutions for consumers as well as provide a level playing field for acceptance and issuance of licenses for electronic payment companies, merchants, and the banking sector have become essential in today's retail environment. A sustainable payments system is not just about technology, but about driving incentives for others to participate in it and derive value from doing so. Encouraging the growth of electronic payments gives consumers and merchants greater choice and increases competition. When economies allow for competition and a level playing field, consumers benefit.

5.2.3. Transport, Logistics, Express Delivery Regulation

A State Council document of 26 October 2015 sets out the Government's approach to accelerating development of the express delivery industry, including building international

competitiveness of China's local express delivery industry. The government plans to establish a safe and efficient delivery network that provides quality service to both urban and rural areas with advanced technology by 2020. The network will cover the whole economy and connect with foreign economies. The new policy aims to tackle problems rough development modes, undeveloped infrastructure facilities and various safety and security concerns.

The State Council policy goals include significant enhancement to air transportation owned by delivery enterprises, building of a batch of new domestic and international cargo terminals, and cultivating key enterprises with international competitiveness. The objective is to ensure express items between major domestic cities can be delivered within 48 hours, and to improve the speed of international services and the economy coverage.

In June 2016, the NDRC announced an Action Plan to promote integrated development of transportation & logistics. This Plan establishes targets to be reached by 2018, with a "one waybill" transportation system (sometimes described as "one data") and a railway system covering over 80% of China's large ports and logistics parks.

5.2.4. Labour Market Regulation

The online retailing ecosystem is providing new flexible employment opportunities for those who would otherwise not participate in the job market but can now more readily find structured jobs that can be done at home and/or during flexible hours. This taps into the pool of ageing workers, mothers who might choose to stay in the labour market if lower-intensity jobs are available, as well as mobility-impaired workers who can perform more easily from home. E-tailing is uniquely suited to offer this type of flexibility.

In China, part-time workers are popular in the online retailing sector. 54 percent of market place-based e-tailers operated their online stores on a part-time job basis. Many mini retailers with fewer than five employees use family members on a part-time basis as well. It is also quite common for large-scale e-tailers to employ part-time workers to work remotely as online customer service assistants. The Chinese giant retailers recruit talent overseas.

China's labour market is relatively dynamic and retail industry employees change jobs even more frequently than most of their counterparts. China's retail industry employees tend to receive an annual pay rise of between 5 and 10 percent and expect a 25 percent salary raise when they change jobs. High staff turnover is a challenge. The annual turnover rate for the retail industry as a whole is between 30 to 40 percent; for some segments, such as junior staff, the turnover rate can be as high as 70 percent. Many retailers indicate that it is hard to recruit and retain staff, especially junior sales associates.

Skills shortages could impede the further growth of the retailing industry in China. There is a need for the Government to consider adoption of a range of more flexible employment policies to further facilitate this type of part-time labour pool expansion, as well as employee skill development and attract more talent from overseas. For example, the government provides tax incentives and specifies a required percentage of mobility-impaired workers.

5.2.5. Competition Policy

According to the MOC⁶, phased progress has been made in eliminating regional blockades and breaking trade monopolies. A series of regulations that hampered fair competition have been overhauled. An intensive review process took place in which 235,721 government regulations, normative documents and other documents were examined in the provinces, autonomous regions and municipalities, among which 476 were amended, abolished or announced invalid. At least 27 local documents providing for favourable tax treatment and conflicting with other relevant regulations were abolished or amended. Coordinating mechanisms were introduced among related departments to ensure bidding regulations were comprehensively cleared, and 33 administrative and institutional fees at the central level and 314 at the provincial level were cancelled or exempted.

Law enforcement supervision has been strengthened, and fair competition promoted in the market. A special campaign was conducted to rectify competition abuses on TV shopping channels. Over 50,000 enforcement personnel were dispatched, more than 770,000 advertisements monitored and 691 cases of violation brought. Penalties were imposed on 316 enterprises and broadcast organizations and 265 websites, 16 illegal TV shopping channels were closed, and 7,803 advertisements were deemed to be illegal and forbidden. After the special campaign, the number of illegal TV shopping advertisements dropped 84 percent.

The MOC also strengthened its supervision of retail and supply transactions, and investigated the pricing policies of Beijing Wumart, Beijing Jingkelong and Jinan Suning. Management procedures were strengthened for commercial prepaid cards. A special inspection was carried out to urge local registered enterprises to more strictly implement the business reporting systems and safeguard measures on pre-collection funds. To date, as many as 4,503 enterprises which issue single-use cards have completed registration.

Capacity for competition law enforcement supervision needs to be strengthened further.

With respect to e-commerce, the Government has remained relatively silent but China's Anti-Unfair Competition Law is currently under revision and is expected to provide clearer guidance with respect to internet-based industry in future.

Meanwhile, in May 2015, the State Council published an Opinion on Striving to develop E-Commerce and Accelerating the Cultivation of the New economic Engine which is focused on competition specifically in the e-commerce market, emphasising curbing monopoly agreements and abuse of market dominance and reviewing the concentration of undertakings. This policy guideline did not have legally binding status nor did it solve any specific anti-trust issues in the e-commerce sector. But it did identify the relevant authorities as NDRC, SAIC and MOC and tasked them with issuing specific policies in the near future.

Based on competition law principles, there are two separate markets involved; the online B2C market where the e-commerce service is a platform and media tool and the e-commerce service market where the platform operator offers both the platform and other services both B2C and B2B. Concentrations of undertakings are potentially present in both markets (eg the transactions between Didi and Kuaidi, 58 Tongchen and Ganji as well as Ctrip and e-Long.)

⁶ <http://www.mofcom.gov.cn/article/ae/ai/201501/20150100882509.shtml>

Trans-market issues are also arising. Platform operators such as Yihaodian and Jingdong engage in direct sales and hence compete directly with the online business operators by selling direct their own commodities and services on their platforms.

In China, as in other APEC economies, the mix of pro competitive and anti-competitive effects of exclusive arrangements and MFN clauses in price-setting between online platform providers and online business operators is now under discussion, with questions arising regarding potential vertical monopoly outcomes.

There was one competition enforcement case in 2012, when Walmart acquired the control of online platform operator Yihaodian's online direct sales business, where MOC considered that Walmart might leverage its offline competitive strength into the online environment and the post transaction entity may foreclose competition in the value-added telecommunications sector, consequently imposing some restrictions of the scope of the transaction and on the post-transaction operation.⁷

In the fast changing technological environment, and development of the O2O business, many platform operators are now focussing on mergers with offline enterprises, for example Alibaba's equity acquisition of Intime Department Store. Meanwhile an increasing number of offline businesses including even logistics companies, are entering into the e-commerce market. In the future there will likely be more trans-market concentrations of undertakings with considerable market power, drawing the attention of competition enforcement.

5.2.6. Development of social and business credit systems and other financial services

The process of building a business credit system has deepened including a regulatory regime for integrity payments systems has been introduced. The MOC introduced a Planning Outline for Social Credit System Construction 2014-2020 (No. 21)⁸, and Opinions on Promoting the Operation of the Business Credit System (No. 772). A targeted promotional plan is being implemented, with a first batch of 87 enterprises and institutions in Beijing, Shanghai, Jiangsu, Zhejiang and Guangdong identified.

Development and promotion of the credit trading sector is underway. A project oriented to awarding credit insurance to SMEs for domestic retail trade has been implemented, with subsidy funds of 98.62 million yuan covering 23 provinces. The factoring industry has been promoted and is flourishing, with factoring agencies established in Tianjin, Shanghai, Shenzhen, Chongqing, Zhejiang and Beijing. Consumer discipline and community integrity of payments systems has become stronger. The government could focus more on encouraging chambers of commerce and industry and other business associations to themselves conduct business credit evaluation.

In June 2016, the State Council issued a Guideline to establish a better social credit system. The idea is to build a credit-focused market, to facilitate streamlining of administration and delegation of government authority. Government at all levels is to put all credit-related information of market entities on the government website, providing more opportunities to enterprises with good credit records. Punitive measures will be imposed on those with low

⁷ King&Wood Mallesons

⁸ The social credit rating system is being designed to assign credit ratings to all citizens, including based on their online behaviour.

credit. The guideline urges establishment of an online sharing system across the economy, promoting a cross- region, cross-sector all-of-government department credit system.

5.2.7. Retail channel regulation

Fundamental structural change has taken place and continues to take place in retail. Consumers are demanding a variety of modern retail channels which provide convenient, affordable, safe, green goods and increasingly also services.

During the last 5 years, there has been keen competition in the retail sector in the first and second-tier cities. Due to a sharp rise in operating costs and a significant increase in rent and labour costs, the pace of retail expansion in the first and second-tier cities is now slowing. Some regional retail markets have also become saturated but most third and fourth-tier cities still have large potential demand. Low rents and labour costs, coupled with implementation of the "Ten Thousand villages" marketing project by MOC, together with other preferential policies, has intensified the pace of multi-channel retail development and encouraged a number of large chain stores to move to medium and small cities and rural areas to extend their retail channels, including establish retail outlets in towns and rural areas. This process is also contributing to accelerating the pace of urbanisation.

In the future, retail will involve multi-channels for both traditional and online retail. Integration of offline and online retail is being encouraged. The online retail chain will continuously be encouraged to radiate to small cities and rural markets.

The Chinese government has also encouraged retail enterprises to actively engage in retail business model transformation, reducing costs to enhance efficiency across the entire supply chain in the interests of all participants. Some local commentators have called for the government to provide incentives for retailers to enhance the degree of office automation by installing up to date Point-of-Sale and Enterprise Resource Planning software, Management Information Systems, financial management software systems and other digital technology.

5.2.8. Provision of e-commerce support services for SME retailers

According to MOC⁹, in 2014, in line with the policy principle “the governments supporting the agencies, and the agencies supporting the enterprises”, the MOC started developing pilot programmes to provide e-commerce support services for SME retailers. The Government is playing a direct role in driving SME e-tail development by helping to connect enterprises with government services to provide information technology consultancy, financing, market intelligence, personnel training and development of e-commerce applications.

To date, the pilot project covers 48 cities in 26 provinces, autonomous regions and municipalities, the construction phase is basically complete, operations have commenced and the government service offerings and modes have been well received by enterprises. Following the principle of “servicing while constructing”, local government departments identified the common elements of SME needs via surveys, and a comprehensive range of services have been established to meet actual SME needs. Personalized services are available through service alliances and introductions are also being made to professional services organizations. A coordinating mechanism has been established among various departments, financial support

⁹ <http://www.mofcom.gov.cn/article/ae/ai/201501/20150100882509.shtml>

policies are in place, and SME retailers are benefitting, including gaining in terms of market recognition.

The programme of SME support will be revised in light of experience and benefits will be enhanced as required. The MOC and related departments will strengthen supervision and performance evaluation, and promote establishment of similar SME e-tail assistance platforms on a nationwide basis.

5.2.9. Other enabling policies to enhance the competitiveness of retail services

The Government has recently introduced a variety of other policies designed to enhance competitiveness and help ensure an enabling business environment for the continued development of the retail sector. Not all of them can be covered in detail but it is worth mentioning specifically the recent efforts with respect to upgrading of transport infrastructure, development of e-commerce standards, protection of intellectual property and development of innovation and technological transformation policies.

Looking forward, the Government is showing awareness of the need to improve digital connectivity between the urban and rural areas and hence reduce the gap in access to modern retail and other services. The Government also needs to do more to ensure international digital connectivity. Some highlights of recent policy action include the following.

In **November 2014**, State Council Guidelines were issued to promote the development of domestic trade and distribution. Efforts are being made to improve the business environment by reducing administrative approval procedures and tax burdens. Loans from commercial banks and other policy support were made available for certain enterprises to build them into globally competitive retailers, wholesalers and logistics companies. Publication of a blacklist of companies that default on promises is taking place in a bid to establish a business credit evaluation mechanism.

In **August 2015**, the State Council commenced a Pilot reform programme in nine cities – Shanghai, Nanjing, Zhengzhou, Guangzhou, Chengdu, Xiamen, Qingdao, Huangshi and Yiwu. oriented to establishing a more efficient, more unified domestic distribution system, including a more integrated law enforcement system, strengthening of the credit system, and a generally more enabling business environment. The programme involves overall planning of urban and rural commercial network construction for an agricultural, and industrial bi-directional flow distribution network.

Municipal governments were assigned tasks in four areas: to explore an innovation-driven mechanism for developing the distribution system, highlighting the role of e-commerce; to establish a business environment that adheres to basic regulations, and upholds the supervisory and credit systems; to guide the construction of infrastructure catering for different modes in the distribution process, including wholesale farm produce markets, community service outlets and large-scale shopping centres; and to improve government management. Following a one year trial, the nine cities are expected to share their experience in terms of innovation, regulation, infrastructure development, and government management, to lay a solid foundation for building a unified domestic market and provide insights for China's overall reform of domestic trade and distribution.

State Council Opinions were also issued in **August 2015** setting out directions for modernization of domestic trade and distribution which is seen as a critical new engine for economic restructuring and transformation of the development model. The Opinions focussed on the importance of eliminating market segmentation and breaking industry monopolies to reduce distribution costs. Development plans cover the Bohai rim region, Yangtze River Delta and Pearl River Delta, and geographic belts such as Shenyang-Changchun-Harbin, Zhengzhou-Wuhan-Changsha, Chengdu-Chongqing, Xi'an-Lanzhou-Urumqi, where distribution-related industries cluster, to construct a series of high-potential interworking cities that would connect domestic and global markets. The domestic distribution sector will also be opened to foreign capitals, with an emphasis on advanced technology, management expertise and commercial models.

September 2015 also saw issue of Guidelines from the State Council on Promoting Online-to-Offline Interaction to Accelerate Innovative Development, Transformation and Upgrading of Commercial and Trade Distribution and on Promoting Modernization of Domestic Trade Circulation and Business Environment for Rule of Law¹⁰. The State Council Opinions on online-to-offline interaction encourage retailers to provide community services and diversify the purchase experience of consumers. Physical stores are encouraged to cultivate new online-offline links, such as exhibiting and selling products online while improving offline services such as delivery, to optimize the consumption chain. Internet companies are encouraged to cooperate with physical stores to efficiently connect the information on supply and demand. Attention is drawn to the changes which should also be expected to take place in wholesaling, logistics and other services industries with the increasingly widespread application of mobile internet, big data and cloud computing. The document calls for the creation of smart business areas in cities that can offer interactive online-offline experiences to consumers. E-commerce enterprises are also encouraged to expand in rural markets to help facilitate the free flow of agricultural products to cities and industrial products to the countryside. Financial and fiscal support was made available to boost this initiative.

In **November 2015**, State Council Guidelines were issued to promote targeted development of open, orderly, reliable and environment-friendly e-business specifically in rural areas by 2020, promoting entrepreneurship and employment of rural residents and alleviating rural poverty. The Guidelines go well beyond e-commerce to e-businesses of all kinds. Supporting policies and measures will be introduced by the government.

In **April 2016**, State Council Guidelines were announced for implementation of the Internet Plus Distribution Action Plan. The objective is to promote innovation and transformation in distribution services, including e-commerce in rural areas. The guidelines call on promoting the transformation and upgrading of distribution by utilizing technology relating to the Internet of Things and Big Data to achieve online-offline interactions in marketing, payments and after-sales services. The guideline urged strengthening of supply-chain management to achieve cost saving and productivity improvement in the distribution sector.

Some commentators have also called for further digital infrastructure investment and support for a productivity push. The government could consider incentives to expand broadband and 4G+ or even 5G+ infrastructure, especially in rural areas. Consumers have already shown clear enthusiasm, but the technology is lacking in remote areas.

¹⁰ China Foreign Trade and Economic Cooperation Gazette [Issue No.61 and 65 2015]

Standards development is an important aspect of improving the business environment for e-commerce. The State Administration for Industry and Commerce (SAIC) has issued e-commerce model specifications and internet trading services specifications (SB/T10519-2009), both of which are voluntary industrial standards and drafted Administrative Measures for Online Commodities Trading and Related Services. The proposed measures specify criteria and procedures for online business registration, including protection of trademarks and company names, and task SAIC with monitoring online goods and services transactions.

Recent e-commerce regulations also lay out directions for the different categories of retailers targeted for development. These include online-only retailers that provide apparel, audio-visual products, books, home appliances, and home furnishings; multi-channel retailers that have traditional stores and offer online shopping services; and third party e-commerce platforms that provide C2C or B2C services that help SMEs and individuals to conduct business online.

Looking forward to an increasingly digital retail system, cities already anticipate decreased need for physical storefronts. Shopping districts and malls often serve as the anchors of civic life in advanced economies. But they may not play the same role in China's emerging cities. This is already posing new challenges for local government and opening new possibilities in urban planning. Smaller cities are having to invest in expanding warehousing and air cargo capacity, trucking routes and other logistics infrastructure. Lack of infrastructure beyond tier-1 and tier-2 cities otherwise risks reducing the willingness of consumers to purchase. The private sector will have to undertake much of the required investment, but the Central Government is providing encouragement and both the central and regional governments at all levels are exploring specific mechanisms to incentivise the process, including land release.

Some commentators are also calling on the Government to consider introduction of incentives for investment in information technology R&D and innovation and to facilitate university-industry collaborative partnerships in technology development.

Finally it is worth mentioning that in June 2016, the State Council issued a Guideline for establishing a censorship mechanism designed for fair competition in an open market system. The mechanism is to be re-oriented to achieving more rapid construction of a standard open market system. Government actions are themselves specifically required to conform to laws and regulations.

In summary, the Chinese government is making efforts on a number of fronts to ensure a fair competitive domestic environment for both online and offline retailers, and promoting coordinated development of traditional and e-commerce business entities.

6. POLICY IMPLICATIONS AND LESSONS FOR APEC MEMBERS

Regulatory policies and practices that are put in place to counter market failures of various kinds, as well as to protect consumers and meet other social goals, have a powerful influence on competitiveness in any services sector and good regulatory policies and practices are vital ingredients in an enabling business environment for services. Regulatory reform can reshape an industry's characteristics, scale and rate of growth and influence the kinds of innovations brought forward. This is true in the retail industry everywhere. This case study demonstrates it to be the case in China.

Studies of structural transformation are necessarily medium- to long-term in nature. This particular case study spans a period of more than 2 decades in which far from slowing, the pace of technology-driven change is actually now intensifying. During the digital disruption taking place in this particular sector, an important task of regulatory work is to ensure that any changes in existing regulations continue to allow indeed to stimulate a beneficial environment for on-going retail innovation.

It is also important to take fully into account that the retail sector does not exist on its own and retailers are not separate actors; they are not separate from other producers, but certainly not from the all important consumers. Retailers are intrinsically linked to all sorts of consumer goods producers and distributors, as well as other services providers and to society as a whole. Changes in this sector impact visibly on everyone. E-tailing, for its part, has turned out to be rather more than merely a replacement channel for traditional retail – by spurring incremental consumption, it is generating new opportunities for productivity gains through the entire retail sector, and across the whole economy.

Policy and regulatory spill-over effects can therefore be very important. Regulation of other relevant services such as express delivery services, financial services, telecommunications services and professional services, all have regulatory spill-over on the retailing sector and vice-versa. The more open and competitive these related sectors, the more enabling the business environment will be for retail sector growth.

In drawing out the policy and regulatory lessons from this case study, focus is placed on identifying what aspects of the Government's policy and regulatory position were measurably most beneficial to the growth of the sector and might have application more generally, as well as attempting to propose some areas requiring ongoing attention.

Of particular importance has been the Government's systematic leaning in the direction of allowing retailers to innovate and more recently e-commerce to develop without a great deal of domestic regulatory intervention to date. The e-tailing sector has grown to significant size while being relatively less regulated than other sectors in China. The free competition within this ecosystem could continue to work its magic if the Government focuses on the few critical policy levers including with respect to security of e-payments and infrastructure development and trade facilitation for express delivery.

Cross-border e-commerce for goods has meanwhile also become a hot topic in China with the implementation of new e-commerce laws in April 2016 announcing a "positive list" for foreign-sourced products and imposing parcel taxes of different rates on foreign-sourced

products. There has perhaps been insufficient stakeholder consultation resulting in much confusion and lack of transparency and this stands out as deserving immediate and dedicated policy attention.

In summary, therefore, this case study identifies a number of potential lessons for other APEC economies.

6.1. LESSONS LEARNED FROM CHINA'S EXPERIENCE

The retail industry in China has undergone profound transformation since China's accession to the WTO and phased implementation of its comprehensive liberalisation commitments in retail services. In the age of digitization, the retail industry continues to experience profoundly disruptive technology-driven structural shifts, generating a new suite of policy and regulatory challenges, with which governments everywhere are currently grappling. Against this background, China's retail services industry, and through the evolving retail value chains, the entire Chinese economy, has evidently benefitted from:

- Pre-WTO accession regulatory reform experimentation in dedicated Free Trade Zones to reduce the limitations on inward FDI in the retail sector.
- Rapid phasing in of market opening commitments in the WTO in all four modes of delivery, with special attention to significantly reducing regulatory restrictiveness with respect to foreign commercial presence.
- Significant simplification and easing of disorderly bureaucratic processes at all levels of government to provide a more enabling environment for growth in the retail sector.
- Policy guidance encouraging local retailers to benchmark against international best practice; scale up, modernise, adopt new technology and business practices to deliver customers with wider higher quality choice and value-for-money and to consider "going-out" strategies of their own.
- A relatively light domestic regulatory touch oriented to enabling innovation and the consequent "savage" growth experienced in e-commerce.
- Policy monitoring and research with respect to potential regulatory spill-overs across related sectors along the value chain, including telecommunications, financial services and express delivery
- Dedicated attention to designing a comprehensive suite of policies to assist SMEs in the transformation to e-commerce

Areas identified in the study as currently needing ongoing attention include:

- Collaborative innovation policies to encourage the uptake of new technologies at SME and MSME level.
- Job market policies to encourage greater labour market flexibility and address skills shortages in retail.
- Infrastructure development, including through public/private partnerships to facilitate express delivery and help build international competitiveness.
- Widespread stakeholder consultation on the need or otherwise for new regulations, on e-payments and m-payments services providers, and their relationship with online shopping platforms, for example to protect the consumer, enhance financial security, facilitate market entry and enforce competition.

- Clarification of anti-unfair trade regulations and enforcement with respect to e-commerce and the online-offline retail business environment, especially potential vertical monopolies and trans-market concentrations of market power.

6.2. GENERAL LESSONS LEARNED FROM CONDUCTING THE STUDY

There is no doubt that for such an inter-connected sector, value-chain mapping can be a valuable analytical tool, not only for the business community where such tools are generally applied, but also for policy makers and regulators. Especially now that the retailing landscape is increasingly complex and dynamic, the regulatory regime is best considered and designed with a value chain perspective so that the predicted impact of proposed regulatory changes can be traced through to other sectors of the economy and considered in their entirety.

It is similarly important, in identifying the full extent of trade restrictiveness in any industry, to take into account restrictions affecting other industries intrinsically linked into the value chain. Strategies for structural reform in any one industry need to be developed in keeping with this economy-wide perspective. Over time, use of the TiVA data offers a new opportunity to trace the impacts of regulatory changes through to their international trade effects.

The retail industry has many different sub-streams. Each of them faces its own unique regulatory challenges. But regulators need to remember that undue regulatory compliance costs experienced at any point along the way, will impact cumulatively along the entire value chain. To undertake a full cost benefit analysis and avoid unintended consequences, regulators need to be able to identify all key parties involved in the retail value chain, identifying the inputs and outputs at each link of the chain and at each point of regulatory intervention.

This study has shown, moreover, that the traditional retail pathway to market is morphing and new and differentiated forks are appearing along the path, even for the same product, and retailers need to accommodate and manage all these different channels. Regulatory policies similarly need to be sufficiently flexible to help deal with the greater variety of potential market failures, consumer protection and other social policy goals, which arise along a morphing value chain.

ABBREVIATION LIST

B2B	Business-to-Business
B2C	Business-to-Consumer
CAD	Computer-aided design
CCFA	China Chain Store and Franchise Association
CNNIC	China Internet Network Information Center
CR	Concentration Ratio
3DP	3D printing
DVA	Domestic Value-added
e-commerce	Electronic online commerce
e-payments	Electronic online payments
E-tail	Electronic retail
FIE	Foreign-invested Enterprise
FVA	Foreign Value-added
GATS	General Agreement on Trade in Services
H&M	H & M Hennes & Mauritz AB
JV	Joint Venture
LVMH	Moët Hennessy Louis Vuitton SE
m-payments	Mobile payments
MOC	Ministry of Commerce, China PRC
MOFTEC	Former Ministry of Foreign Trade and Economic Cooperation, China PRC
NDRC	National Development Reform Commission, China PRC
NPC	National Peoples' Congress of China, PRC
O2O	Online-to-offline
OECD	Organisation for Economic Cooperation and Development
SAIC	State Administration for Industry and Commerce, China PRC
SETC	Former State Economic and Trade Commission, China PRC
SEZ	Special Economic Zone
SOE	State-owned Enterprise
SME	Small and medium sized enterprise
STRI	Services Trade Restrictiveness Index
TiVA	Trade in Value-added
UNCTAD	United Nations Commission for Trade and Development
WTO	World Trade Organisation

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APPENDIX 1: CHINA'S WTO COMMITMENTS ON RETAIL

The services sectoral classification list (MTN.GNS/W/120) defines “4. Distribution services” as “A. Commission Agents’ services; B. Wholesale Trade services; C. Retailing services; D. Franchising; and E. other”.

		Mode 1	Mode 2	Mode 3	Mode 4
Commission Agents’ Services and Wholesale Trade Services (excluding salt, tobacco)	Limitation on market access	Unbound	None	Phase in commitments 1	Unbound except as indicated in horizontal commitments
	Limitation on national treatment	Unbound	None	None	Unbound except as indicated in horizontal commitments
Retailing Services (excluding tobacco)	Limitation on market access	Unbound except for mail order	None	Phase in commitments 2	Unbound except as indicated in horizontal commitments
	Limitation on national treatment	Unbound except for mail order	None	None	Unbound except as indicated in horizontal commitments.
Franchising	Limitation on market access	None	None	Within 3 years after accession to the WTO, none	Unbound except as indicated in horizontal commitments
	Limitation on national treatment	None	None	Within 3 years after accession to the WTO, none	Unbound except as indicated in horizontal commitments
Wholesale or retail trade services away from a fixed location	Limitation on market access	None	None	Within 3 years after accession to the WTO, none	Unbound except as indicated in horizontal commitments
	Limitation on national treatment	None	None	Within 3 years after accession to the WTO, none	Unbound except as indicated in horizontal commitments

Source: WTO documents GATS/SC/135, 14 February 2002, GATS/SC/135/Corr.1, 20 February 2003, and GATS/SC/135/Corr.2, 30 November 2004.

Note 1: Within 1 year after China's accession to the WTO, Foreign Service suppliers may establish joint ventures to engage in the commission agents' business and wholesale business of all imported and domestically produced products, except those products that immediately follow. For these products, foreign service suppliers will be permitted to engage in the distribution of books, newspapers, magazines, pharmaceutical products, pesticides and mulching films within 3 years after accession, and to engage in the distribution of chemical fertilizers, processed oil and crude oil within 5 years after accession. Within 2 years after accession to the WTO, foreign majority ownership will be permitted and no geographic or quantitative restrictions will apply within 3 years after accession, except for chemical fertilizers, processed oil and crude oil within 5 years after accession.

Note 2: Foreign services suppliers may supply services only in forms of joint ventures in 5 SEZs (Shenzhen, Zhuhai, Shantou, Xiamen and Hainan) and six cities (Beijing, Shanghai, Tianjin, Guangzhou, Dalian and

Qingdao). In Beijing and Shanghai, a total of no more than four joint venture retailing enterprises are permitted respectively. In each of the other cities, no more than two JV retailing enterprises will be permitted. Two JV retailing enterprises among the 4 to be established in Beijing may set up their branches in the same city (i.e. Beijing). Upon accession, Zhengzhou and Wuhan will be immediately open to JV retailing enterprises. Within 2 years after accession, foreign majority control will be permitted in JV retailing enterprises and all provincial capitals, Chongqing and Ningbo will be open to JV retailing enterprises. Foreign Service suppliers will be permitted to engage in the retailing of all products, except for the retailing of books, newspapers and magazines within 1 year after accession, the retailing of pharmaceutical products, pesticides, mulching films and processed oil within 3 years after accession and retailing of chemical fertilizers within 5 years.

None, within 3 years after accession, except for: retailing of chemical fertilizers, within five years after accession; and- those chain stores which sell products of different types and brands from multiple suppliers with more than 30 outlets. For such chains stores with more than 30 outlets, foreign majority ownership will not be permitted if those chain stores distribute any of the following products: motor vehicles (for a period of 5 years after accession at which time the equity limitation will have been eliminated), and products listed above and in Annex 2a of the Protocol. The foreign chain store operators will have the freedom of choice of any partner, legally established in China according to China's laws and regulations.

APPENDIX 2: OECD STRI FOR DISTRIBUTION SERVICES, CHINA

	Distribution Services: China		Score	Total
			24	0.330561292
Category Code	Category	Weight	Score	Total
DS.1	Restrictions on foreign entry	54.18406	10	0.179291869
DS.2	Restrictions to movement of people	7.07145	3	0.019152749
DS.3	Other discriminatory measures	8.415172	2	0.022110396
DS.4	Barriers to competition	19.74419	4	0.054323245
DS.5	Regulatory transparency	10.58512	5	0.055683033
Measure Code		Weight	Score	Contribution
1_1_1	Maximum foreign equity share allowed (%) (retailers)	0.063746	0	0.003321164
1_1_1	Maximum foreign equity share allowed (%) (wholesalers)	0.063746	0	0.003321164
1_1_3	There are limits to the proportion of shares that can be acquired by foreign investors publicly-controlled firms	0.015936	0	0.000830291
1_2_1	Legal form: JVs required	0.015936	0	0.000830291
1_2_11	Legal form: other restrictions	0.015936	1	0.015936488
1_4_1	Board of directors: majority must be nationals	0.015936	0	0.000830291
1_4_2	Board of directors: majority must be residents	0.015936	0	0.000830291
1_4_3	Board of directors: at least 1 must be national	0.015936	0	0.000830291
1_4_4	Board of directors: at least 1 must be resident	0.015936	0	0.000830291
1_4_5	Manager must be national	0.015936	0	0.000830291
1_4_6	Manager must be resident	0.015936	0	0.000830291
1_5_1	Screening explicitly considers economic interests	0.015936	1	0.015936488
1_5_2	Screening exists without exclusion of economic interests	0.015936	1	0.015936488
1_5_3	Memo: thresholds for screening projects	0	0	0
1_9_1	Conditions on subsequent transfer of capital and investments	0.015936	1	0.015936488
1_10_1	Restrictions on cross-border mergers and acquisitions	0.015936	1	0.015936488
1_7_1	Acquisition and use of land and real estate by foreigners is prohibited or restricted	0.015936	0	0.000830291
1_20_1	Service provision is reserved for statutory monopoly or granted on an exclusive basis (retailers)	0.015936	0	0.000830291
1_20_1	Service provision is reserved for statutory monopoly or granted on an exclusive basis (wholesalers)	0.015936	0	0.000830291
1_25_1	Memo: Monopoly in the sector value between 0 and 1, e.g. for 50% enter 0.5)	0	0	0
1_6_18	Quotas or economic needs tests are applied in the allocation of licenses (wholesalers)	0.015936	0	0.000830291
1_6_18	Quotas or economic needs tests are applied in the allocation of licenses (retailers)	0.015936	1	0.015936488

1_6_181	Licenses for department stores or large-store formats are subject to quotas or economic needs tests	0.015936	0	0.000830291
1_14_18	Zoning regulation discriminates foreign suppliers against domestic competitors	0.015936	0	0.000830291
1_15_18	The number of sales outlets per firm is limited	0.015936	1	0.015936488
1_16_18	Commercial presence is required in order to provide distribution services.	0.015936	0	0.000830291
1_17_18	A license is required for e-commerce	0.015936	1	0.015936488
1_18_18	Restrictions on franchising	0.015936	1	0.015936488
1_19_18	Restrictions on direct selling	0.015936	0	0.000830291
1_50_1	Other restrictions on foreign entry	0.015936	1	0.015936488
2_1_1	Quotas: intra-corporate transferees	0.00544	0	0.000283402
2_1_2	Quotas: contractual services suppliers	0.00544	0	0.000283402
2_1_3	Quotas: independent services suppliers	0.00544	0	0.000283402
2_2_1	Labour market tests: intra-corporate transferees	0.00544	1	0.005439577
2_2_2	Labour market tests: contractual services suppliers	0.00544	1	0.005439577
2_2_3	Labour market tests: independent services suppliers	0.00544	1	0.005439577
2_3_1	Limitation on stay for intra-corporate transferees (months)	0.010879	0	0.000566804
2_3_2	Limitation on stay for contractual services suppliers (months)	0.010879	0	0.000566804
2_3_3	Limitation on stay for independent services suppliers (months)	0.010879	0	0.000566804
2_50_1	Other restrictions to movement of people	0.00544	0	0.000283402
3_1_1	Foreign suppliers are treated less favourably regarding taxes and eligibility to subsidies	0.00935	0	0.000487145
3_2_1	There are limitations on foreign participation in public procurement	0.00935	1	0.009350191
3_3_5	Do national standards for distribution services deviate from international standards?	0.00935	0	0.000487145
3_4_18	Foreign firms are discriminated against on trademark protection	0.00935	0	0.000487145
3_5_18	Local sourcing requirements	0.00935	0	0.000487145
4_17_81	Retailers can set up their own recycling systems	0.011614	0	0.000605101
3_7_18	The pre-packaging of products is subject to mandatory nominal quantities	0.00935	0	0.000487145
3_8_18	Labelling provisions go beyond information requirements	0.00935	0	0.000487145
3_9_18	Consumer credit licenses are available to foreign retailers	0.00935	1	0.009350191
3_50_1	Other restrictions in other discriminatory measures	0.00935	0	0.000487145
4_1_1	Decisions by the regulatory body can be appealed	0.011614	0	0.000605101
4_2_1	Firms have redress when business practices restrict competition in a given market	0.011614	0	0.000605101
4_3_1	The government controls at least one major firm in the sector	0.011614	1	0.011614231

4_4_1	Publicly-controlled firms are exempted from the application of the general competition law	0.011614	0	0.000605101
4_6_1	Minimum capital requirements	0.011614	1	0.011614231
4_8_18	Vertical agreements: Resale price maintenance is subject to regulation	0.011614	0	0.000605101
4_8_28	Vertical agreements: Territorial or customer group sales restrictions are subject to regulation	0.011614	0	0.000605101
4_8_38	Laws or regulations impose restrictions on the nature or content of contracts	0.011614	0	0.000605101
4_8_48	Firms are required to disclose confidential information	0.011614	0	0.000605101
4_12_18	Price regulation: minimum prices	0.011614	1	0.011614231
4_12_8	Large retailers are subject to specific taxes (retailers)	0.011614	0	0.000605101
4_13_8	Seasonal sales periods are regulated	0.011614	0	0.000605101
4_14_81	Regulation imposes an upper limit on shop opening hours	0.011614	0	0.000605101
4_15_81	Regulations limit the range of products a retailer may carry	0.011614	0	0.000605101
4_16_81	Retailers or wholesalers are subject to restrictions on advertising	0.011614	1	0.011614231
4_50_1	Other restrictions in barriers to competition	0.011614	0	0.000605101
5_1_1	There is a legal obligation to communicate regulations to the public prior to entry into force	0.010585	1	0.010585122
5_2_1	There is a public comment procedure open to interested persons, including foreign suppliers	0.010585	0	0.000551485
5_3_1	Range of visa processing time (days)	0.010585	0	0.000551485
5_4_2	Construction permit: time to complete all the procedures necessary to legally build a warehouse (in calendar days)	0.010585	1	0.010585122
5_5_2	Construction permit: official costs associated with completing the procedures necessary to build a warehouse (% of warehouse value)	0.010585	1	0.010585122
5_6_2	Construction permit: all procedures that are necessary to build a warehouse (number)	0.010585	1	0.010585122
5_8_1	Time taken for customs clearance (days)	0.010585	1	0.010585122
5_9_1	Licenses are allocated according to publicly available criteria	0.010585	0	0.000551485
5_10_1	Restrictions related to the duration and renewal of licenses	0.010585	0	0.000551485
5_50_1	Other restrictions in regulatory transparency	0.010585	0	0.000551485

Source: OECD

APPENDIX 3: TiVA ANALYSIS FOR WHOLESALE, RETAIL AND HOTELS, CHINA

The OECD/WTO Trade in Value-Added (TiVA) dataset offers the potential for analysis of individual industry sectors of the value added inputs and outputs between different sectors of the economy and can be usefully employed to quantify the inter-relationships between industry sectors connected along the value chain, both goods and services.

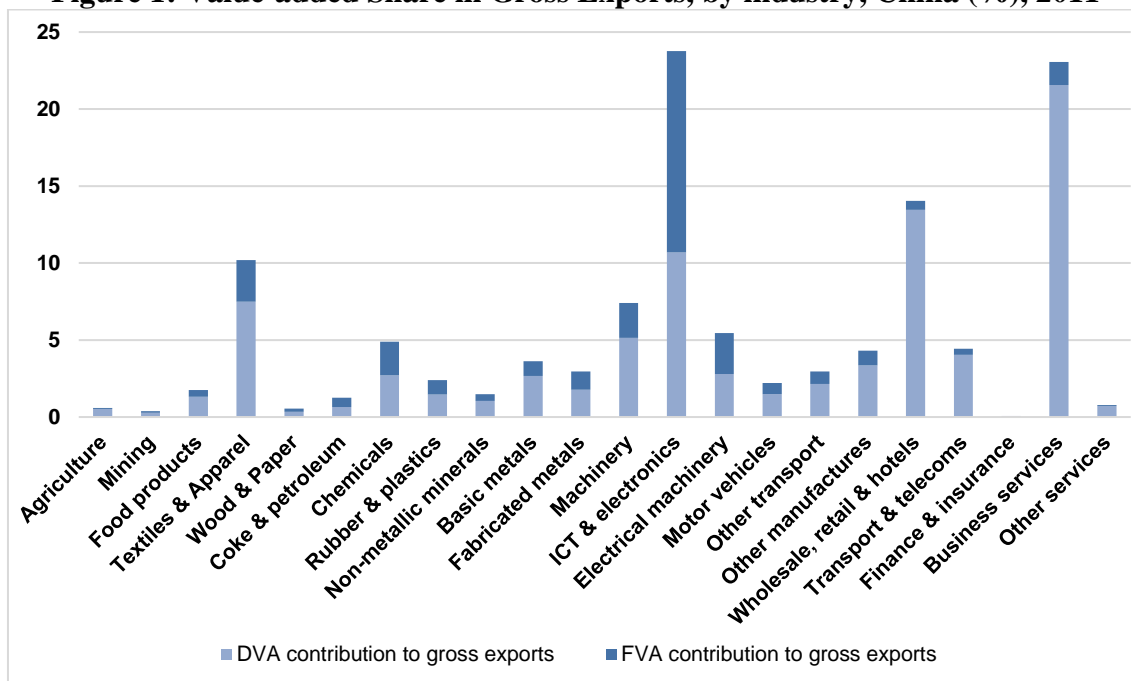
The TiVA data can also provide an early signal of a potential structural shift in services intensity in any sector; this is useful given the positive correlation between services intensity and value-added. A drop in foreign services value added content in any exported goods sector, if not more than matched by an increase in local services value added content, can signal a prospective decline in international competitiveness. If the data is sufficiently timely, this can be a useful early warning of a regulatory inefficiency in the services sectors.

Unfortunately analysis of the retail sector is handicapped by the fact that in the TiVA data, retail is aggregated with wholesale and also with hotels and these are each very different activities with different roles in trade transactions. It is nevertheless worth considering the extent to which other industry sectors are contributing inputs into the wholesale and retail sector and to what extent and to track the changes occurring over time. The data also shows whether these intermediate B2B inputs are domestic or foreign and if foreign, from which trading partner they are sourced.

The TiVA indicators similarly enable estimates of the extent to which retailers (aggregated with wholesalers and with hotels) are contributing value added content to total final demand of all the other sectors of the economy. In addition, TiVA indicators show how all this translates into gross exports. The TiVA data shows the trends in the retail industry's share (aggregated with wholesale and also with hotels) of exported domestic value added (DVA). It also shows the extent to which foreign value added (FVA) in retail (and wholesale and hotels) is contributing or not to gross exports and the trends over time.

Figure 1 shows how importantly the combined retail, wholesale and hotels sector figures in terms of domestic value added (DVA) content contribute to China's gross exports. This aggregated industry grouping actually ranks number 1 in terms of contribution of DVA to gross exports, contributing around to 13.5 percent, followed by ICT and electronics (11 percent) and textiles (7.5 percent). In terms of total contribution to gross exports, wholesale, retail and hotels rank second only to ICT and electronics.

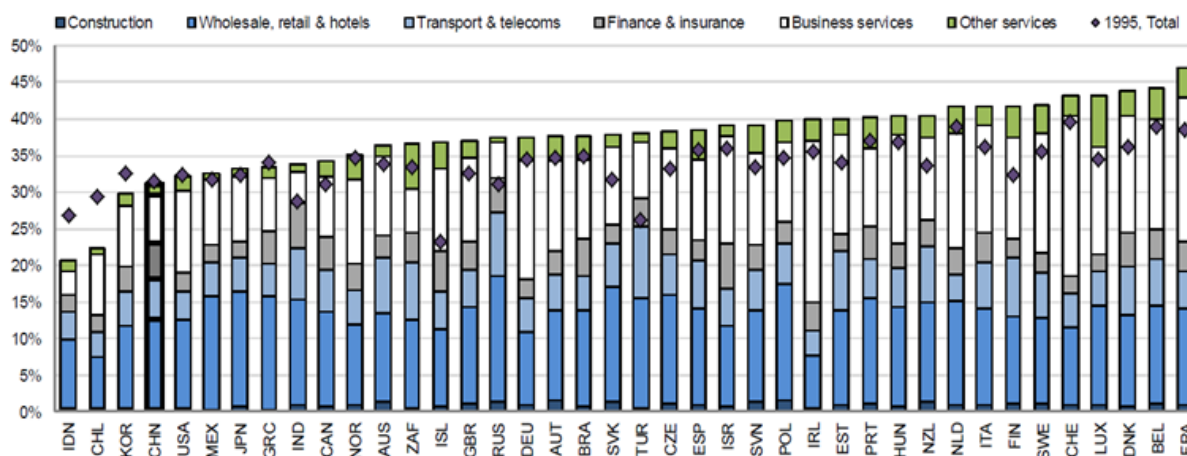
Figure 1: Value-added Share in Gross Exports, by industry, China (%), 2011



Source: OECD-WTO TiVA database 2015

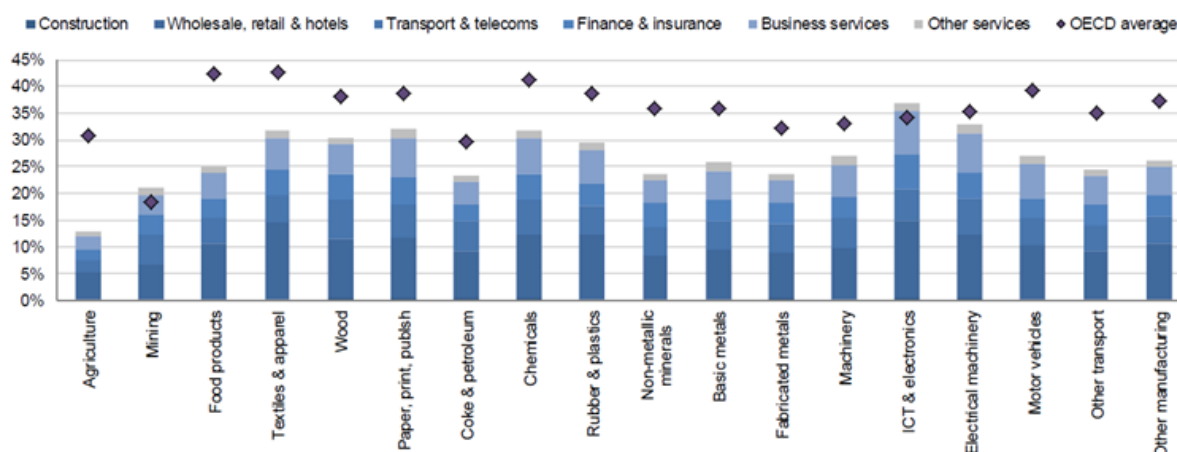
Figure 2 shows that 31 percent of the total value of China’s exports of manufactured goods now reflect services sector value-added (still low by most standards). Of this share, the wholesale, retail and hotels sector accounts for as much as 12.2 percent of total gross exports, with Business services and Transport & Telecommunications accounting for 6.6 percent and 5.6 percent respectively. Inputs into individual manufacturing sectors are in Figure 3.

Figure 2: Services Content in Gross Manufacturing Exports, by economy, 1995 and 2011



Source: OECD/WTO. October 2015. “Note on Trade in Value-Added: China”

Figure 3: Services Content of Gross Exports, by industry category, China 2011

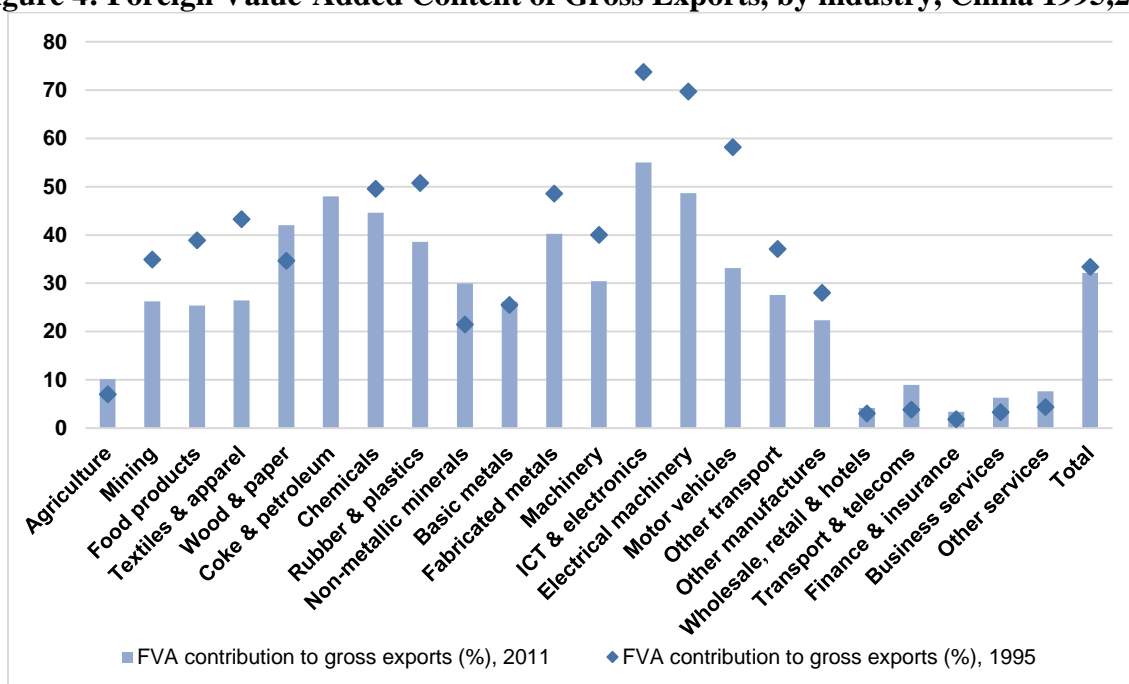


Source: OECD/WTO. October 2015. “Note on Trade in Value-Added: China”

China’s wholesale, retail and hotel sector is nevertheless not particularly export oriented itself. The 2011 data shows that of the total domestic value added (DVA) in wholesale, retail and hotels, only about 30 percent is driven by foreign final demand and this has dropped about 5 percentage points since 2008.

Figure 4 on the other hand shows that the foreign value added (FVA) share is very small at less than 1 percent and has experienced no significant increase since WTO accession. It is worth noting that this is true also for the share of foreign value added in China’s total gross exports. This is fully consistent with the data provided in Chapter 2 which showed that foreign owned firms did not have a strong export performance but tend to be more focused on the domestic market.

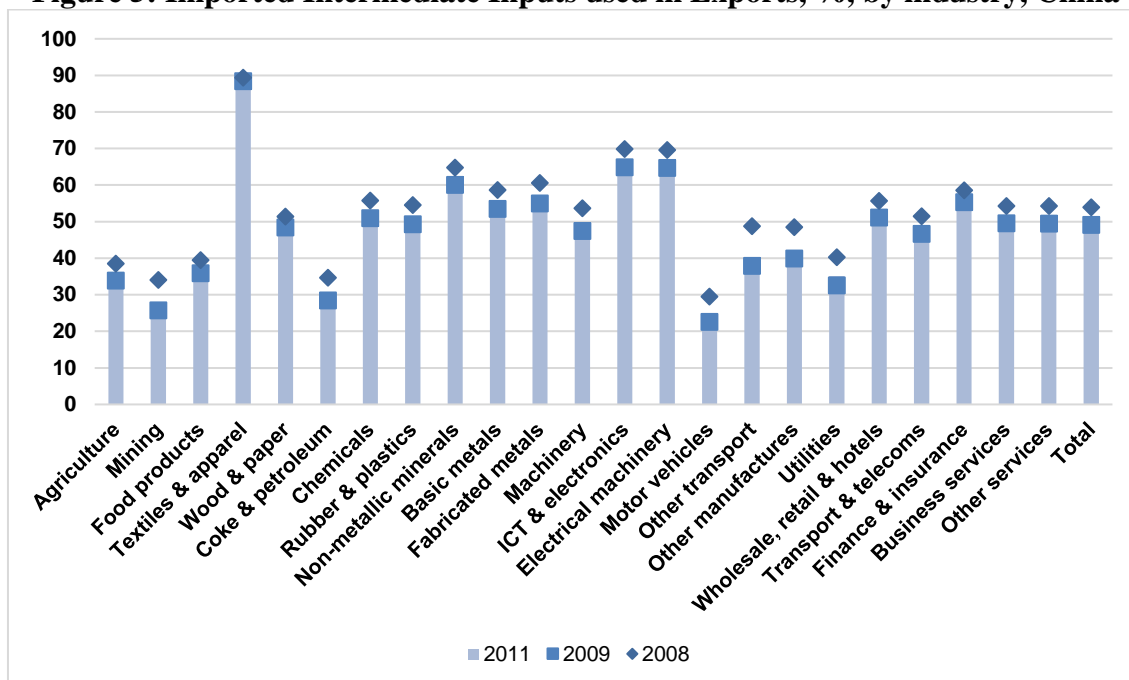
Figure 4: Foreign Value-Added Content of Gross Exports, by industry, China 1995,2011



Source: OECD-WTO TiVA database 2015

But the TiVA data adds a new dimension to that earlier conclusion, as it suggests that some local services upgrading has taken place and that other services intermediates contributing to exports in this aggregated industry group are also being provided in a competitive manner by local services firms. This is further confirmed by Figure 5 which shows a small but steady decline over 2008-2011 of imported inputs going into exports of wholesale, retail and hotels.

Figure 5: Imported Intermediate Inputs used in Exports, %, by industry, China



Source: OECD-WTO TiVA database 2015

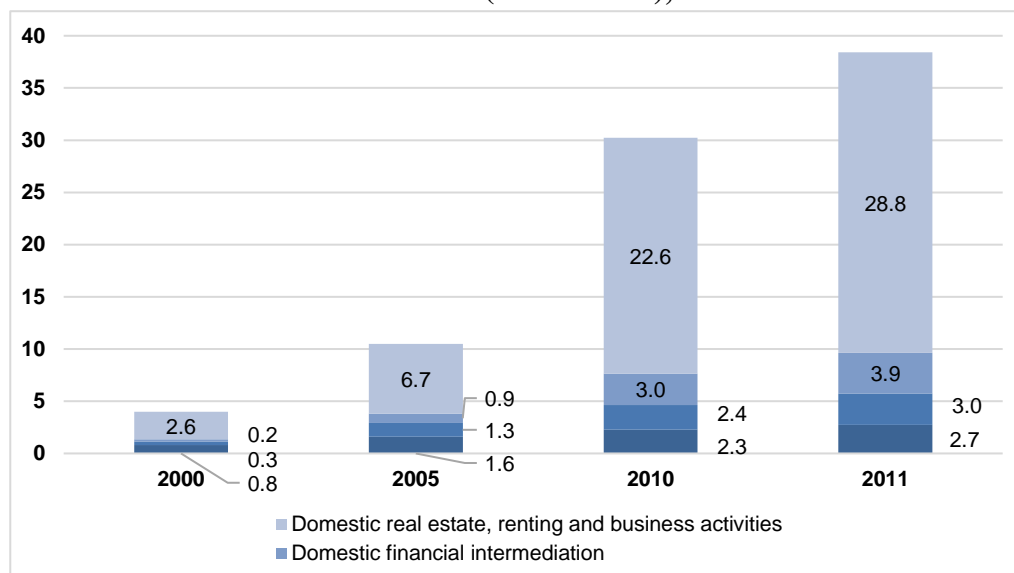
In its own recent analysis, the OECD concludes that the overall TiVA data for 2011 provides important signals that China is moving upward in the value-chain as the contribution from processing services declines and domestic services providers integrate upstream. Retail is a high value-added upstream services activity. Although the overall figures seem relatively small, it is important therefore to try to dig deeper still to ascertain exactly what the newly contributing local services activities in China's wholesale and retail value chain include. And what the various imported inputs are, and especially which other services inputs are dominant among them and from which region they are sourced.

While the data does not necessarily provide all the ingredients for a full analysis, it certainly allows some deeper insights. The data identify a relative overall importance for the wholesale, retail and hotels sector of value-added content from Real Estate, Renting & business activities, Financial Intermediation, Post & Telecoms and Transport & Storage.

The figures also tell a potentially policy-relevant story. Within the wholesale retail and hotels sector, as shown in Figure 6, domestic financial intermediation value-added saw an increase of more than 16 fold over the decade to 2011 (compared with just under 16 fold for foreign value added). Foreign Post and telecommunications providers saw a well over 9 fold increase in value added, a slightly greater increase than for domestic value-added. For foreign real estate, renting and business activities grew more than 11 fold (roughly the same as domestic value-added).

The domestic value-added contribution from Transport and Storage more than tripled over the decade to 2011 - but foreign value-added more than quadrupled.

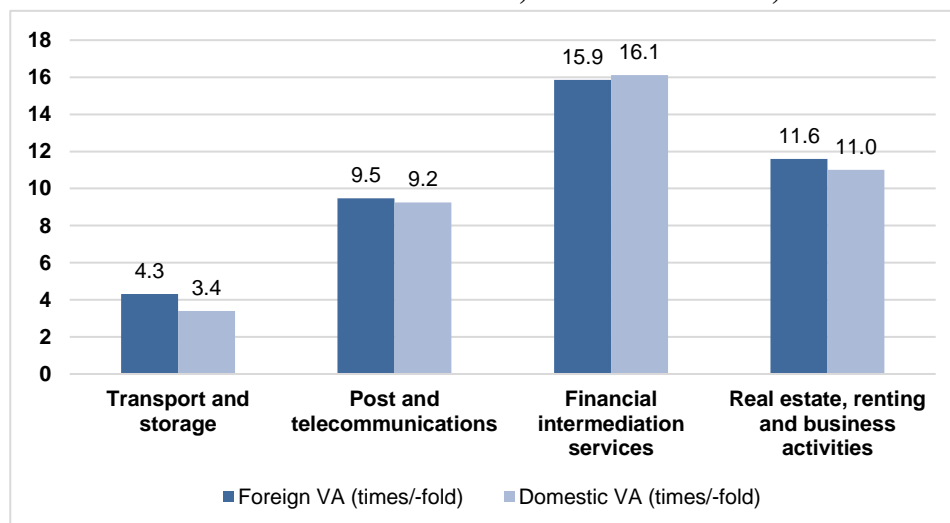
Figure 6: Domestic Services Content in China’s Final Demand for Hotels, Wholesale and Retail Services (USD billion), 2000-2011



Source: OECD-WTO TiVA database 2015

These growth outcomes are plotted visually in Figure 7. Financial intermediation stands out as one services sector where growing local value-added participation in the wholesale, retail and hotel value chain is apparent. But foreign value added is growing slightly more in some other key services inputs.

Figure 7: Increase in Key Services Sector Domestic and Foreign Value Added in China’s Final Demand for Wholesale, Retail and Hotels, 2000 to 2011



Source: OECD-WTO TiVA database 2015

It is especially relevant to the discussion of reform in the retail sector, and recent developments in e-commerce, to note that in 2011, only 10.5 percent of China’s total final domestic

consumption reflects foreign content with as little as 2.1 percent from Europe, 1.4 percent from NAFTA, 3.4 percent from East and Southeast Asia, 0.7 percent from South and Central America and 3 percent from other region.

APEC Economic Policy Report Case Study

Indonesia: Deregulation of Air Transport Service and Its Impact

1. BACKGROUND

The nature of Indonesia's geography with 6000 inhabited islands makes air and maritime transportation its main modes of transport. Maritime transport continues to be the main mode of transport of non-perishable goods while air transports is more suitable for business and tourist travellers and perishable goods as well.

Following economic growth in general and the growth of its tourism sector in particular, the demand for air travel in Indonesia has increased significantly, both by domestic and international travellers and shippers. Indonesia has also undertaken steps to deregulate its air transport sector, transforming the sector gradually from being a state-dominated sector to a more hybrid model where state-owned enterprise competes with private providers. Foreign participation is also allowed. Airfares were allowed to float. Entry requirements for new airlines were eased. However, air transport infrastructure and its management, such as airports, has remained the domain of the government.

The effect of these changes has been dramatic. For example, back in the 1990s, air transport was regarded as a luxury, due to its relatively high price. With the reforms outlined, airfares have substantially declined. Damuri and Anas (2005) found that the airfare for the Jakarta-Surabaya route (about 90 minutes air travel) was as high as US\$90 at the low season before the reforms. Currently, the same distance can be as low as US\$20.

What has been the impact of the deregulation on the industry, on other industries, and on the economy at large? Has the deregulation been sufficient to improve the efficiency of the sector? This study aims at assessing the impact of air transport deregulation in Indonesia. The analysis will focus on the impact of the deregulation on the industry's performance.

The study will also examine the implications of the key reforms in the air transport sector for other industry sectors, backward and forward in associated value chains. In this study we will map the industry linkages, using the Indonesian Input Output Table for the purpose of this assessment.

This paper will begin with a review of a sample of recent literature on this topic, followed by a comprehensive discussion on the regulatory changes in the sector, a description of the sector, its value chain and the analysis of the impact of the deregulation to the sector and the economy in general. The paper will conclude with a discussion of new issues relevant to the sector, lessons learned and some policy recommendations related to structural reforms of the air transport.

2. LITERATURE SURVEY

Air transport is highly regulated and relatively restrictive for foreign investment. Walulik (2016) examined airline investment regime in 121 states and territories and showed that airline investment rules worldwide is restrictive. Nevertheless, a large number of studies on air transport show that liberalization of the sector contributed to the improved performance of the sector.

There have been few recent analyses of Indonesia's air transport sector and its reforms. Saraswati and Hanaoka (2013) examined aviation industry policy in Indonesia as well as its preparedness for the ASEAN Single Aviation Market (ASAM). The authors presented an extensive overview of Indonesia's aviation policy, emphasizing the evolution of the industry from operating in a relatively restricted regime to a more dynamic and market-oriented one. The authors also noted the challenge of infrastructure capacity and quality. The OECD (2014) also reviewed the extent of competition in the airline industry in Indonesia and highlighted the capacity shortage and infrastructure bottlenecks impeding growth of the sector.

Studies of liberalisation in other economies or regions generally find positive results. For example, Hanaoka et al. (2014) show that the liberalization of air transport has increased competition in the Low Cost Carriers (LCCs) markets. LCCs have become the main type of airlines in ASEAN and have begun to take over the market share of the FSCs on the intra-ASEAN and domestic routes. However, Bowen (2016) emphasizes that the fast growth of LCCs in South East Asia has not done much to improve Southeast Asia's spatial inequality as LCCs are also concentrating in well-served markets.

Zhang et al. (2009) also examined the impact of deregulation and liberalization in aviation industry in the United States, Canada, and the EU. The authors argued that the deregulation and liberalization has eliminated the less efficient airlines and led to the emergence of LCCs such as Southwest, JetBlue, Ryanair, and Westjet. The study concluded that there are three major obstacles faced by LCCs in Asia, namely: (1) obstacles found in domestic policy; (2) lack of open-skies agreements among Asian economies, which makes it difficult for LCCs to increase their operational range; (3) lack of secondary airports in the major metropolitan areas.

Zhang and Findlay (2014) showed that air transport liberalization is significantly and positively associated with the extent of the movement of people. In another study, Cristea et al (2014a) assess the impact of US Open Sky Agreements (OSAs) on the performance of the sector. They use a 'difference in difference' model to compare outcomes pre and post the application of OSAs and finds that liberalizing economies see expansions in route offerings and reallocations of carrier capacity. They find that consumers enjoy lower prices and more direct flights, and leading to large increases in passenger numbers.

Cristea et al (2014b) examine the impact of more liberal policies in the Middle East. They find that more liberal policy is associated with greater passenger traffic between

economies. This result is driven primarily by larger numbers of city pairs being served, rather than by more passengers traveling along given routes.

3. THE INDONESIAN DEREGULATION

The major milestones in air transport policy are summarised in Figure 3.1. In the 1990s, the air transport sector was controlled by the state, as stated in Law No. 15/1992 regarding Air Transport. Article 31 of the law stipulated that the government regulated the use of facilities and services at airports, which also provided the basis of powers to regulate prices. This power was delegated to the Ministry for Transport. However, in 1997, the Minister for Transport in Decree No. 25/1997 delegated the rights to set scheduled passengers airlines' ticket prices to the airlines association (the Indonesian National Air Carrier Association (INACA)) which set a floor price (the decree did not specify a floor price but the rationale for that format of regulation was to limit predatory behaviour).

Indonesia deregulated its transport sector, including the air transport sector after the 1998 Asian Financial Crisis. The momentum for reform in the air transport sector was provided by the enactment of the Competition Law in 1999. The Law granted the authority to supervise competition to The Supervision Commission for Business Competition, the KPPU. Price fixing by INACA was among the first cases that the KPPU oversaw.

The KPPU decided that the price setting by INACA violated (Article 5, point 1) of the Competition Law. The KPPU then required the Minister for Transport to revoke the decree that granted INACA the right to set tariffs. The Minister of Transport later issued Decree No. 9/2002 amending the Decree No. 25/1997. The new decree regulated only a ceiling price for economy class travel on scheduled passenger airliners.

In 2001, Minister for Transport eased entry requirements to set up airlines companies by issuing Decree No. 11/2001, allowing new scheduled airlines to obtain a license to operate by operating only two aircraft (previously the requirement had been 5 aircraft). As a result, the total number of scheduled airlines increased from only 7 in 2000 to 27 in 2004. New airlines companies established following the issuance of this new decree including Adam Air, Celebes Air, Sriwijaya Air, Bali Air, Batavia Air, Star Airlines, Air Paradise, Kartika Airlines, Papua Air and Air Asia. However, the industry consolidation later drove out some scheduled airlines from the market, for example, Adam, Celebes, Batavia and Indonesian Airlines. A number of new airlines were also established in 2013 and 2014: Batik Air (2013), NAM Air (2013), and Indonesia AirAsia X (2014).

In 2009 Indonesia enacted a new air transport law, Law No. 1/2009, replacing the Law No. 15/1992 which was no longer compatible with the dynamics of the sector. The new air transport law also rules regarding tariffs and licensing. On licensing, the 2009 law was more restrictive than the Transport Minister Decree No. 11/2001. The Law required all civil airlines registered in Indonesia to have at least 5 units of aircraft (for scheduled airlines) and at least 1 unit of aircraft (for unscheduled airlines and cargo airlines).

On tariffs, the law set new guidelines for a maximum tariff (ceiling price) for economy class of travel on scheduled passenger airlines. The law originally did not mention a floor price. The new law allowed tariffs for non-economy class of travel on

scheduled passenger airlines and commercial cargo to float. Since then however floor prices have been re-introduced. Carriers are classified into different types (full service, medium service, and no frills) and are allowed to charge up to different fractions of the ceiling price (100%, 90% and 80% respectively). The Centre for Asia Pacific Aviation (CAPA)¹ provides the following graphic (from the Directorate General of Civil Aviation) to illustrate the classifications:

Table 3.1 Indonesia airline categories

Full Service	Medium Service	No Frills
Services and optional requirements covered by the fares (maximum services)	Some services covered by the fares (limited services)	Only essential services covered by the fares
Provide free baggage (30kg for international 20kg for domestic)	Limited free baggage	Baggage Fee Implemented
Provide full inflight service	Provide limited inflight services	Inflight service is available on charged bases

Source : Directorate General of Civil Aviation – Ministry of Transportation Republic of Indonesia

CAPA reports that of 14 airlines currently certified for scheduled passenger services,

- two are classified as full service – [Garuda Indonesia](#) and [Lion Group](#) full-service subsidiary [Batik Air](#)
- five are in the no frills category – [Garuda](#) budget subsidiary [Citilink](#), [Indonesia AirAsia](#), [Lion Air](#), Lion regional subsidiary [Wings Air](#) and [Susi Air](#).
- seven airlines are in the middle service category include [Aviastar](#), [Kalstar](#), [Sriwijaya](#), [Transnusa](#), [Trigana](#), [Xpress Air](#) and Sriwijaya subsidiary [NAM](#).

Indonesia also introduced a price floor of 30% of the ceiling price (see Table 3.2). CAPA reports that in practice Indonesia has routinely provided exemptions for LCCs to offer fares well below this floor but that the Transport Ministry then decided to stop allowing any exemptions to the floor and raise the floor from 30% to 40% of the ceiling. More recently, the floor has been dropped again to 30% of the ceiling. Although the government reintroduced the floor price in 2005, the requirement was never effectively implemented until 2014.

Table 3.2 Floor Price from Time to Time

Year	Regulation in Floor Price	Contents
2002	Ministerial Decree 9, 2002	Article 1 : the enactment of the basic tariff and distance rate
2005	Ministerial Decree 36, 2005	Article 5 : the enactment of the reference tariff
2006	Ministerial Decree 11, 2006	Article 5 : the enactment of the reference tariff

¹ <http://centreforaviation.com/analysis/indonesias-price-floor-for-airlines-is-misguided-a-bad-precedent-and-will-be-counterproductive-204752>

2010	Ministerial Decree 26, 2010	Article 12 : the enactment of the ceiling price
2014	Ministerial Decree 51, 2014 Ministerial Decree 59, 2014	Article 15 : the enactment of the ceiling price
2014	Ministerial Decree 91, 2014	Article 1 : air transport enterprises in setting normal rates minimum 40% of the upper limit according to the group of services provided
2015	Ministerial Decree 126, 2015	Article 9 : air transport enterprises in setting normal rates minimum 30% of the upper limit according to the group of services provided
2016	Ministerial Decree 14, 2016	Article 9 : air transport enterprises in setting normal rates minimum 30% of the upper limit according to the group of services provided

Source : Indonesia's regulations for air transport

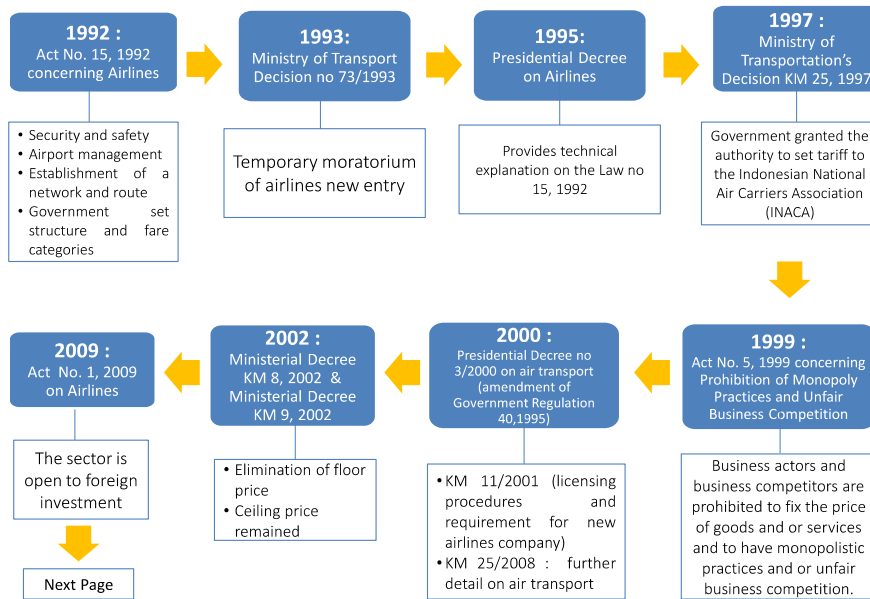
While the new air transport law of 2009 continued to limit foreign equity in the commercial airline business. It was not clear about foreign investment in other subsectors. For this, the negative list of investment, often referred as DNI (Daftar Negatif Investasi), is the reference. The current negative list of investment lists foreign equity limits on air transport (Table 3.3). The foreign equity limit on supporting services, including computer-based reservation system, passenger and cargo ground handling, and aircraft leasing is 67%. Similarly, foreign equity in freight forwarding services, airport support services and general airlines sales agencies is capped at 67%. The subsectors, which are closed to foreign investment, are cargo condition survey services and survey of air transport facilities.

Table 3.3 Foreign Equity Limits

Sector	Subsector	Foreign Equity limits
Air Transport	Scheduled and non scheduled domestic air transport services	49%
	Scheduled international air transport services	49%
	Supporting services, include computer-based reservation system, passenger and cargo ground handling, and aircraft leasing	67%
	Airport services	49%
	Air expedition freight forwarding services	67%
	Airport support services	67%
	General airline sales agent	67%
Services Auxiliary to All Forms of Transport	Cargo condition survey service	0%
	Survey of land, sea, and air transportation facilities	0%
	Supporting business in terminals	67%
	Freight forwarding services	67%
	Warehousing	67%
	Multimode Transportation	49%

Source. Presidential Regulation No. 44/2016.

Figure 3.1 Policy Changes, 1990-2016

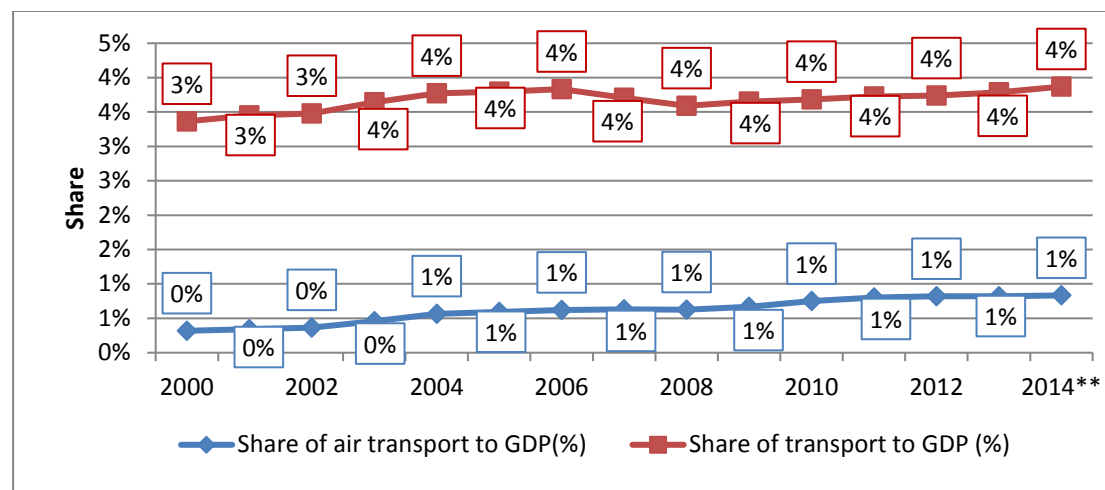


craft, Annex 11–Air Traffic Services, and Annex 14–Aerodromes.

4. AIR TRANSPORT IN INDONESIA

The transport sector, on average contributed about 4% to GDP (at constant price) in the past 10 years. In the year 2000, the contribution of the sector to GDP was only 3% and from 2003, the sector's contribution to GDP increased to 4%. Air transports was about 25% of transport sector. Its contribution to the GDP increased from very small in the year 2000 to about 1% since 2004 (see Figure 4.1).

Figure 4.1 Contribution of Transport and Air Transport in GDP (%)



Source. Indonesia Statistics (BPS)

Air transport in Indonesia has been in excess demand. The first indicator is from the Indonesia's Input Output (IO) Table. First, the ratio of domestic demand to domestic output shows that the domestic demand for air transport has been higher than domestic output.² However, the gap is decreasing over time.

Table 4.1 Air Transport: Domestic Demand and Output, 1995, 2005, 2010

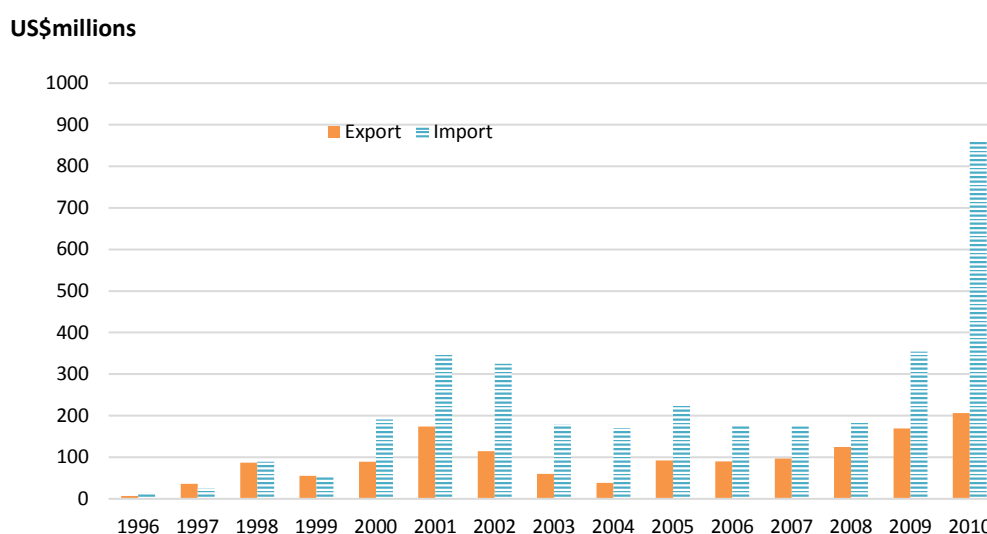
No	Indicators	1995*	2005**	2010***
1	Domestic Demand/ Domestic Output	117.9%	114%	105.1%
2	Share of Export to Domestic Product	20.5%	18.03%	13.4%
3	Share of Import to Domestic Demand	38.4%	28%	17.6%

Source. author's calculation based on Indonesia's Input Output Table

Notes. * 172 Sectors ** 175 sectors *** 185 sectors

Second, the World Bank Trade in Services Database (Figure 4.1) shows that Indonesia's exports of air transport services are smaller than its imports. The deficit in absolute terms increased from US\$7.8 million in 1996 to US\$652 million in 2010. However relative to the total sales, the trade data also shows a declining trend in the deficit, due to the rapid growth of the domestic market. The ratio of imports to domestic demand in Table 4.1 has fallen (alongside a fall in the ratio of exports to domestic output).

² IO table 1995 comprises 172 sectors, IO Table 2005 comprises 175 sectors and IO Table 2010 comprises 185 sectors.

Figure 4.2 Indonesia: Air Transport, Exports and Imports, 1996-2010

Source. World Bank Trade in Services database

Using the IO table, we can calculate an output multiplier and indicators of various linkages of the air transport sector. Table 5 shows that the sector has high multiplier effect to the economy. The output multiplier is relatively similar among the three IO Tables. Based on IO 2010 for example, a 1million increase in final demand and therefore sector output will increase the total output of the economy by 2.37million. The extent of linkage is also strong: air transport has a Backward Linkage (BL) of 1.22 (ranked 34th for BL) and a Forward Linkage (FL) of 0.82 (ranked 80th for FL) in 2010. If BL or FL is greater than 1, it indicates the sector has high linkage. Air transport has a stronger backward linkage that forward linkage that its growth affecting more the input suppliers (sectors) than its users (sectors).

Table 4.2 Indonesia Air Transport: Multiplier and Linkages

No	Indicators	1995*		2005**		2010***	
		Value	Rank	Value	Rank	Value	Rank
1	Output Multiplier	2.29	39	2.37	33	2.37	34
2	Backward Linkage	1.20	39	1.21	33	1.22	34
3	Forward Linkage	1.16	36	0.93	57	0.82	80

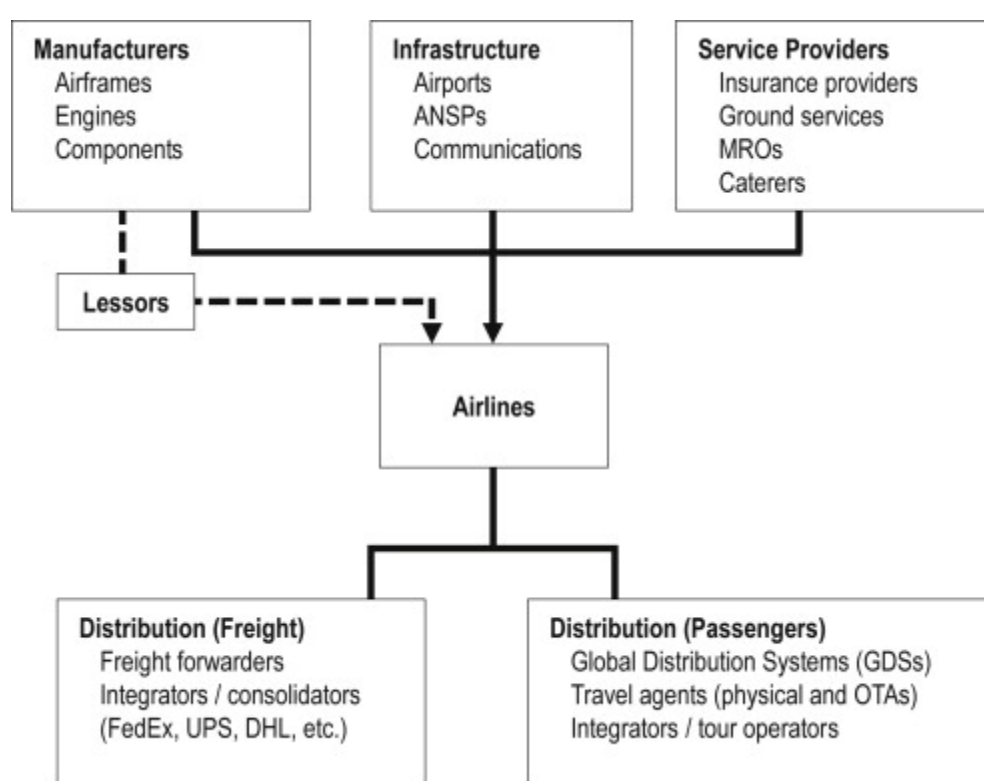
Source. the author's own calculation based on Indonesia's Input Output Table

Notes. * 172 Sectors ** 175 sectors *** 185 sectors

5. AIR TRANSPORT VALUE CHAIN IN INDONESIA

The main inputs of the airline business are fuel, aircraft and its maintenance. Apart from those main inputs, the airline business also relies on other services, such as food and beverages services, insurance, trade and other services. ICAO (2013) in its review of the aviation value chain to include airport and air navigation services, aircraft leasing services and manufacturing, maintenance repair and overhaul services, fuel supply, ground handling and systems for selling tickets including online systems. Tretheway and Markhvida (2014) provide the following graphic of the aviation value chain which distinguishes clearly between airlines and their input suppliers.

Figure 5.1 Aviation value chain



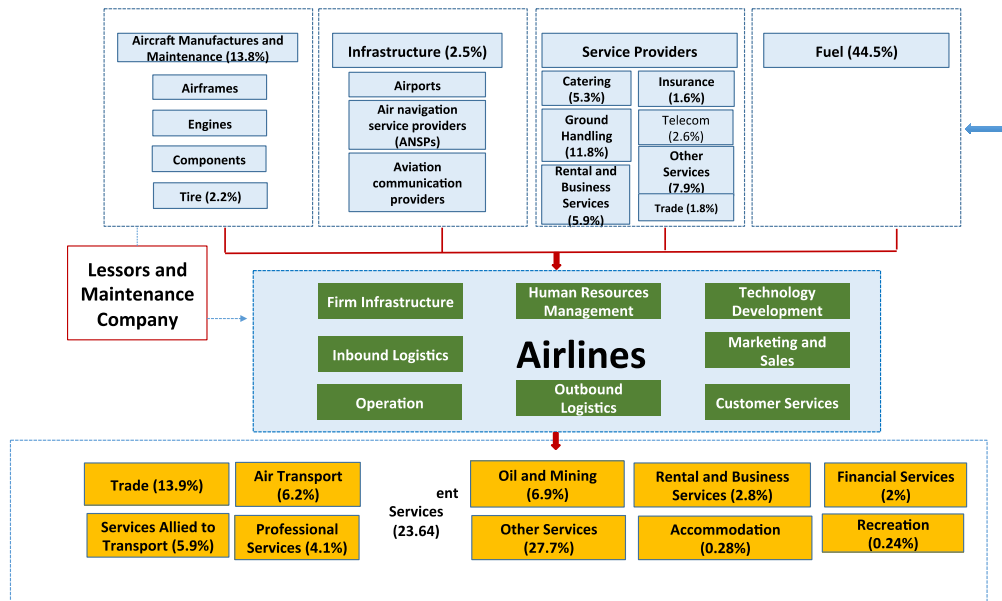
Source: Figure 1 in Tretheway and Markhvida (2014)

We try to map out the value chain of the air transport based on Indonesia's Input Output (IO) Table (see Figure 5.1).

Although, the proportions differ across time, the input elements of the airline business are the same: fuel, aircraft and maintenance, infrastructure and other services related to air transport. Based on the 2010 IO table, the largest input is fuel, about 44.5%, followed by aircraft and maintenance (13.8%), services allied to air transport, i.e., ground handling (5.3%), food and beverage (5.3%), rental and business services (5.9%), telecommunication (2.6%), insurance (1.6%), trade (1.8%) and other services (7.9%). We compare IO Tables of 2010 to 2005 and 1995 Tables. Based on the 2005 IO Table, fuel was about 30% of total input of the sectors listed (see Appendix 1 for a complete comparison).

We also try to map the main users of the sector based on the IO Table. Figure 5.2 shows that the largest users of air transport services are general government services (28.1%), followed by trade services (13.9%), air transport itself (6.2%), services allied to transport (5.9%), professional services (4.1%), oil and mining sector (6.9%), rental services and business support system services (2.8%) and other services (27.7%). We also compare the IO tables of 2010 to 2005 and the 1995 IO Table. Based on the 2005 IO Table, the largest sector remains the government sector (23.64%) followed by the trade sector (17.29%), air transport itself (11.76%), and business services (9.9%). Appendix 1 contains a complete comparison.

Figure 5.2 Air Transport Value Chain



Source. Authors' calculation based on Indonesia's IO Table

6. AIR TRANSPORT AND GLOBAL VALUE CHAIN

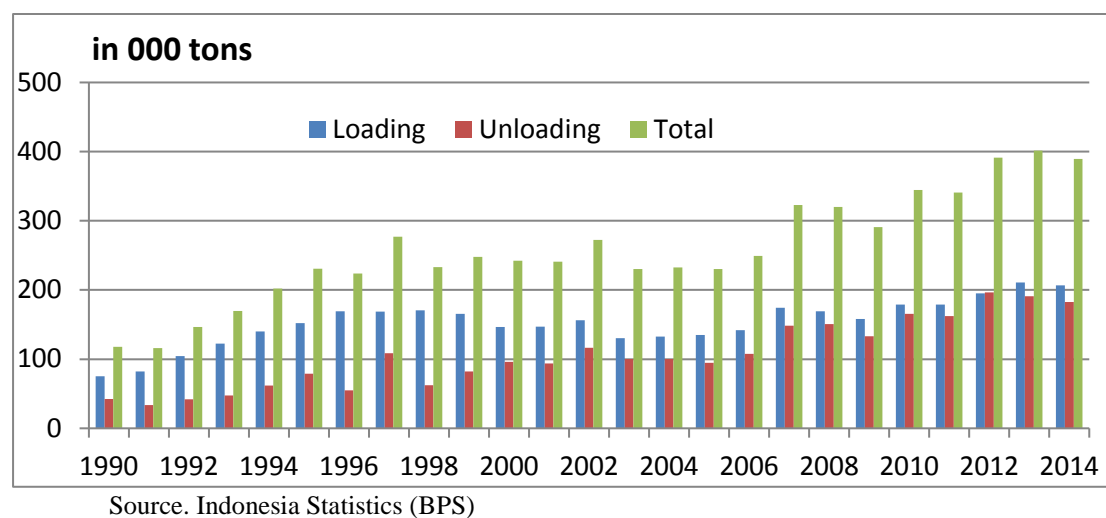
Although sea transport remain to be the main important modes of transport for raw material and intermediate inputs, air transport shows an increasing role in the global value chain. Live animals and perishable inputs from agriculture and fishery sectors for restaurants worldwide are often transported by air. Air cargo also holds an important niche in the transport of lightweight, high-value commodities (Popescu, et al, 2010).

In Indonesia, international air cargo, loaded and unloaded, increased from about 117,000t in 1990 to 389,000t in 2014. The average growth for the period of 1990-2014 was about 6% per annum. Figure 6.1 shows that the volume of loaded cargo is always higher than unloaded cargo except for 2012. Apart from fresh products, international cargo also delivers parts and components.

In Indonesia, there are 4 cargo airlines, with 3 scheduled cargo airlines (PT Cardig Air, PT TRI-MG Intra Asia Airlines, PT MY INDO Airlines) and 1 non-scheduled cargo airlines (PT Asialink). See the Appendix for details of cargo airlines. We describe the activities of each airline to provide a picture of the areas of specialisation of air transport in the cargo sector.

- Cardigair delivers fresh tuna, aircraft engines, live animals, and car parts. It serves Jakarta –Singapore, Jakarta – Balikpapan, Balikpapan –Singapore and Wamena Jayapura regularly but also serves other routes on a charter basis, including Hongkong and Thailand.
- PT TRI-MG Intra Asia Airlines operates cargo aircraft on scheduled routes for contract charters and non-scheduled routes for ad-hoc charters. The company serves the oil and gas industry, computer, electronic and spare parts businesses. It serves Jakarta - Singapore (JKT - SIN), Balikpapan - Singapore (BPN – SIN, Jakarta - Balikpapan (JKT - BPN).
- PT MY Indo Airlines delivers airmail, dangerous goods, live animals, perishable cargo (vegetables, seafood, chilled meat, flowers and spare parts), artwork cargo, and heavy weight cargo (including extremely large, heavy or non-standard shipments, such as pipes, generators, pumps and other drilling or off-shore equipment). PT MY Indo Airlines serves Halim Perdanakusuma-Balikpapan, Halim Perdanakusuma-Singapore and Balikpapan-Singapore.
- PT Asialink Cargo Express³ delivers fresh products (fruits and vegetables), marine products (crab, salmon, shrimp, and lobster), dangerous goods, automotive products (pistons, gaskets, bulbs, brake pads), electronics, and oil gas.

³ <http://www.asialinkcargo.co.id/>

Figure 6.1 Indonesia: International Cargo, 1990-2014

Grosso and Shepherd (2011) examine the response of cargo traffic to changes in regulatory regimes. They find that air transport matters more for some sectors than others. In particular, they find that liberalisation of air transport regulation is associated with larger effects on cargo volumes of time sensitive products and of parts and components. They conclude that 'economies seeking greater integration in international production networks could greatly benefit from a more liberal aviation policy regime'. (p. 203).

7. THE IMPACT OF DEREGULATION

A significant growth of the air transport sector follows the series of deregulations on the sector. We will discuss each element in the Structure Conduct Performance framework. Several aspects are considered, including output and price.

7.1 MARKET STRUCTURE

The number of airlines increased significantly following the reopening up of the sector for new entrance in 2001. Before entry was eased, there were only six scheduled airlines in Indonesia.⁴ The state-owned enterprises, Garuda Indonesia and Merpati Nusantara dominated the industry. In 1992, both captured about 90% of the market. In 1996, however the share of these two dropped to 68% (ADB, 1997). In 1993, the government temporarily closed the industry for new entry. However, the moratorium was lifted in 2001. As a result a number of new airlines emerged. By 2004, 28 new airlines were licensed. By this time, Merpati Nusantara and Garuda Indonesia captured about 38 per cent of Indonesia's air travel market, while the new entrants captured 35 percent of the market (Damuri and Anas, 2005).

In the past ten years, the industry has consolidated. After the euphoria of having a large number of air transport providers, naturally some of the new entrants closed down, either due to lack of capacity for managing airlines or financial difficulties. Scheduled airlines declined to only 17 in 2014 (OECD, 2014) and only 12 this year as in Table 7.1. Adam Air for example, established in 2003, after experiencing a number of fatal accidents ended up with its license revoked in 2008. Some other airlines also went bankrupt including Batavia Air, which filed for bankruptcy in 2013. Merpati Nusantara, the state-owned airline, ceased operation in February 2014.

Table 7.1 Scheduled Airlines, 2016

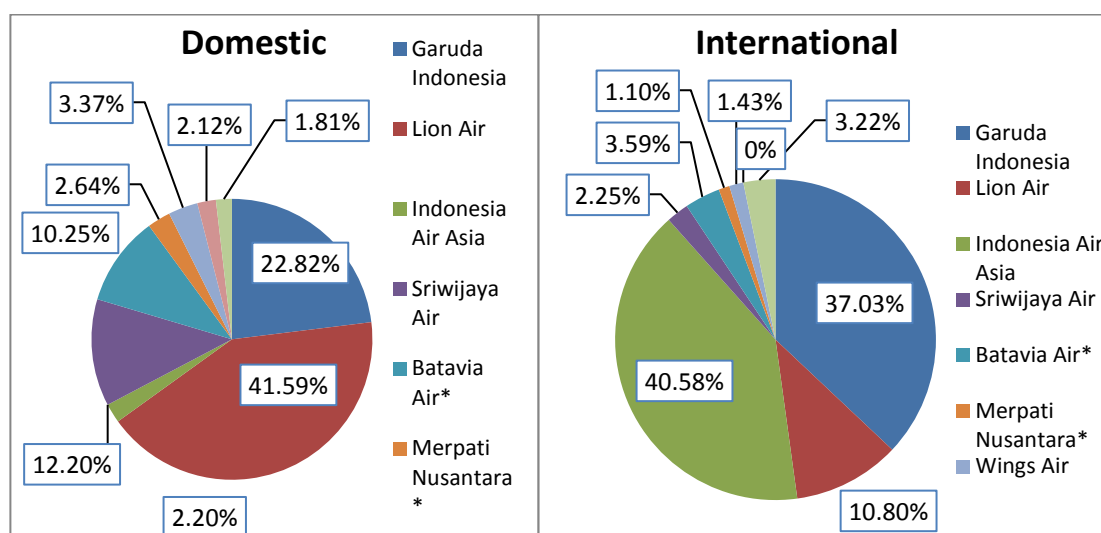
No.	Airlines
1	PT Garuda Indonesia
2	PT Mandala Airlines (AOC REVOKED May , 2015)
3	PT Indonesia AirAsia
4	PT Lion mentari Airlines
5	PT Wings Abadi Airlines
6	PT Sriwijaya Air
7	PT Kal Star Aviation
8	PT Travel Express Aviation
9	PT Citilink Indonesia
10	PT Transnusa Aviation Mandiri
11	PT Batik Air Indonesia
12	PT Asi Pudjiastuti Aviation
13	PT Aviastar Mandiri
14	PT Sky Aviation (Revoke)

Source. Ministry of Transport, accessed March 30, 2016

⁴ Two states owned enterprises: Garuda Indonesia, Merpati Nusantara. Four private companies: Sempati Air, Bouraq Indonesia, Mandala Airlines and Dirgantara Air Service.

While Garuda was the dominant player in the industry back in 1990s, the largest domestic carrier in Indonesia now is the Lion Air, with a market share of 42% (Figure 7). Meanwhile, international routes were dominated by Indonesia Air Asia and Garuda Indonesia with total share of more than 75% (Saraswati and Hanaoka, 2013). While Garuda serves international routes from the largest hubs, i.e., Soekarno Hatta and Denpasar, Indonesia Air Asia serves international routes from smaller international airports.

Figure 7.1 Market Share, 2012



Source. Saraswati & Hanaoka, 2013

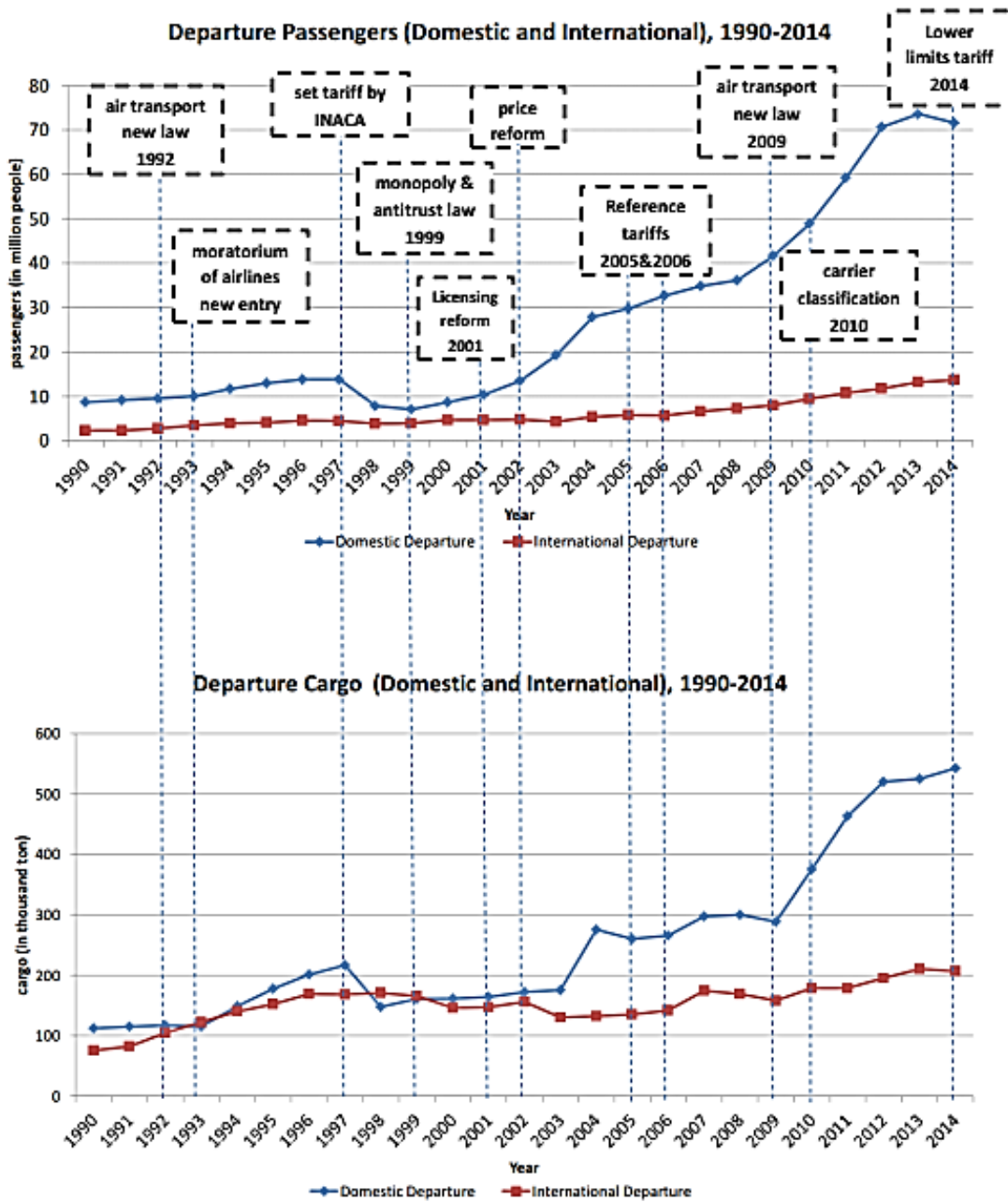
7.2 AIR TRAFFIC

Air traffic grew very fast in the past 15 years. During the period of 1990-2014, domestic passenger departing from any airports in Indonesia increased by 11% p.a on average. Meanwhile, international passengers departing from Indonesia increased by about 8% p.a. In 2014, total domestic passengers (departing and arriving) in any airports in Indonesia were about 152.5 million, almost 4 times the traffic in 2003 of only 42.2 million. Total international passengers were about 27 million, more than three times the quantity in 2003.

Domestic cargo also shows a significant increase, from 370,500t in total for 2003 to 935,500t in 2014. The need for faster inter-city and inter-island transport of perishable goods is among the reasons for the increase. Similarly, international cargo also increased, although the increase was not as big as that of domestic cargo. In 2003, the total international air cargo was only 230,300t which increased to 389,300 ton in 2014.

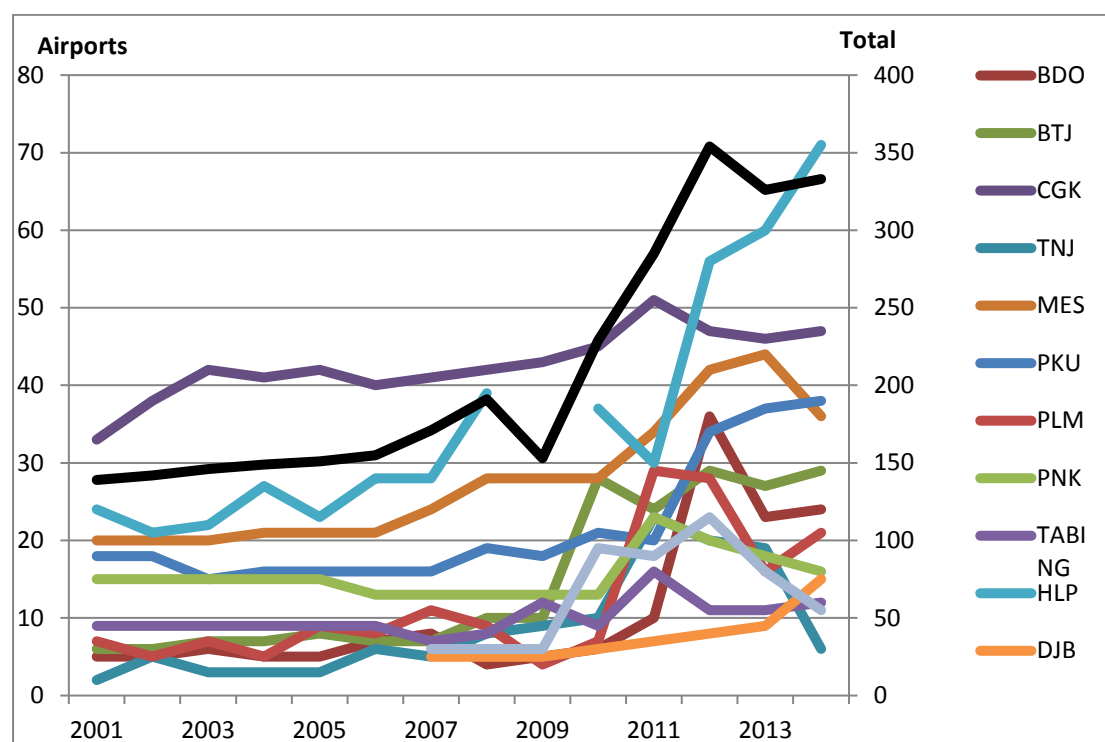
Figure 7.3 shows the changes in passenger numbers and cargo volumes, alongside key milestones in the reforms of policy. Passengers and cargo departing from Indonesia's airports during the 1990-2014 follow an increasing trend. However, a significant increase took place after 2002, following the price and entry reforms.

Figure 7.2 Air Traffic (Domestic & International Flights) 1990-2014 (in million person)



Source. Indonesia Statistics (BPS), 2016

The number of routes has also increased, particularly at secondary airports. Figure 7.4 shows that total number of routes for 13 airports increased from 139 in 2001 to 333 in 2014. The significant increase took place in secondary airports, such as Bandung (BDO). Meanwhile, big airports, particularly in Jakarta (CGK) demonstrate their operating constraints, since no significant increase in the number of routes was possible.

Figure 7.3 Number of Routes in 13 Airports, 2001-2014

Source. adapted from Setiawan et al, 2016

7.3 AIR FARES

Although, price data is relatively difficult to get, especially for a long timeframe, some indications are available from earlier studies. The removal of floor price in early 2000 has resulted in a competitive price, in economy class travel in particular. Ministry of Transport (2005) provides indicator that price had significantly decreased during the period of 2000-2004 following this change. As shown in Table 7.2, the average price for all routes in the year 2000-2001 and 2002 were much higher than the price in 2003. Price continued to drop in 2004.

Table 7.2 Average Airfare for Economy and Middle Class

No	Route	1996-1999 (Rp)	2000-2001 (Rp)	%	2002 (Rp)	%	2003 (Rp)	%	2004 (Rp)	%
1	CGK-BPN	356,000	1,382,000	288%	1,037,250	-25%	494,174	-52%	396,092	-20%
2	CGK-BDJ	189,000	1,059,000	460%	791,950	-25%	456,791	-42%	324,600	-29%
3	CGK-BTH	256,000	974,000	280%	684,750	-30%	434,159	-37%	348,724	-20%
4	CGK-DPS	251,000	1,138,000	353%	733,933	-36%	542,420	-26%	386,872	-29%
5	CGK-DJB	189,000	719,000	280%	914,600	27%	305,281	-67%	245,785	-19%
6	CGK-JOG	143,000	566,000	296%	456,950	-19%	270,654	-41%	236,080	-13%
7	CGK-UPG	377,000	1,572,000	317%	1,085,889	-31%	549,487	-49%	422,500	-23%

ANNEX A: APEC Economic Policy Report Case Study

8	CGK-MES	368,000	1,550,000	321%	1,060,350	-32%	519,332	-51%	436,255	-16%
9	CGK-PDG	276,000	1,070,000	288%	797,000	-26%	364,299	-54%	332,447	-9%
10	CGK-PLM	144,000	550,000	282%	451,000	-18%	292,143	-35%	260,704	-11%
11	CGK-MDC	597,000	2,275,000	281%	1,250,988	-45%	629,029	-50%	598,477	-5%
12	CGK-PGK	143,000	544,000	280%	453,475	-17%	296,611	-35%	272,807	-8%
14	CGK-SRG	122,000	465,000	281%	377,250	-19%	299,799	-21%	290,312	-3%
15	CGK-SOC	144,000	591,000	310%	443,200	-25%	334,338	-25%	296,119	-11%
16	CGK-SUB	206,000	804,000	290%	602,756	-25%	290,504	-52%	265,831	-8%

Notes. Pink: increase, Green: decrease

Source. Ministry of Transport (2005).

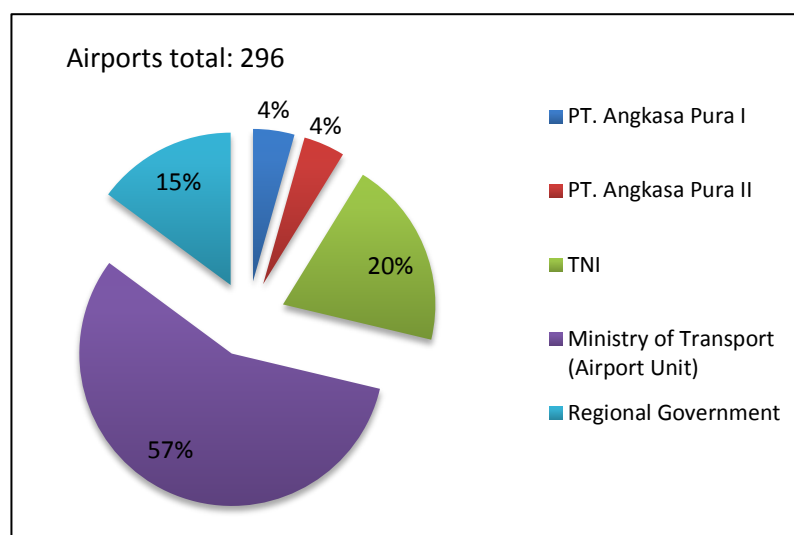
8. NEW ISSUES

Since the introduction of the policy reforms outlined a number of new issues have emerged which we review in this section.

8.1 CONGESTION

Indonesia has 296 airports economywide, with 26 of them commercially operated by state owned airport management, Angkasa Pura I and II. Angkasa Pura I is managing 13 airports in the eastern part of Indonesia, while Angkasa Pura II is managing the other 13 airports in the western part of Indonesia.⁵ The remaining are managed by the unit under Ministry of Transport, the Air Force or regional government (see Figure 8.1).

Figure 8.1 Total Airport in Indonesia by Operators



Source : Indonesia Statistics (BPS)

Congestion has been a feature of the last few years. The Soekarno Hatta (Soeta) International Airport in Jakarta, which has a capacity for 22m passengers, accommodated 53.8m passengers in 2015 (Jakarta Post, 2016). Several other airports are also reported to operate beyond their capacity, such as Husein Sastranegara International Airport in Bandung. This has resulted in delays. To address the issues,

⁵ AP II manages Soekarno Hatta, Halim Perdana Kusuma International Airport, Sultan Mahmud Badarudin International Airport, Supadio Airport, Kualanamu International Airport, Minangkabau International Airport, Sultan Syarif Kasim II International Airport, Husein Sastranegara International Airport, Sultan Iskandar Muda International Airport, Raja Haji Fisabilillah International Airport, Depati Amir Airport, Sultan Thaha Airport and Silangit Airport. AP I manages Ngurah Rai International Airport, Juanda International Airport, Sultan Hasanuddin International Airport, Sultan Aji Muhammad Sulaiman Sepingan International Airport, Frans Kaisiepo Airport, Sam Ratulangi International Airport, Adisucipto International Airport, Adisumarmo International Airport, Syamsudin Noor International Airport, Achmad Yani International Airport, Lombok International Airport, Pattimura Airport and El Tari International Airport

AP II had increased its runway capacity from 72 per hours to 86 per hour in the second semester of 2015.⁶

The state-owned airport management (AP I and AP II) had also started the expansion of their airports to keep up with the fast growing demand. Major airports currently either had expanded or undergone massive expansion. Soekarno-Hatta Airport will soon have a new terminal adjacent to Terminal 3. The new terminal is about 422,804 square meters with a commercial area of 70,000 sq m. It will host around 180 tenants and will be able to accommodate 15 million passengers in the first phase and 25 million passengers in the second phase. It will also have at least seven baggage conveyor belts, 206 check-in counters and 24 self check-in and bag drop counters to avoid long lines (*Jakarta Post*, 22 April 2016).

Soekarno-Hatta International Airport absorbed Rp10 trillion for the first phase of its expansion. The expansion was funded partly by the state budget (PMN) and partly by corporate loans from state banks and internal AP funds. AP II is on progress to expand Soeta third runway and phase 2 and 3 of the terminals. The next phase of expansion will be additional runway and further expansion of Terminal 3. Given that Soekarno-Hatta International Airport accommodated 53.8m passengers last year, the expansion remains to be too limited. The pressures for Soekarno-Hatta International Airport need to be addressed.

AP II also built a new terminal building at Husein Sastranegara International Airport in Bandung. The new terminal is about 17,000 square-meters which can accommodate about 3 million people per year. The new terminal began operation in April 2016. The current air traffic to Bandung stood at 10000 passengers per day with 70-80 flights per day. The old terminal building can accommodate only 500,000 passengers per year. This airport also shifted some burden for to Husein Sastranegara, as Jakarta and Bandung are about 170kms apart.

The cost of airport revitalization is not small. Table 8 shows the list of expansion projects and expansion that had already finished and the estimated cost. With the growing tourist destinations, there is demand for airport upgrading outside those airports managed by AP I and AP II.

Table 8.1 Airport Expansion

Airport	Expansion	Total Cost (IDR Trillions)
Soekarno Hatta	On Going	4.7
Halim Perdana Kusuma International Airport		
PLN Sultan Mahmud Badarudin International Airport	On Going	
Supadio Airport	2015	
Kualanamu International Airport	2013	
Minangkabau International Airport		
Sultan Syarif Kasim II International Airport	2012	

⁶ <https://m.tempoco/read/news/2015/06/04/090672027/pergerakan-pesawat-di-bandara-soekarno-hatta-jadi-86-per-jam>

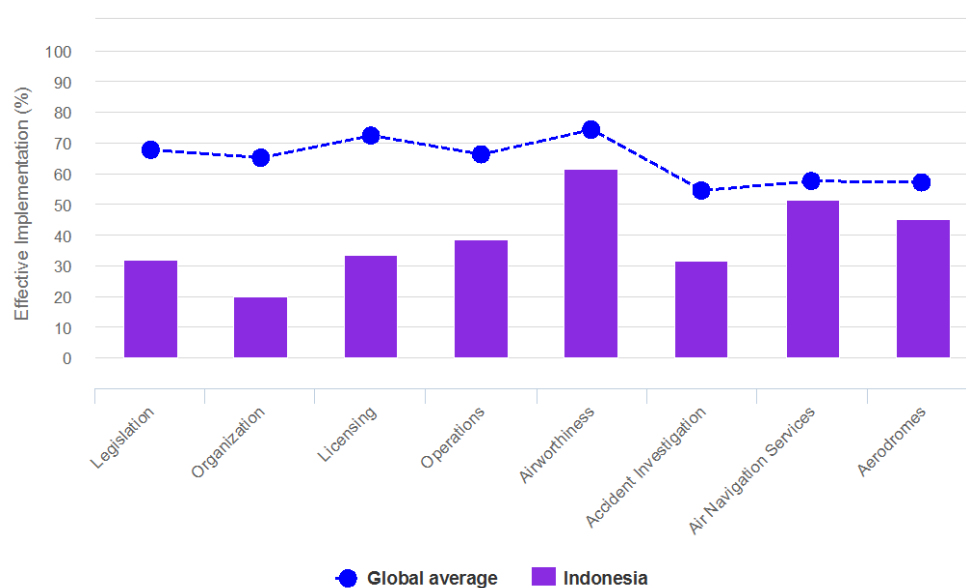
Airport	Expansion	Total Cost (IDR Trillions)
Husein Sastranegara International Airport	2016	0.139
Sultan Iskandar Muda International Airport		
Raja Haji Fisabilillah International Airport		
Depati Amir Airport		
Sultan Thaha Airport	2016	0.3
Silangit Airport	On Going	0.119
Ngurah Rai International Airport	2014	3.1
Juanda International Airport	2014	1.1
Sultan Hasanuddin International Airport		
Sultan Aji Muhammad Sulaiman Sepinggan International Airport	2014	2.1
Frans Kaisiepo Airport		
Sam Ratulangi International Airport		
Adisucipto International Airport	2015	5.0
Adisumarmo International Airport		
Syamsudin Noor International Airport		
Achmad Yani International Airport	On going	2.0
Lombok International Airport	On going	2.3
Pattimura Airport		
El Tari International Airport		

Source: Angkasa Pura I and Angkasa Pura II

8.2 AIR TRANSPORT SAFETY

Air transport safety is one of the crucial issues related to Indonesia aviation business. A number of global ratings indicate concern over Indonesia's air safety monitoring quality. First, the ICAO USOAP⁷ indicates Indonesia's safety rating is below the global average (<http://www.icao.int/safety/Pages/default.aspx>). Core areas audited by the USOAP are: primary aviation legislation and civil aviation regulations; civil aviation organization; personnel licensing and training; aircraft operations; airworthiness of aircraft; aircraft accident and incident investigation; air navigation services; and aerodromes and ground aids. The rating is between 0% to 100%, with 0% being "Not Implemented" and 100% being "Fully Implemented". Based on 2014 audits, the ICAO USOAP for Indonesia was below the global average (Figure 8.2).

⁷ The ICAO USOAP is the safety audit to determine the status of States' establishment of safety oversight measures and resources, as well as relevant ICAO Standards and Recommended Practices (SARPs), associated procedures, guidance material and safety-related practices. The USOAP was expanded in 2005 to cover provisions contained in all safety-related Annexes to the Convention on International Civil Aviation (Chicago Convention).

Figure 8.2 ICAO USOAP Safety Audit Results 2014: Indonesia

Source. ICAO

Second, the US Federal Aviation Authority (FAA) also issued its international aviation safety assessment (IASA) in 2015. Following the ICAO audit, US FAA downgraded Indonesia to Category 2, which means that Indonesia does not meet the ICAO standard.⁸

Third, following the ICAO audit result, the European Union banned all air carriers certified by the authorities with responsibility for regulatory oversight of Indonesia, with the exception of Garuda Indonesia, Airfast Indonesia, Ekspres Transportasi Antarbenua, Indonesia Air Asia, Citilink, Lion Air and Batik Air.⁹

Straits Times (2015) reported 40 fatal air crashes in Indonesia since 2001 in contrast to only 6 in Britain over the same period: a passenger on board an Indonesian carrier was estimated to be 25 times likelier to die in a crash than one in an American airliner.

Related to air safety, other concerns in the aviation business in Indonesia are the quality of air traffic controller. Tempo (2013) argued that the combination of heavy traffic and shortage of air traffic controllers at Soeta International Airports put air traveller at risk. Tempo reported that an air traffic-controlling supervisor at Soeta Airport also has to handle daily traffic control due to a shortage of human resources. At the time of Sukoi Superjet 100 demo airplane crashed on Mount Salak in Indonesia in 2012, the Safety Investigation Committee (KNKT) pointed out three major causes of the crash, which included the failure of the air traffic control at Soekarno Hatta to provide indication of the height of Mount Salak.

Based on our discussion with air transport stakeholders, the shortage of quality human resources is the main impediments to meet the ICAO safety standards. The number of

⁸ https://www.faa.gov/aircraft/air_cert/airworthiness_certification/

⁹ http://ec.europa.eu/transport/modes/air/safety/air-ban/doc/list_en.pdf

inspectors at the DG Air Transport could not keep up with the growth of the sector. Stakeholders, however, have been discussing how to fill the gap in the short run. One of the solutions was to lend some of their experienced pilots as inspectors to the DG's safety directorate. The longer run solution requires systematic improvement of the human resources, recruitment and training.

8.3 FLOOR PRICE VS. SAFETY

Responding to the recent accident of AirAsia flight QZ8501, Indonesia's government reintroduced floor price. Ministerial Decree 59/2014 requires air transport providers who set their tariff less than 40% of the upper bound of related services categories to obtain approval from related Director General. The Director for Air Transport at the Ministry of Transport argues that the floor price is used to ensure airlines do not lower safety levels. The concern is that price competition drives airlines for predatory pricing and neglect safety standards. As the Minister said, "We want the aviation sector to be healthy, not cheap. If it's cheap, there are many things that might not be done."¹⁰

The argument, however is unconvincing since the ICAO audit referred to earlier was actually pointing at the weakness at the regulatory side rather than in the airlines. The government needs to improve its capacity in monitoring airworthiness of airlines, quality of the airlines crews and controlling air traffic. Ministry for Transport should also work closely with the Competition Commission to prevent predatory pricing and ensure airlines comply with safety standard.

Setiawan et al (2016) assessed the impact of the floor price on airfare using difference in difference on a travel agent's air ticket prices for the period 2013-2015. They found that the floor price increased the average ticket price by Rp 75,368 (US\$ 6). The authors argue that the floor price only affects pricing of the low cost carriers. Garuda Chief Executive Arif Wibowo also said that "in fact, it means that we will not be attacked by competitors that have predatory pricing. It's still far from Garuda's average price,"¹¹

Tony Fernandez of AirAsia did ask the government to lower the floor price to 30% (Jakarta Post, April 25, 2016). The Ministerial decree no. 14/2016 then revised the floor price back to 30% of the ceiling price. But even so, Indonesia has shifted back towards a 1990s air transport regulatory regime on pricing and licensing.

¹⁰ <http://www.reuters.com/article/us-indonesia-airplane-regulations-idUSKBN0KH00620150108>

¹¹ See the previous footnote.

8. ASEAN OPEN SKY POLICY AND INDONESIA'S PARTICIPATION

ASEAN Open Skies Policy (AOSP) [also known as the ASEAN Single Aviation Market (ASAM)] is one of the key pillars to support the establishment of the AEC via facilitating the free, efficient, safe, and secure movement of people and goods within and potentially beyond ASEAN. There are economic and technical elements of the ASEAN Single Aviation Market. Economic elements are those of market access, charters, airline ownership and control, tariffs, commercial activities, competition law and policy/state aid, consumer protection, airport user charges, dispute resolution, and dialogue partner engagement. The technical elements include aviation safety, aviation security, and air traffic management.

The operationalization of ASEAN Open Skies comprises of three agreements: the ASEAN Multilateral Agreement on the Full Liberalisation of Air Freight Services (MAFLAFS), the ASEAN Multilateral Agreement on Air Services (MAAS), and the ASEAN Multilateral Agreement on the Full Liberalisation of Passenger Air Services (MAFLPAS). Ratification of those three agreements will allow any airlines designated by an ASEAN Member State to operate both passenger and cargo scheduled services between its home economy and a point with international airport in another Member State, and then to a point with international airport of a third Member State, without limitations on capacity and schedule.

The ratification of the protocols under the three agreements has not been smooth. Indonesia was among the late signatory members to ratify the agreement. It was only April 2016 when Indonesia together with Laos signed the agreement (see Appendix 3 for Indonesia's schedule of ratification of protocols under ASAM agreements).

With ASAM in place, does it not mean that ASEAN carriers are free to fly across ASEAN sky? Unfortunately not!

ASEAN members limit the access of other ASEAN carriers to several airports within their jurisdiction. Indonesia, for example, limits access of ASEAN carriers to five designated airports - Jakarta Soekarno-Hatta (Jakarta), Medan Kuala Namu (North Sumatra), Surabaya (East Java), Denpasar (Bali), and Makassar (South Sulawesi). Laos also limits access to Vientiane and Luang Prabang. The Philippines excludes Manila from AOSP. The secondary limitation to the access is the availability of slot time at the designated airports. The problem is some of the airports have slot time constraints for the next 1-2 years, e.g. Soekarno Hatta airports. Although the new terminal building at Soekarno Hatta is fully operating later this year, the slot time is constrained by availability of runways. For the longer run perspective, ASAM will benefit travelers in Indonesia as Indonesia is currently expanding its major airports, including finishing the third runway of Soekarno Hatta by the end of 2017. But in the meantime, the application of policy on access to airports is limiting its impact.

Ahsan et al (2015) also argue that restrictions remain on the rights to fly routes that do not connect to the carrier's home economy, on the application of the 'community carrier principle' (where ownership can be accumulated in order to access the benefits of the agreements). They also point to forces in favour of further reform. These include that they call the 'growing confidence' of Indonesian carriers (evident in

Indonesia's policy change noted above), the pressure for open regimes from interests associated with secondary cities, and the value of a common approach when dealing with large non-members such as China. Also Tan (2013) argues that some economies have more liberal arrangements with economies outside ASEAN than they do with their ASEAN partners: these agreements could provide benchmarks for internal commitments.

9. LESSON LEARNED AND POLICY RECOMMENDATION FOR STRUCTURAL REFORMS

The reform of air transport policy in Indonesia has led to significant changes in prices and is associated with a rise in passenger numbers. Partly the growth in load is related to overall growth in the economy but the capacity in the sector has also expanded. This has been facilitated by changes in licensing including for foreign carriers. Service quality has increased with more cities being served more often.

The inter-sectoral effects have been important. The growth of the sector has led into growth in sectors supplying inputs, including energy and manufacturing sectors. The better performance of the sector has supported the improved performance of other sectors, including tourism and business services.

Despite these positive experiences, the reform has been unstable, with a more recent return to the effective imposition of a floor price and tighter rules on licensing. This experience is in part a response to the growth of the sector itself and the safety (including congestion) issues with which growth has been associated. IATA has presented options for the solutions to these issues, and their proposals do not include economic instruments like price controls or rules on entry. Instead they involve the adoption of international standards and systems to improve safety and to manage capacity (in airports and with respect to air traffic control) more efficiently. Instead, the response has been to slow down the reform process, rather than deal directly with the source of the problem.

This outcome leads to the following observations on lessons from the Indonesian experience.

- One is the value of targets and instruments in the selection of policy. The most efficient instrument is directly related to the policy problem. As just noted, a recent example is the use of price controls for the purpose of meeting safety targets. More effective is the direct application of safety policy for the purpose of targets in that area. The application of an indirect measure has other side effects, often not anticipated, impedes the process of competition and the design of options in terms of quality and price, and risks additional costs for consumers including exporters of other goods and services.
- Another is the importance of policy and capacity in complementary areas, in this case, airports. Airport capacity including runway landing slots are a more important constraint on entry than is policy. Awareness of the linkages between the sector undergoing reform and the rest of the economy is important to appreciate. The risk is that the benefits of reform are captured instead by input suppliers, or absorbed in higher costs associated with other services.
 - Tretheway and Markhvida (2014) argue that other parts of the aviation value chain can exercise market power. In that case, liberalisation of the airline activity would lead to competition among airlines, higher

- traffic volumes, greater demand for other inputs and a redistribution of rents along the chain. Indeed, the authors also report IATA data which shows relatively low returns on capital in airlines compared to other activities in the last decade.¹ This leads to a case for the application of competition policy (and reform as well where regulation is the source of the problem) to those other sectors.

A third observation is the value of international commitments to continue to drive reform and provide some guidance to the next steps in reform. While slow to commit to ASEAN arrangements, Indonesia has now been drawn into the process of regional integration, having built its own confidence through domestic reform.

¹ <https://www.iata.org/whatwedo/Documents/economics/profitability-and-the-air-transport-value%20chain.pdf>

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APPENDIX

APPENDIX 1. CALCULATING MULTIPLIER AND LINKAGES

Multiplier Analysis

Multipliers are basically contracted from Leontief inverse (matrix). (For detailed mathematical steps in composing Leontief inverse (matrix), see Miller and Blair (2009))

$$\begin{aligned} \Delta X &= AX + \Delta Y \\ \Delta X &= (I - A)^{-1} \cdot \Delta Y \end{aligned} \quad \dots\dots\dots (2)$$

$$\Delta X = L \cdot \Delta Y \quad \dots\dots\dots (3)$$

$X = ([X_i]_{n \times 1})$, the column vector of the total output changes received of endogenous variables. $A = ([a_{i,j}]_{n \times n})$, is the matrix of technical coefficient, which is obtained by dividing each component in any of endogenous variables by its column sum value. This indicates spending on sector i 's output from sector j as inputs of its total expenditure. $Y = ([Y_i]_{n \times 1})$, is the column vector of final demand or exogenous variable changes. $L = ([l_{i,j}]_{n \times n}) = (I - A)^{-1}$ is Leontief inverse matrix.

Output multiplier is the initial unit's worth of sector j output needed to satisfy the additional final demand (Miller and Blair, 2009). It can be obtained by the column sums of Leontief inverse matrix. Mathematically, it follows;

$$OM_j = \sum_{i=1}^n l_{ij}$$

Linkage Analysis

A key sector in the economy must have strong interdependency with other sectors, neither with its input-supplier sector or output-demander sectors. The simplest tools to measure the interdependency among sectors are backward and forward linkage. Sectors that have high value backward linkage (BL) can be said that they are important to others production activities. They buy products of other sectors to a significant extent for their input production. On the other hand, High value of forward linkage (FL) indicates that output of particular sector is needed by others. Typical of these sectors would have input production supplier role in the economy. The rule of thumb for backward and forward linkage is more than 1 (>1) or less than 1 (<1). BL or FL more than 1 means have strong interdependency with others and vice versa. The construction of backward and forward linkage follows;

$$BL_j = \frac{\sum_{i=1}^n l_{ij}}{\frac{1}{n} \cdot \sum_{j=1}^n l_{ij}}$$

$$FL_i = \frac{\sum_{j=1}^n l_{ij}}{\frac{1}{n} \cdot \sum_{i=1}^n l_{ij}}$$

APPENDIX 2. CARGO AIRLINES

Type	Airlines	Status	Number of scheduled routes	Scheduled Routes	Aircraft	Number of Aircraft	Aircraft Capacity	Number of non-scheduled routes (chartered)	Chartered Flight	Goods
Scheduled and non Scheduled - Cargo	PT Cardig Air	Operate	4	Jakarta-Singapore; Jakarta-Balikpapan; Balikpapan-Singapore; Wamena-Jayapura	Boeing 737-300F	3	Maximum 18 tons gross payload on 8 to 9 pallets	31	Banda Aceh; Medan; Padang; Pekanbaru; Batam; Palembang; Semarang; Surabaya; Yogyakarta; Denpasar; Balikpapan; Banjarmasin; Makassar; Kendari; Manado; Ternate; Ambon; Kupang; Islamabad (Pakistan); Hongkong; U-Tapao-Pattaya (Thailand); Singapore; Dili (Timor Leste); Darwin, Christmas Island (Australia); Port Moresby (Papua New Guinea)	general cargo, perishable goods, live animals, dangerous goods and aircraft engine.
Scheduled and non Scheduled - Cargo	PT TRI-MG Intra Asia Airlines	Operate	3	Jakarta-Balikpapan; Singapore-Jakarta; Singapore-Balikpapan	Boeing 737-300F; Beechjet 400XP and Super King Air B200C (for medivac flights), etc	11	16 tons	15	Jakarta-Makassar; Jakarta-Ambon; Jakarta-Luwuk; Jakarta-Manado; Jakarta-Berau; Jakarta-Sorong; Jakarta-Timika; Jakarta-Kualanamu; Jakarta-Batam; Jakarta-Kupang; Jakarta-Surabaya; Singapore-Kualanamu; Singapore-Batam; Singapore-Surabaya; Surabaya-Kuala Lumpur	also provide medical evacuation services (Medivac)

Scheduled and non Scheduled - Cargo	PT MY INDO Airlines	Operate	3	Jakarta-Balikpapan; Jakarta-Singapore; Balikpapan-Singapore	Boeing 737-300 F and Boeing 737-200 F	3	Boeing 737-300 F (16,3 tons) and Boeing 737-200 F (12 tons)	3	Jakarta-Balikpapan; Jakarta-Singapore; Balikpapan-Singapore	airmail, dangerous goods, live animals, vegetables, seafood, chilled meat or flowers, pharmaceutical goods, valuable goods (vehicle; gold, platinum group metals; legal banknotes, travellers' cheques, securities, share coupons, and stamps; precious stones, including diamonds rubies, emerald, sapphires, opals and pearls; Jewellery, watches and articles made of silver, gold and platinum), shoes, textiles, and spare parts, among others, artworks, antiques and musical instruments, pipes, generators, pumps and other drilling or off-shore equipment
Non Scheduled - Cargo	PT Asialink Cargo Express	Operate	-	-	F-27 Friendship-500 (3) and Fokker 50-	4	7,06 tons	16	Batam-Pangkal Pinang; Batam-Palembang; Batam-Jambi; Batam-Padang; Batam-Pekanbaru; Batam-Medan; Pangkal Pinang-Jakarta; Pontianak-Balikpapan; Batam-Singapore; Batam-Kuala Lumpur; Batam-Penang; Batam-Matak; Batam-Pulau Natuna Besar; Batam-Kuching; Batam-Pontianak; Kuching-Bandar Seri Begawan	fresh product, marine product, dangerous product, automotive products, electronics, oil & gas,

APPENDIX 3. ASEAN TRANSPORT INSTRUMENTS AND STATUS OF RATIFICATION

Instruments		Indonesia: Date of Ratification
ASEAN Multilateral Agreement on the Full Liberalisation of Air Freight Services (MAFLAFS)		28 August 2015
Protocol 1	Unlimited Third, Fourth and Fifth Freedom Traffic Rights among Designated Points in ASEAN	28 August 2015
Protocol 2	Unlimited Third, Fourth and Fifth Freedom Traffic Rights among All points with International Airports in ASEAN	28 August 2015
ASEAN Multilateral Agreement on Air Services		24 November 2011
Protocol 1	Unlimited Third and Fourth Freedom Traffic Rights within the ASEAN Sub-Region	24 November 2011
Protocol 2	Unlimited Fifth Freedom Traffic Rights within the ASEAN Sub-Region	24 November 2011
Protocol 3	Unlimited Third and Fourth Freedom Traffic Rights between the ASEAN Sub-Region	27 November 2012
Protocol 4	Unlimited Fifth Freedom Traffic Rights between the ASEAN Sub-Region	27 November 2012
Protocol 5	Unlimited Third and Fourth Freedom Traffic Rights between the ASEAN Capital Cities	30 May 2014
Protocol 6	Unlimited Fifth Freedom Traffic Rights between the ASEAN Capital Cities	30 May 2014
ASEAN Multilateral Agreement on the Full liberalisation of Passenger Air Services (MAFLPAS)		April 2016
Protocol 1	Unlimited third and fourth freedom traffic rights between any ASEAN cities	April 2016
Protocol 2	Unlimited fifth freedom traffic rights between any ASEAN cities	April 2016
Air Transport Agreement between the Government of the Member States of the Association of Southeast Asian Nations and the Government of the People's Republic of China		April 2016
Protocol 1	April 2016	April 2016
Protocol 2	April 2016	April 2016

Source. Ratification Status Air Transport Agreements (<http://www.asean.org/storage/images/2015/December/Air-Transport-Section/Ratification%20status%20Air%20Transport%20Agreements-151208.pdf>)

APPENDIX 4. INPUT OUTPUT OF AIR TRANSPORT

No	1995				2005				2010			
	Input		Output		Input		Output		Input		Output	
	Sectors	Share	Sectors	Share	Sectors	Share	Sectors	Share	Sectors	Share	Sectors	Share
1	Petroleum Refineries Products	17.3%	Air Transport	20.5%	Petroleum Refineries Products	30.8%	General Government	23.64%	Petroleum Refineries Products	44.5%	General Government	28.1%
2	Aircraft And Its Repair	17.1%	General Government	16.1%	Aircraft And Its Repair	16.6%	Trade Service	17.29%	Aircraft And Its Repair	13.8%	Trade except car and motorcycles	13.9%
3	Services Allied To Trans-Port	16.6%	Trade	10.6%	Services Allied To Transport	14.5%	Air Transport	11.76%	Services Allied To Trans-Port	11.8%	Air Transport	6.2%
4	Business Services	14.6%	Business Services	8.3%	Air Transport	6.4%	Business Service	9.91%	Rental Services and Business Support Services	5.9%	Services Allied To Trans-Port	5.9%
5	Air Transport	12.6%	Banking And Other Finan-Cial Intermediaries	5.5%	Restaurant Services	6.3%	Bank	2.54%	Food and beverages services	5.3%	Professional, Scientific and Technical Services	4.1%
6	Restaurant (Food and beverages)	5.4%	Crude Oil	2.2%	Business Services	6.3%	Coal	2.10%	Telecommucation Service	2.6%	Crude Oil	3.8%
7	Insurance	2.8%	Services Allied To Transport	1.4%	Trade Services	4.6%	Service allied to transport	1.59%	Air Transport	2.5%	coal and lignite	3.1%
8	Trade	2.3%	Coal	1.3%	Tire	3.1%	Cigarette	1.22%	Tire	2.2%	Rental Services and Business Support Services	2.8%
9	Communication Service	1.37%	Cigarette	0.9%	Insurance and pension fund	2.6%	Crude Oil	0.12%	Trade except car and motorcycles	1.8%	Cigarette	2.4%
10	Tire	0%	Professional, Scientific and Technical Services	0.0%	Communication Service	1.04%	Professional, Scientific and Technical Services	0.00%	Insurance Service	1.6%	Financial Banking Services	2.0%
	Other Sectors	10.0%	Other Sectors	33.1%	Other Sectors	7.9%	Other Sectors	29.8%	Other Sectors	7.9%	Other Sectors	27.7%

Source. BPS, authors calculation

APPENDIX 5. INDONESIA AIRPORT CODE

Code	City	Airport
BDO	Bandung	Husein Sastranegara Airport
BTJ	Banda Aceh	Sultan Iskandar Muda Airport
CGK	Jakarta	Soekarno Hatta Airport
TNJ	Tanjung Pinang	Raja Haji Fisabilillah Airport
KNO	Medan	Kualanamu/Medan Airport
PKU	Pekanbaru	Sultan Syarif Kasim II Airport
PLM	Palembang	Sultan Mahmud Badaruddin II Airport
PNK	Pontianak	Supadio Airport
TABING	Padang	Padang/Tabing Airport
HLP	Jakarta	Halim Perdana Kusuma Airport
DBJ	Jambi	Sultan Thaha Airport
PGK	Pangkal Pinang	Depati Amir Airport
DTB	Siborong-borong	Silangit Airport

Source. Indonesia Directorate General of Air Transportation

APEC Economic Policy Report Case Study

Financial Services Sector Reform in Japan

EXECUTIVE SUMMARY

Japan's "lost decades of growth" owe to insufficient countermeasures to address (a) demographic changes and (b) belated and incomplete adaptation of the services sector in particular to globalisation. The combination of a strong bureaucracy, a high level of per-capita GDP at the outset and redistributive dynamics between industrial sectors have softened the impact of deflationary shocks but allowed policy immobilism to flourish. The Koizumi reform agenda was successful in resolving Japan's banking crisis, and endeavoured to capitalise on this success to go beyond financial services reform, and to implement capital market reform.

Why examine Koizumi's 2006 reforms?

Koizumi's reform agenda was part of a long (still ongoing) process of financial reform. The 2006 reforms were those most focused on the opening of capital markets and represented a far greater opportunity for much-needed structural reform than actually took place.

To understand the context of these reforms and gauge their degree of success or failure (thereby learning lessons in the process), it is necessary to have a working understanding of several things including:

- (1) Characteristics of Japan's postwar political economy.
- (2) The influence of these characteristics upon Japan's postwar history of financial reform
- (3) The overall economic context of Japan's "lost decades"

It is worth bearing in mind that while financial sector reform may have been an objective in its own right until the bursting of Japan's real estate and stock bubbles in 1990, the over-arching goal of structural reform thereafter became one of extricating Japan from its deflationary "lost decade" dynamics thereafter. The latter proved extremely difficult and lent to negative evaluations of structural reforms in the post-bubble era.

What were the reforms?

The 2006 reform package included:

- The Financial Instruments and Exchange Law
- New Companies Law
- Postal Privatisation

What did they intend to achieve?

- Market-opening (greater cross-border investment, particularly inward investment)
- Better corporate governance through capital market opening
- A move “from savings to investment” – diversification of household balance sheets

What was the outcome?

The 2006 market reforms were successful in overcoming a degree of policy immobilism but were ultimately incapable of resolving Japan’s “lost decades” of growth, particularly given the 2008 Lehman shock.

There were some individual policy successes as well as valuable lessons learned from the 2006 Koizumi reforms. Limited progress on capital market reforms in various subsequent administrations after Koizumi tended to place disproportionate focus on the negative aspects of the reforms’ outcome. Japan’s relapse into “lost decade” dynamics alongside the global financial crisis only underscored the necessity to press ahead with structural reforms to achieve eventual sustainable economic recovery.

Ultimately, financial and capital market reforms represented advancements but not enough to solve the entire economy’s problems.

Lessons for APEC

Lessons from the 2006 reforms as applicable to APEC include:

- The complementarity of capital market reforms to reforms in financial services
- Policy sequencing: economic expansion makes structural reform via income redistribution more palatable
- Benefits in expansion of new products may be sought to offset compliance costs associated with harmonisation to global regulatory standards in financial systems.
- Idiosyncratic application of the rule of law is a potential hurdle for cross-border M&A into Asian economies
- “Mandatory” corporate governance regimes might be more transparent than “enabling” regimes in the eyes of foreign investors
- Given the greater role of non-shareholding stakeholders in many Asian models of governance, there may be merit in collectively exploring alternative models to Anglo-saxon governance models.

- Strong and centralised political leadership may be a pre-requisite to achieve success when battling vested interests to enact reform
- Gradualist or piecemeal financial reform agendas run the risk of falling behind global trends - failing to achieve desired reform or even exacerbating crisis risk.

1. THE NEED FOR STRUCTURAL REFORM IN JAPAN

As of 2001, Japan had experienced its first “lost decade” of growth. Although it was generally agreed that policy reforms were required, policymakers were divided on the substance of such reforms. Prior to the Koizumi administration, Japan’s consensus-driven policymaking process did produce hard-won reforms at great cost, which amid frictions among stakeholder interests were implemented in stuttering, piecemeal fashion.

Koizumi’s reformist credentials are not to be overlooked, even if in implementation his reforms failed to rescue Japan from its “lost decades”. It is argued that, if not for the onset of the Global Financial Crisis (GFC) in 2007, the postal privatisation (PM

Timeline of Reforms under PM Koizumi

- April 2001: PM Koizumi comes to power
- June 2001: CEFPP under Koizumi & Takenaka compile first centralised economic and fiscal policy guidelines
- Sep 2001-Apr 2002: FSA inspections to reclassify non-performing loans at troubled institutions
- Jan 2002: Bank Shareholding Purchase Corporation established (Purchased 1.6trn yen of stocks by 2006)
- Oct 2002: PFR (Programme for Financial Revival) to accelerate bank loan restructuring.
- April 2003: IRCJ established
- April 2004: Economic expansion has begun
- September 2004: Takenaka is appointed Postal Reform Minister
- March 2005: Major banks' NPL ratio declines to 2.9%; government announces official end of the banking crisis
- October 2005: Postal reform legislation is enacted.
- May 2006: New Companies Act comes into force
- June 2006: FIEL is enacted
- September 2006: PM Koizumi steps down per LDP

Koizumi’s crowning legislative victory) would have changed the face of Japan’s financial system.¹ The New Companies Act represented the first major revision to corporate law since the early 20th century, striving to modernise Japanese laws surrounding corporate mergers and acquisitions (M&A) and therefore to fuel growth in cross-border investment. The Financial Instruments

and Exchange Law (J-SOX, as commonly known in the US) was designed to comprehensively overhaul Japan’s outdated Securities and Exchange Law taking into account regulatory changes in the United States² and, by establishing a regulatory “level playing field” to encourage inward foreign direct investment (FDI).

¹ (Vogel 2006)

² In the wake of Enron and WorldCom accounting scandals, US Congress enacted the Sarbanes-Oxley Act, passed on 30 July 2002, under the oversight of the Securities and Exchange Commission “to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes.” <https://www.sec.gov/about/laws/soa2002.pdf>

economy (Japan's relapse into deflation) these reforms have been widely dismissed as failures. Yet summary dismissal overlooks elements of progress in financial sector function and productivity. A more nuanced assessment of the programme is necessary, starting with the political and economic contexts of the reforms.

1.1. POLITICAL ECONOMY OF THE JAPANESE FINANCIAL SECTOR:

The Japanese financial system displays structural idiosyncrasies whose roots lie in recent political and economic history. In evaluating the success of structural reform in Japan, it is insufficient simply to hold up isolated examples of policy reform to comparisons with the US or UK. Instead, it is necessary to take into account characteristics of Japan's model of stakeholder capitalism, in which suppliers, employees, business partners and financiers alongside shareholders are all viewed as important business stakeholders.

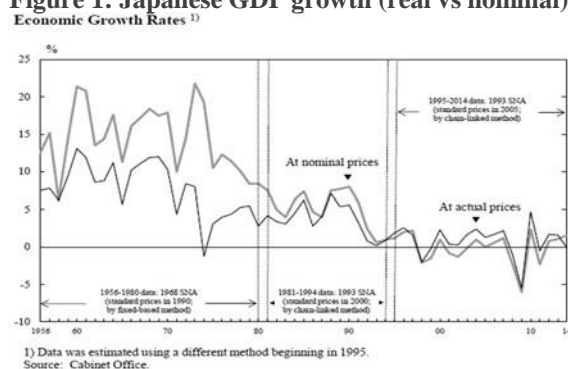
The Japanese model, born of an era of far less flexible financial policy, is not without its benefits – including stability throughout the supply chain and plentiful private-sector support for innovative R&D. However, among other rigidities, the shareholder's power to drive change is much blunted in comparison to the US shareholder. Existing stakeholders may see insufficient benefits to the US model to abandon the Japanese model wholesale. Thus protection of stakeholders' interests may remain a structural characteristic of the Japanese economic model that will not disappear. If so, it would be realistic for Japan to seek alternative models of structural reform than that of pure shareholder primacy.

In order to understand the motivations behind structural reform in Japan in the 2000's and the challenges reforms faced, it is useful to consider several key developments in the Japanese postwar financial system, including:

- Japan's rigid postwar financial system was characterized by a high degree of interventionism, which helped mobilise resources in Japan's high-growth era yet at a cost to the efficiency of decentralised market functions. As Japan's economy matured and global financial markets internationalised, domestic fiscal and monetary policy alone were inadequate in regulating liquidity flow and assuring productive asset allocation across sectors.
- The pains of adjustment to globalisation led to market-opening reforms in the 1980's that, in the absence of complementary regulatory and administrative reform, proved incomplete. The incomplete nature of market-opening reforms in the 1980's contributed to market failure.

- The necessity for comprehensive reform had become clear from the early 1990's, upon the bursting of Japan's real estate and stock market bubbles. Indeed, these market shocks led political and business leaders to question the existing Japanese economic model.
- In the mid to late 1990's "Big Bang" deregulatory reforms, intended as market-opening measures, were unable to resolve the main problems of loss of confidence in the Japanese financial sector, which was aggravated by the Asian Financial Crisis of 1997. Deregulation and structural reform proved to be two separate phenomena.
- Meanwhile, an aging demographic combined with regulatory forbearance³ prolonged Japan's financial crisis. Japanese productivity growth plummeted.

Figure 1: Japanese GDP growth (real vs nominal)



See Appendix 5 for a detailed account of Japan's postwar history of financial reform and Appendix 6 for a structural description of Japan's financial sector.

Source: Statistical Handbook of Japan 2016, p. 23

1.2. THE ECONOMIC PROBLEM

While financial sector reform may have been an objective in its own right until the bursting of Japan's real estate and stock bubbles in 1990, the over-arching goal of structural reform thereafter became one of extricating Japan from its deflationary "lost decade" dynamics thereafter.

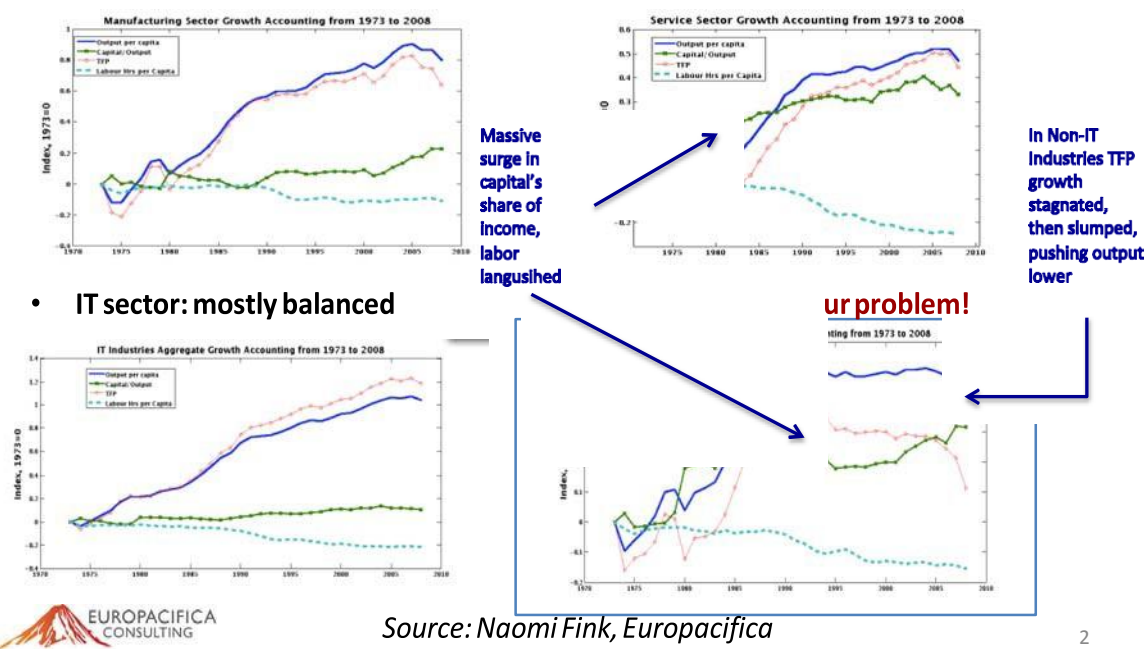
By 2001, when PM Koizumi came to power, productivity had taken a large hit, particularly in the more domestic portions of industry (in the services sector, which comprises over 70% of Japanese GDP and jobs). Moreover, with the financial sector beset by problem loans, loose monetary and fiscal policies were having little impact in rescuing Japan from its deflationary spiral. Nor was export-oriented growth proving successful in extricating Japan from its economic malaise.

³ (Hoshi and Kashyap 2011)

Figure 2: Heterogeneity in Japanese growth accounting, 1973-2008

The source of the problem:

- Manufacturing - balanced
- Services sector is **not** balanced



Source: Fink, 2015

Industry-level decomposition of Japanese growth accounting is illustrative in pinpointing structural problems from an economic perspective.

The slump in Japanese productivity that occurred during the “lost decades” was accompanied by increased divergence between industrial sectors. Manufacturing displayed textbook characteristics of a “balanced growth path”, in contrast to services. Although it may seem counter-intuitive (given the trend toward offshoring production was greater in the manufacturing sector), labor’s share of income showed an unhealthy decline in services, where capital’s share surged.

Total factor productivity (TFP) growth in the (largely domestic) services sector substantially underperformed TFP in (more export-oriented, less regulated) manufacturing. But under-performance in the non-IT sector with respect to IT was

greater still, suggesting that mercantilist export-led growth strategies were not the only explanation behind the failure of domestic demand to recover.

Further empirical research reveals the importance of technological investment in Japanese productivity growth. A simulation by Fink (2015) incorporating Investment-Specific Technology (IST) achieves an even better fit with actual data than the Hayashi-Prescott “base case” model. Fink finds that IST explains roughly one-third of productivity growth since 1970.⁴

Meanwhile, for both IT and non-IT sectors, allocation to “innovative capital” matters for total factor productivity growth, above and beyond overall investment in capital, or even in intangibles. This is a result robust across a number of econometric studies (see Appendix 1). Separately, econometric analysis also reveals that increases in productivity are consistent with deregulation in the non-IT services sector in particular (Fink, 2016).

The combination of analytical findings support the argument that regulatory incentives should be designed not only as to boost allocations to innovative capital but also to reallocate capital away from non-innovative “dead weight” capital, which dulls productivity.⁵

With regard to the financial sector in particular, it is demonstrated (see Appendix 1) that between 2005 and 2008 (following a period of financial deregulation), the financial sector’s investments in intangibles as a proportion of gross value added (GVA) surged by almost 5%, with innovative capital accounting for a high proportion of intangibles, a mix consistent with improvements in total factor productivity (TFP).

In practical terms, empirical results underscore the importance of **strengthening corporate governance**. Where corporate governance influences the allocation of firm assets, improved governance, by way of improving asset allocation, ought to lead to higher productivity. Improving corporate governance is also consistent with deregulation of highly regulated industries, also empirically consistent with growth in services-sector TFP.

Appendix 1 presents empirical analysis on drivers of Japanese total factor productivity.

⁴ (Fink, 2015)

⁵ (Fink, 2016)

1.3. THE STRUCTURE OF THE JAPANESE FINANCIAL SECTOR

As of 2012, financial services represented roughly 3% of gross output and a similar percentage of compensation of Japanese employees. Examining input-output tables, the greatest immediate impact of changes in financial services outputs is greatest upon the following industries:

- Housing
- Activities not elsewhere classified
- Finance
- Real estate
 - Railway
 - Rental of office equipment and goods
 - Wholesale
 - Retail
 - Other services for businesses

Input-output analysis of the financial sector however, has limitations in analysis of structural reforms' potential impact on the macro-economy. As of 2012, bank lending accounted for less than 30% of nonfinancial firms' financing, with capital markets providing most of the balance.

It is certain that there is a great discrepancy between access to capital markets among large and small firms, particularly within the services sector (see Appendix 6 for further details). However, small firms, many of them suppliers to large firms, are also more dependent on inter-business credit, which accounted for nearly 13.9% of nonfinancial firms' financing. .

The role of Japan Post in Japan's financial system as a savings and investment institution underscores the pivotal role of indirect financing for Japanese firms. Even though Japan Post Bank is not a corporate lending institution (remaining subject to the rigid segmentation of public financial institutions), it is Japan's largest savings institution and deposit taker, with over JPY200trn in assets as at March 2016. Over 40% of its assets are allocated to Japanese Government Bonds (JGB's), and over 20% are liabilities against the financial sector; 8% of its balance sheet is dedicated to local government and corporate bonds. Japan Postal Insurance holds an additional 81.5 trillion yen in assets. Privatisation of these institutions brings with it the prospects of greater diversification of their balance sheets away from JGB's and into risk assets, providing from private firms' perspective greater domestic supply of capital market financing.

Figure 3: The Koizumi Reform Agenda

Key reforms

1. Financial system reform
2. Postal Privatization
3. Labor reform
4. Promotion of FTAs and agricultural reform
5. Deregulation through special zones
6. Local public finance reform (“Trinity” reform)

Source: Hoshi and Kashyap, 2011

This is one substantial limited factor, in our view, of input-output analysis of the financial sector. A Computable General Equilibrium (CGE) model may be superior in analytical power when measuring the instantaneous impact

of financial services reform upon the economy.

But as we have argued above, narrow reform to financial services is insufficient on its own (in the absence of accompanying capital markets reform) to offer the optimal market solution in terms of financial intermediation. In the presence of capital market reforms however, it is important to capture interest rate dynamics, structural change in capital markets and interaction with monetary and fiscal policy. A Dynamic General Equilibrium (DGE) model might provide a more complete analysis of realised and potential benefits of comprehensive financial and capital markets reforms, including interactions with cyclical (monetary and fiscal) policies.

See Appendix 6: Current structure of the Japanese financial sector for further descriptive details on the structure of the Japanese financial services sectors.

2. THE IMPLEMENTATION OF THE KOIZUMI REFORM AGENDA

Key points:

- The greatest strengths of Koizumi's reform credentials lay in the combination of institutional structure, ability to capitalize on its own successes, efficient use of prior reforms, and policy sequencing.
- Financial sector reforms of 2002-2004 under Koizumi and financial reform minister Heizo Takenaka were largely viewed to have resolved Japan's financial crisis, allowing some recovery in financial sector productivity.
- After building a track record with the resolution of the financial crisis and reflating the economy, the Koizumi-Takenaka team focused on a combination of reforms to capital markets and regulatory reforms necessary to re-invigorate the newly recovered financial sector with the aim of restoring its regional and global competitiveness.
- The radical aspect of Koizumi's reform program was the legislation of market-liberalising reforms (Postal Privatisation) that challenged not only bureaucratic power but also vested interests within the Liberal Democratic Party (LDP).
- Instrumental in Koizumi's reforms was its institutional structure. Notably, the Council on Economic and Fiscal Policy (CEFP) was a pivotal body in the drafting, successful legislation and implementation of reform measures.⁶
- Reflationary conditions not only made structural reforms more palatable, but they helped achieve other economic targets (such as fiscal reform).
- Despite his radical reform program, Koizumi stopped short of transforming Japan into a US-style liberal market economy. In the context of Japan's postwar history of financial reform, this is not surprising.

Successful elements of Koizumi reforms

The Koizumi reform agenda included several controversial items: cabinet appointments based on merit rather than seniority; breakup of the highway corporation and reductions of "wasteful" spending on public works; a cap on public borrowing; devolution of both power and responsibility from central to local governments, and resolution of non-performing loans in the banking sector.

⁶ Established in 2001 by PM Yoshiro Mori to emulate the Council of Economic Advisors in the US, the CEFP served as a vehicle to devolve power from the Ministry of Finance (which previously held greater sway over the compilation of budgets) to the Prime Minister's office. The CEFP was chaired by the Prime Minister and included up to 11 members including the Minister of State for Economic and Fiscal Policy, the BOJ Governor and up to four independent private-sector experts. The CEFP served to consolidate the Prime Minister's control over economic and fiscal policy (Mulgan 2013).

The majority of these items were either overt or indirect challenges to MOF interests. Yet the truly radical component of the reform agenda was not its overt challenge to bureaucratic power, but its challenge to vested interests within PM Koizumi's own political party, the Liberal Democratic Party (LDP). This manifested most clearly in his plans for privatisation of Japan Post. Even the mandarins of the MOF had historically little say over this behemoth institution, whose regional offices were bastions of LDP political support. Koizumi's willingness to challenge not only bureaucratic but also political vested interests won him credibility abroad, amid expectations that he would introduce "globally standardized capitalism"⁷

Effectiveness of the CEFP under Koizumi and Takenaka

Koizumi's reforms did not arise in a vacuum. Rather, they were built on the foundation of reforms enacted by his predecessors, particularly PM Hashimoto's electoral and administrative reforms, legislated in 1994⁸ and PM Mori's establishment of the Council on Economic and Fiscal Policy (CEFP).

Indeed, much of Koizumi's success in giving rise to change owed to his efficient use of the CEFP, established in 2001. The CEFP was one of the four councils directly established by PM Mori under the Cabinet Office Establishment Law⁹, and was responsible for compilation of *Honebuto no Houshin* or "Big Boned Policy", central policy guidelines compiled annually to drive economic and fiscal policy priorities.

In the words of Peter von Staden, the body was pivotal to the transfer of power from *kanryo shudo* (bureaucratic leadership, axiomatic under the convoy system) to *kantei shudo* (leadership from the prime minister's residence).¹⁰ As a result, Koizumi's administration received the credit for "[breaking] down the old fashioned and well-entrenched system of administrative guidance that was a pillar of traditional Japan."¹¹

In a 2006 report, the APEC secretariat lauded the CEFP as: enhancing the "consistency and comprehensiveness of economic policymaking", enabling of "policy achievement evaluation and feedback to new policymaking" and as a driver of "transparency in the decision-making process" and finally for acting "as a driving force to promote the structural reforms of the Koizumi cabinet".¹²

Staffing was one of the greatest merits of the CEFP under Koizumi. Heizo Takenaka, appointed by Koizumi as Minister of State for Economic and Fiscal policy in 2001,

⁷ (Sakai, Japan's Economy in the Post-Koizumi Era 2006)

⁸ (Shinoda 2013), p. 79

⁹ (Mulgan 2013), p. 76

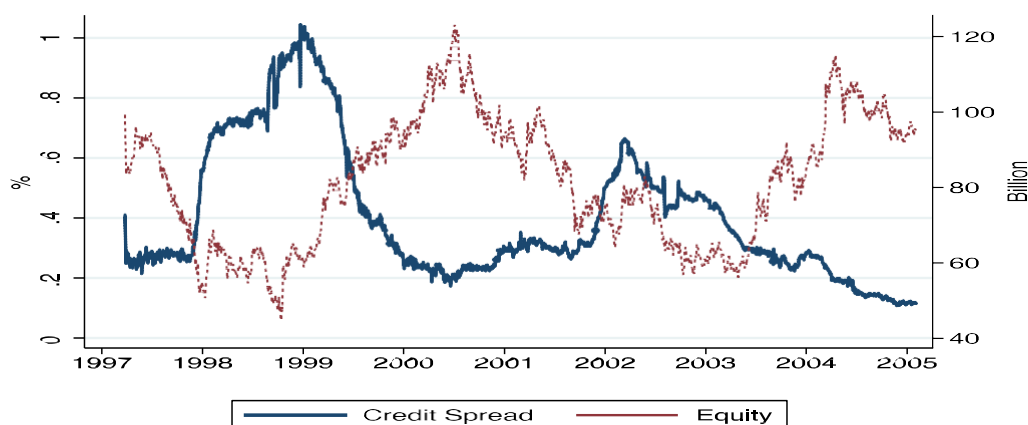
¹⁰ (Hook 2010); Peter von Staden cites Estevez-Abe (2006) in pointing out that "Reform in favour of a 'Westminster system' was one of the most significant structural changes that Koizumi brought to political decision making and by extension, the business and government relationship," p. 169

¹¹ (Sakai, Japan's Economy in the Post-Koizumi Era 2006)

¹² (APEC Secretariat 2006)

who included private sector expertise in the formulation of policy. The CEFP coordinated its reform agenda with the FSA's "Program for Structural Reform of Securities Markets" in August 2001, in order to facilitate a "transition from preferential treatment of savings to preferential treatment of investment" (popularly known by the policy slogan "from savings to investment"). The Program provided the basis the 2006 Financial Instruments and Exchange Law.¹³

Figure 4: AA credit spreads decline as equities rebound



Source: Nakashima & Saito (2007)

Capitalising on early successes (Resolution of the Banking Crisis)

The reform program that led to the resolution of Japan's banking crisis started in 2002, when Heizo Takenaka was appointed Financial Reform Minister and head of the Financial Services Agency.¹⁴ In his reform plan, Takenaka capitalised on prior reforms to compel disclosure of Non-Performing Loans (NPL's) on bank balance sheets¹⁵. In September 2001 the CEFP set up a plan for corporate restructuring, in cooperation with the Development Bank of Japan (DBJ), the Resolution and Collection Corporation (RCC), and the Deposit Insurance Corporation (DIC)¹⁶ which laid the ground for Takenaka's pivotal six point plan for NPL disposal.¹⁷

Under Takenaka's guidance, government capital injections softened the blow of select bank failures (formerly impossible under the convoy system). Troubled firms were encouraged to restructure via the Industrial Revitalisation Corporation of Japan (IRCJ).

¹³ (Summary of the "Front-Loaded Reform Program" 2001);

¹⁴ (Hoshi and Kashyap, Why Did Japan Stop Growing? 2011)

¹⁵ The NPL disclosure mandate had already been cemented in 1999 (see Big Bang reforms, above) alongside the establishment of the Financial Services Agency (FSA).

¹⁶ (Japan Cabinet Office 2001)

¹⁷ (Japan Cabinet Office 2002)

Financial institutions were consolidated as a less systemically damaging alternative to failure; 13 city banks that emerged in the early 1990's were merged to form 4 megabanks. Harmonisation with global standards progressed under the FSA's guidance on disclosure and capitalisation per BIS regulations. Securities firms were consolidated under the umbrella of large banks (both domestic and foreign), leaving Nomura as the only large independent player. The insurance industry consolidated.

Importantly, the plan met its two-year goal to halve Bank NPL's by 2004. In fact, major banks lowered their NPL ratio from 8.4% in March 2002 to 1.8% in March 2006. The achievement was lauded by APEC as an exemplary case of structural reform,¹⁸

Building on reflation and early success of bank reform

By 2006, the stock market had troughed, and mild inflation had taken hold, prompting optimism among consumers and investors that Japan had left its lost decade behind. Slumping productivity growth that had hit the services sector particularly hard post-bubble, had begun to improve.¹⁹ Assisted by solid global expansion, the longest expansion in postwar Japanese history allowed Koizumi to achieve a number of his stated goals without great effort.

Koizumi's successes on manifold fronts after the end of the banking crisis taught a lesson on policy sequencing. The upturn in the economy had not only assuaged the pains of reductions in public works spending and labor reforms, but had also boosted fiscal coffers beyond the MOF's initial targets, and in 2006 the government looked as if it were on track to achieve its goal of primary balance by 2010.²⁰

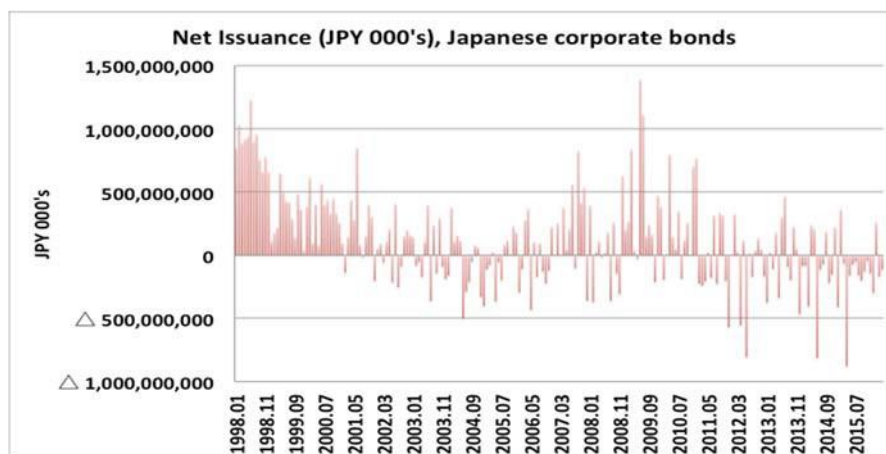
A significant reflationary cycle provided favourable conditions to put in place the less popular reforms of Koizumi's manifesto.

¹⁸ (APEC Secretariat 2006), section 2.2.3

¹⁹ (Fink, Heterogeneity in Japanese TFP, Part 1: Why Overcoming Deflation Alone is Not Enough 2015)

²⁰ (Yumoto 2003) The main contributor to the accelerated improvement in fiscal coffers was corporate taxes. Firms who had previously posted insufficient profits to pay corporation tax had started becoming profitable, thus going from a 0% to 40% tax rate. Importantly, banks (whose deferred tax assets had delayed their taxpaying status) were central among firms newly paying tax at this stage. Source: Discussions with Japan's Ministry of Finance, 2005 (Fink)

Figure 5: Corporate bond issuance remains stagnant



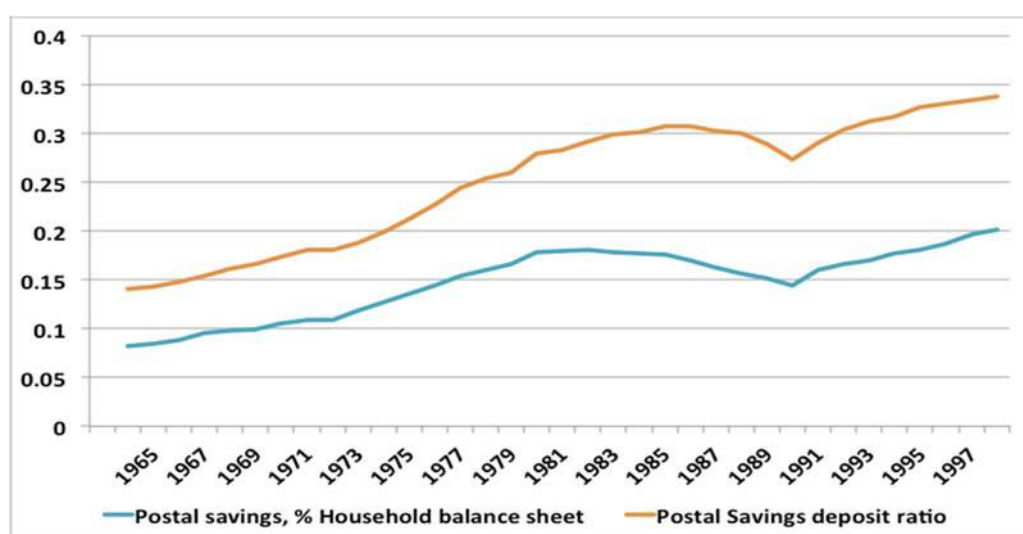
Source: JSDA

This was convenient, given the need for structural reforms remained ever-apparent. Despite the pick-up in lending growth after the resolution of the Japanese banking crisis, progress in capital market development had stagnated. Lacklustre foreign inward investment and risk-averse household balance sheets were ripe targets for growth-enhancing incentives by way of structural reform.

The postal privatisation referendum

As Koizumi's signature reform, privatisation of the Japanese Post Office was of both practical and symbolic value. Postal privatisation was the most radical and thus contentious reform proposed by PM Koizumi.

Figure 6: Historical ratio of Postal Savings in household balance sheets



Source: Japan Statistics Bureau, Europacifica

In form, postal privatisation backed both the administration's commitment to transfer economic activity from the public to the private sector and concretised its policy slogan "from savings to investment". *Yucho* (postal savings) balance sheets remained inflated by deposits and cash that had flowed in from households when Japan's "lost decade" was in full swing and sentiment was at its worst (see Figure 6: Historical ratio of Postal Savings in household balance sheets).

Japan's trading partners in the region also welcomed privatisation. The goal of ensuring "equal footing with the private sector" promised to dilute the existing predominance of Japan Post in the financial and insurance sectors, which previously conformed to APEC's description of "natural monopolies that are protected from strong competition by large startup costs" and "ineffective structures that allow anti-competitive behaviour [that] may act as a barrier for firms" (APEC Secretariat 2006).

In substance, postal privatisation was the most direct challenge to intra-party factions within the Liberal Democratic Party (*habatsu*). Japan's Post Office, since its birth at the time of the Meiji Restoration, was a powerful political lobby group, representing conservative interests in regional Japan.²¹ Its Postal Savings and Insurance arms are formidable publicly owned competitors and remain massive employers in financial services and insurance.

Over the course of Japan's modern history, Japan Post held direct policymaking influence in the form of *seisaku zoku* "policy tribes" or groups of Diet Members who specialised in specific policy affairs within the framework of the LDP's Policy Affairs Research Council. Even the MOF's powerful *gyōsei shido* guidance system had declined historically to interfere with interests controlled by LDP's policy tribes.

Postal reform and its inherent challenge to status quo occupied a priority position on the Koizumi agenda from the start; in the CEF's first *Honebuto no houshin* in 2001, "Privatization/ Regulatory Reform-Maximizing Use of the Private Sector" occupied the top spot among his seven programs of structural reform following the resolution of the non-performing loans problem.

To drive the reform initiative, Koizumi appointed his reform czar Heizo Takenaka as Postal Reform Minister in September 2004. Takenaka's postal reform proposal (promulgated, incidentally, without the approval of the LDP) was to:

1. Divide Japan Post into four independent companies, each in charge of network services, postal services, savings and insurance
2. Divide Japan Post into regional companies
3. Establish a holding company

²¹ Japan Postal Savings was established in 1885, initially modeled on UK Postal Savings.

4. Establish a private corporate body to succeed the public company

Privatisation was to take place by end of fiscal 2006 (April 2007). Following privatisation, Takenaka proposed application of commercial laws to all new corporations, and establishment of an oversight body. Takenaka's plan was greeted with resistance at almost every stage, both from LDP *zoku*, opposition parties, the Ministry for Internal Affairs and Communications (headed by Taro Asō) and Japan Post itself (represented by Japan Post president Masaharu Ikuta).

The postal privatisation bill survived parliamentary boycotts to gain Lower House approval in July 2005 by a narrow margin of 233 to 228, but was defeated in the Upper House thanks to the rebellion (dissent or abstention) of thirty Diet Members. In a bold move, Koizumi called a snap election and dissolved the Lower House, strategically choosing high-profile candidates to run against thirty-seven dissenters within the LDP (popularly known as Koizumi's "assassins" campaign). On September 11, Koizumi won by a landslide, at once winning a mandate for postal reform systematically removing policy reform opponents from influential political posts, finally enacting the legislation on October 11th 2005.

In legislating postal privatisation, Koizumi successfully capitalised upon 1994 electoral reforms (promulgated in 1996) to consolidate legislative power²², finally turning the tables on vested interests, weakening their influence and instead pursuing a market-opening agenda.²³

The Japan Postal Services Holding Company was established in January 2006, which APEC aptly lauded as a "major achievement" (APEC Secretariat 2006). The 2006 postal privatization referendum should have changed the face of Japan's financial system. However, given in part the end of Koizumi's turn as Prime Minister, the longer-term fate of his signature reform would prove much less revolutionary than their legislation.

2.1. THE NEW COMPANIES ACT, which came into force in May 2006 to replace the existing Commercial Code, found its roots in a series of reforms starting in 2001, spearheaded by the judiciary. These were the first major changes to the Commercial Code since the Meiji era (1868-1912) and focused upon:

1. Improving corporate governance
2. Updating the law to reflect technological developments (particularly in information technology)
3. Improving corporate fundraising availability and access.

²² (Pekkanen, Nyblade and Krauss 2007)

²³ (Pekkanen, Nyblade and Krauss 2007), p. 21

4. Updating company law to reflect the internationalisation of corporate and financial activities
5. Modernising and streamlining corporate law²⁴

In form, the Act brought made available to enterprises previously unavailable financial structures, including the acquisition and sale of treasury stocks, stock exchange/transfer, corporate splits and takeover bids.²⁵

Points relevant to corporate governance standards and specifically to new regulations dealing with cross-border mergers and acquisitions (M&A) were most representative of the Koizumi agenda of market-liberalising reforms and harmonisation with global standards. With regard to corporate governance, the Act distinguished between large and small companies, with larger firms required to adopt a strict internal control system based on board resolutions.

The need for improved corporate governance had been made especially apparent by global investors, whose investment into Japanese capital markets surged from the deregulations of the 1990's onward. Cross-shareholdings, the dearth of independent directors and discouragement of shareholder derivative suits did little to protect minority shareholders.²⁶

It is remarkable to note that legislating these reforms did not require the same firebrand legislation as postal privatisation. MITI (the Ministry of International Trade and Industry, the predecessor to the current Ministry of Economy, Trade and Industry) had been calling for improvements to corporate governance (such as the appointment of external directors) since the mid-1990's. Notwithstanding, bureaucratic support for legislation targeting corporate governance did not necessarily make legislation friendlier to foreign investors. Rather, their participation diluted the substance of the reform.

Examining why this was, it is pertinent to note that the intended beneficiaries of corporate governance under the commercial code are not the shareholders first and foremost, but all stakeholders. Indeed, peppered throughout the legislation are references to the interests of the stakeholder²⁷, which at times are at odds with those of shareholders. On top of this, the legal framework in Japan (even after reforms to the outdated Commercial Code) leaves substantial room for interpretation. Putting these together, the Ministry of Justice is given substantial discretion to arbitrate these conflicts, without the underlying assumption of shareholder primacy.

²⁴ (Takahashi and Shimizu 2005)

²⁵ Takashi Ejiri, Asahi Koma Law Offices (2004)

²⁶ (Spedding 2009)

²⁷ 利害関係人 (*rigaikankeinin* or “interested parties”) in Japanese Law traditionally refers to stakeholders including business partners, employees, and suppliers, etc. as mentioned in section 2.1

A particularly contentious element of legislation was the “triangular merger” provision under which the Japanese subsidiary of a foreign firm can exchange shares of its foreign parent for control over a Japanese company. On one hand, the provision was the first official recognition of cross-border M&A in Japanese law, but on the other it was met with (and diluted by) a slew of anticipatory bureaucratic guidance, the “Guidelines for Defending Corporate Value”²⁸, released in 2005. These were, in the tradition of bureaucratic guidance, extrajudicial standards, which were upheld by courts as if it were law.

In implementation, fear of hostile takeovers imposed a much less market-friendly solution than originally intended. Bureaucratic guidelines created a wedge between supply and demand in the market for corporate control. In the eyes of international participants in the market for listed shares, Japan fell short of instituting best corporate governance practices upheld by transparent rule of law. The result has proven a hurdle for inward foreign direct investment, which to this day remains muted. The linkage of the hostile takeover stigma with M&A regulation is illustrated below with the Livedoor and Bulldog Sauce case studies.

The Corporations Act of 2006 was a work in progress and springboard for ongoing reform, as manifold subsequent revisions showed. Its legislation was also complementary to the Financial Instruments and Exchange Law, enacted in June 2006.

2.2. THE FINANCIAL INSTRUMENTS AND EXCHANGE LAW (FIEL)

The FIEL, legislated in 2006 and implemented in September 2007 was the final step in a series of market-opening reforms falling under the category of “from savings to investment” reforms.²⁹ This class of reforms built on the recent market-opening measures of the Big Bang reforms in the late 90’s, and in so doing focused on the improvement of sales channels and financial infrastructure and also sought to attract a diversity of investors (particularly cash-heavy households), with some success. A rise in the number and volume of complex financial products and transactions resulted.³⁰

The FIEL was, in form, an update to the existing Securities and Exchange Law, aimed at keeping up with developments in global financial markets, also protecting investors by means of adequate disclosure and stringent measures against unfair trading practices.

²⁸ There was some confusion of triangular mergers with hostile takeovers (when in fact, the law precludes the use of triangular mergers for hostile takeovers without board approval from the target company).

²⁹ These reforms included the Basic Policies for Economic and Fiscal Management and Reform (June 2001); the Program for Structural Reform of Securities Markets (August 2001); and the Program for Promoting Securities Markets Reform (August 2002).

³⁰ (Japan Securities Research Institute 2014)

Aspects of FIEL (commonly referred to as J-SOX in the US) attempted to harmonise regulation with international standards, notably with the recently-implemented Sarbanes-Oxley regulations in the US. The broader objective of these reforms was to establish an adequate regulatory environment to implement Koizumi's market-opening reforms³¹ and was intended by the Financial Services Agency to promote Japan's status as a "Financial Services Nation".³²

The FIEL also sought to streamline regulation; outdated regulatory codes such as the Financial Futures Trading Act, the Act Concerning the Regulation of Investment Advisory Services Relating to Securities and the Act Concerning Foreign Securities Firms were supplanted by FIEL. Other codes, such as the Commodity Fund Act, were updated to reflect FIEL.

There were four key changes that came from FIEL³³:

1. Expansion of the range of regulated financial instruments, to include investment trusts and collective investment schemes; the scope of regulated "derivatives transactions" was broadened to include interest rate and currency swaps, weather derivatives and credit derivatives.
2. Establishment of more stringent regulations for broker/dealers of high-liquidity securities than low-liquidity securities, and for general investors versus professional investors.
3. The J-SOX component, which sought more stringent disclosure by issuers of listed equity and bonds as well as external auditor certification of the issuers' internal controls on financial reporting.
4. Rules for bidders and target companies in tender offers, in form designed to ensure "fairness and transparency in market transactions".

In substance, some aspects of FIEL facilitated financial activity and others acted as a restraint. Exemplifying the former, FIEL did away with the need for special authorisation to conduct business in the over-the-counter (OTC) derivatives market.

Considerable compliance costs were also associated with FIEL, which on top of new regulations also imposed new reporting requirements – the Quarterly Reporting System, the Internal Control Reporting System and the Certification by Management System.

For a concrete example where FIEL presented an expanding financial sector with compliance costs, it is useful to examine the market for investment trusts. Distribution channels for investment trusts were on an expansion path after 2005, in anticipation of

³¹ <http://www.fsa.go.jp/en/policy/fiel/>

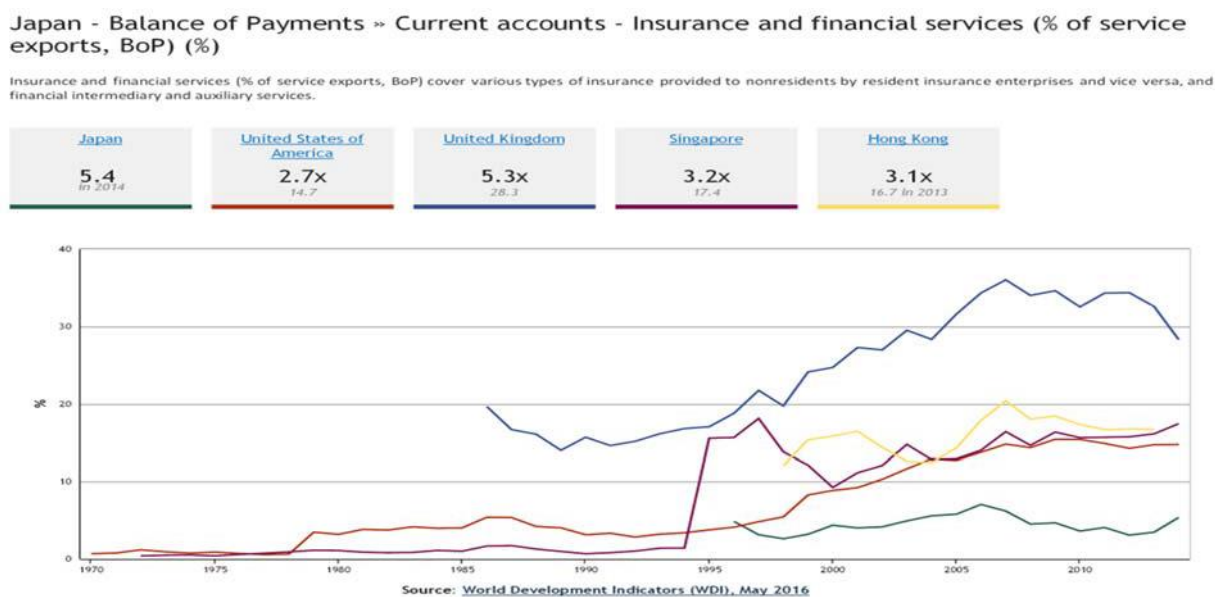
³² <http://www.fsa.go.jp/news/newse/e20041224.pdf>

³³ (EVANOFF 2015)

postal privatisation. Under FIEL however formerly exempt investment advisory firms were required to register under the provisions of the new law, increasing registration and reporting requirements, hence compliance costs. Nonetheless, the investment trust market ultimately benefited from the harmonising aspect of the new regulations, as may be seen in the case study on investment trusts, below.

The fourth key change introduced by FIEL (regarding disclosure in tender offers) was strongly influenced by the events surrounding the Livedoor debacle (examined below), and acted as one of several effective deterrents to hostile takeovers, which many foreign investors view as a failure in corporate governance and a wedge in the market for corporate control. The optimal role of hostile takeovers in the market for corporate control remains hotly contested to this date (addressed in Appendix 2). This aspect of the FIEL, similarly to the “Guidelines for Defending Corporate Value” with regard to Corporations Act reform, frustrated foreign investors who had eagerly anticipated the introduction of more Anglo Saxon style M&A practices.

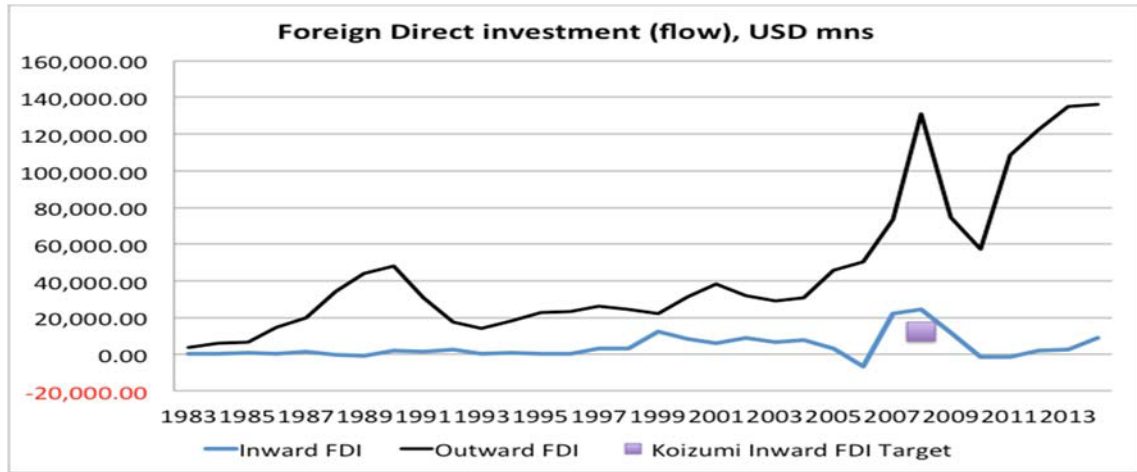
Figure 7: Financial and Insurance Services, % of total exports



Source: World Bank WDI, Knoema

Much like the New Companies Law, the FIEL has been updated frequently since inception. FIEL remains a work in progress and a springboard for future reform.

Figure 8: Japanese Foreign Direct Investment (USD mns)



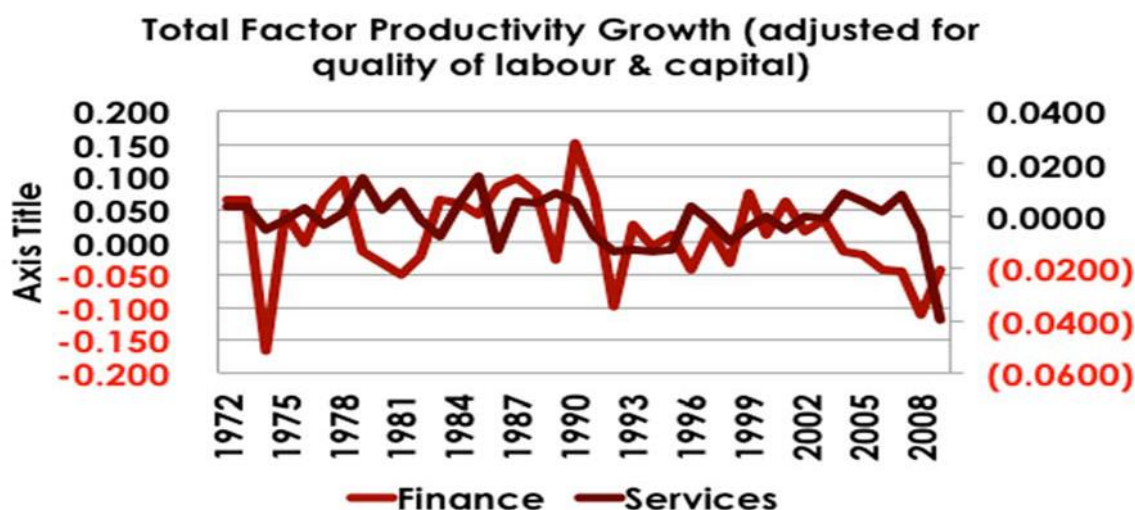
Source: JETRO, Europacifica

3. EVALUATION OF THE KOIZUMI REFORMS AND LESSONS LEARNED

Admittedly, Koizumi’s reforms do appear to have missed their mark by some metrics. Targets for drastically increasing inward Foreign Direct Investment were set³⁴, but only temporarily met.

Similarly, success in promoting Japan as a “Financial Services Nation” was only partially successful. On one hand within the services sector, financial services productivity is comparatively competitive. Total factor productivity in the sector hit an early trough following the GFC, and by our above framework of economic analysis, was assisted by not only deregulation but also positive asset allocation, as may be observed in the rising rate of intangible investment as well as allocation to innovative capital as a percentage of capital.

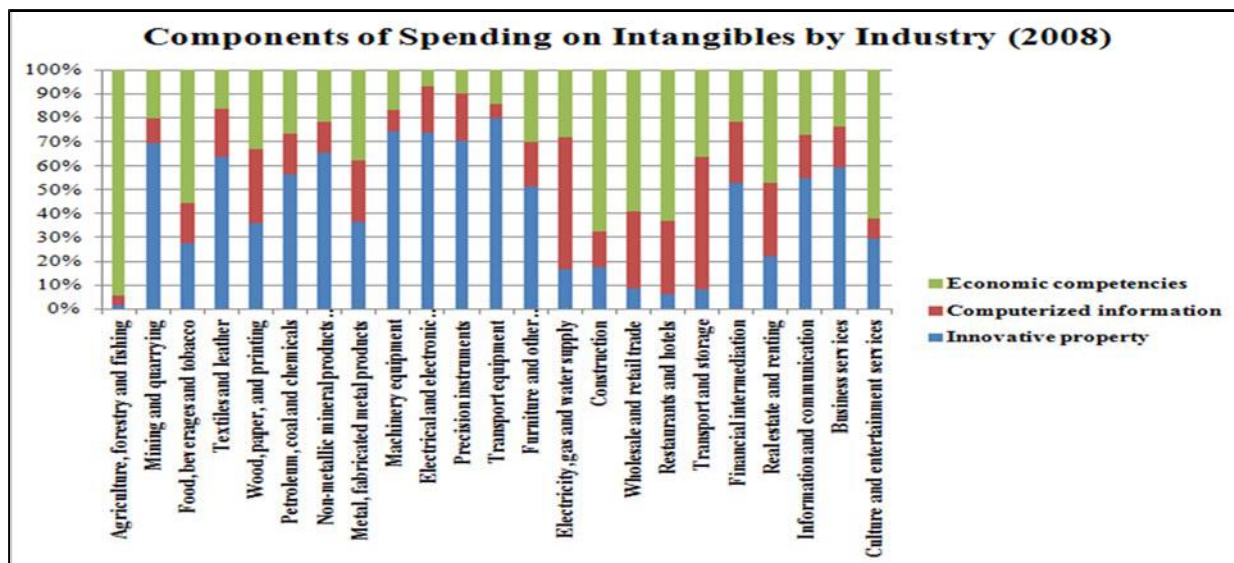
Figure 9: Financial services vs Services sector productivity



Source: Europacifica, RIETI

³⁴ Koizumi announced targets to double FDI by 2008 in a 2003 speech (Wada 2005)

Figure 10: Spending on Intangibles by Major Industry

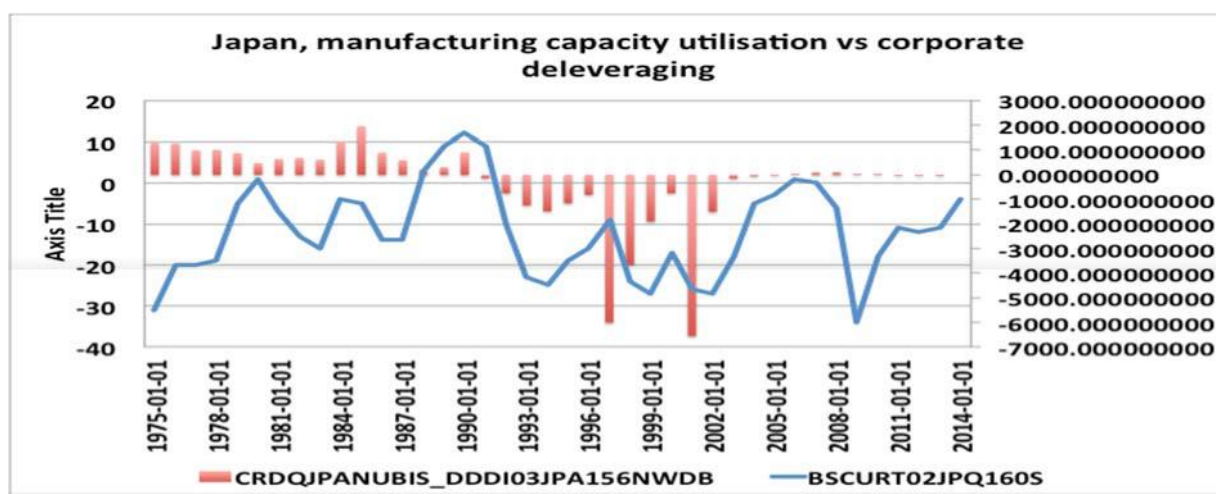


Source: (Fukao, Hisa and Miyagawa 2012)

Anecdotally, we may also observe disposal of non-performing assets as supportive of financial sector productivity. Still, as mentioned above, there were limits to the ability of financial sector recovery to relieve Japan of its economic malaise. From a global competitiveness standpoint, financial services lagged far behind the export-oriented IT or manufacturing sectors.

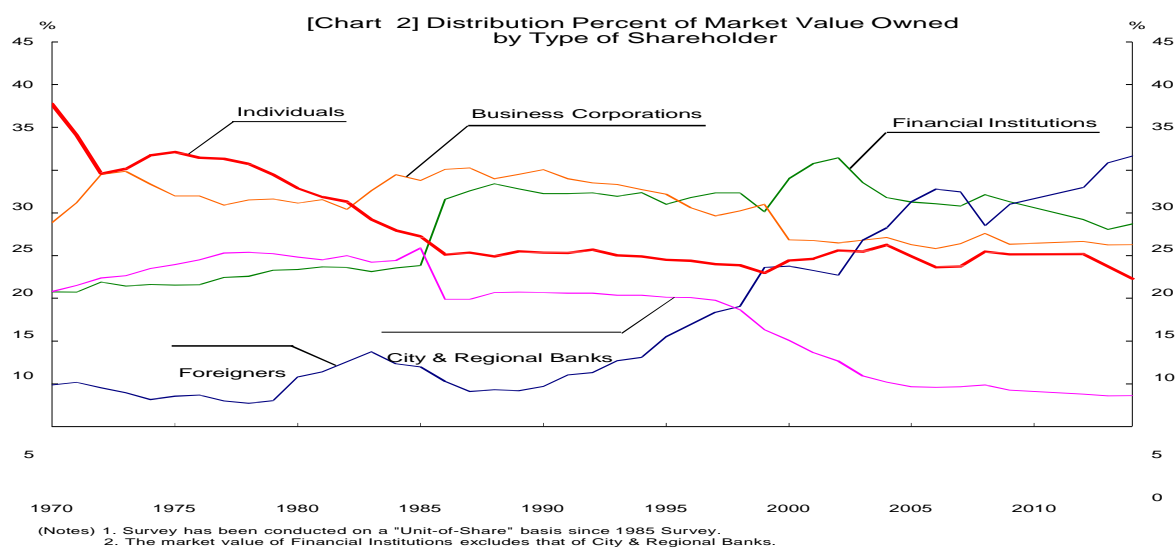
Comparing exports of financial services with those of other large global financial centres however yields a much more sombre verdict on the FSA’s goal of promoting Japan as a “Financial Services Nation” (see Figure 7: Financial and Insurance Services, % of total exports).

Figure 11: Japanese capacity utilisation vs corporate leverage



Source: FRED, Europacifica

Figure 12: Japanese shareholdings, distribution by type of investor



Source: JPX

The FIEL is not entirely to blame for this, however, nor does it invalidate other benefits of 2006 reforms. Incidentally, inward FDI did increase from 2006 onward (see **Error! Reference source not found.**, though failed to maintain its gains. Peaking at a meager USD24.5bn per annum, inward FDI failed to recover following the GFC; outward FDI meanwhile regained its peak of USD120bn post-GFC.

Conversely, a much more positive conclusion may be drawn when examining portfolio flows. In absolute terms, portfolio inflows dwarf foreign direct investment; as of calendar year 2013, net inward investment cleared JPY 20trn.

Foreign investors have become the largest investor class in the Japanese equity market since the time most recently eclipsing traditionally cross-shareholding financial institutions (see Figure 12: Japanese shareholdings, distribution by type of investor). This is a significant shift in the composition of share ownership that would not have

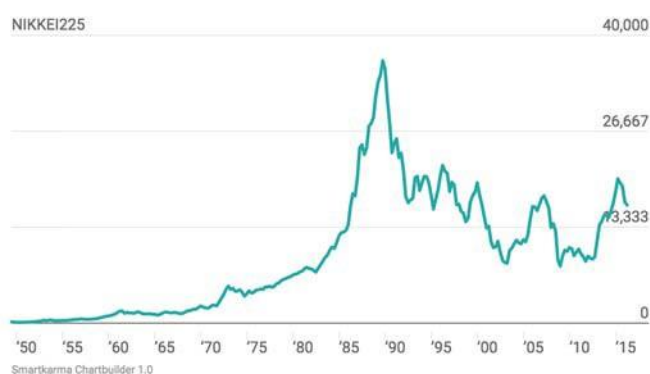
happened without the Big Bang, and was further facilitated by reforms to the financial sector and changes to share transfer regulations under the New Companies Act.

Many credit the Koizumi administration for having enhanced the allure of Japanese corporates after having overcome the “three excesses” of excess debt, excess employment and excess capacity that beset Japanese corporates, by virtue of the conditions surrounding the resolution of the Japanese banking crisis.³⁵ Indeed, we may observe empirically that, during the Koizumi administration, chronic underutilization of manufacturing capacity resolved, as did corporate leverage. Although capacity under-utilisation temporarily resumed with the global financial crisis (GFC), it was quick to correct thereafter. Problematically however, corporate deleveraging appeared too successful in that it failed to give way to new risk-taking behaviour once the cycle turned, yet another signal that resolving the Japanese banking crisis was not enough to boost final demand. As a result, try as they might, foreign investment into Japanese stocks has been unable to propel Japanese stocks to new highs.

Foreign investors find it tough to avoid Japan’s stock market altogether, given it is the world’s second largest by market capitalisation. But their investments wax and wane with economic cycles and remain, on trend, barely sufficient to offset domestic reductions in risk-taking.

Inward foreign direct investment (FDI) on the other hand reflects the stunted market for corporate control. As mentioned above, inward FDI remains subdued even despite

Figure 13: Nikkei 225



Source: FRED, Europacifica

the surge in foreign share ownership. Responsible at least in part for lacklustre inward direct investment are (a) perceived limitations to access to the Japanese market for corporate control and (b) perceived limitations to the ability of shareholders to influence governance.

The next logical step, it would appear, would be to bring governance up to global standards, enhancing the

appeal of cleaned-up corporate Japan for good. Under Koizumi, this did not happen, and one major root of the perceived failure of the reform programme. Despite this

³⁵ (Sakai, Japan’s Economy in the Post-Koizumi Era 2006)

considerable drawback however, there remain aspects of the programme that still contributed to the advancement of financial sector and capital market function.

A top-down LAISR Evaluation

Employing APEC's five-point LAISR framework³⁶ to evaluate the Koizumi structural reform program, we observe that:

- i. **Regulatory reform:** The implementation of FIEL covered significant ground in both updating Japanese regulations and harmonising them with global (American) precedents. Many new regulations were clearly modeled after Sarbanes-Oxley in the US. In some markets, regulation was effective in increasing market activity (e.g. the FX market and eventually the Investment Trust market). However, much as with Sarbanes-Oxley, associated compliance costs remain significant, which remains an oft-expressed concern for other regional regulatory authorities under pressure to implement US-style reforms. Japan continues to update regulations to adapt to changing market conditions. Recent updates to regulations concerning Investment Trusts in particular might prove amenable to the adoption of the Asia Regional Funds Passport (see Appendix 3).
- ii. **Competition policy:** although FIEL, the New Corporations Act and postal reform all attempted to break down barriers to regional competition in financial services, the delay of postal privatisation and its partial nature led to muted improvement in financial sector competition. Moreover, the perceived protection of cross-border acquisition targets decreased the market-opening effect of the New Corporations Act. As a result, growth in inward FDI has failed to sustain, even as outward FDI has rebounded.
- iii. **Public sector management:** The Koizumi reforms were bold in their consolidation of power under the Prime Minister's office and cabinet (via the CFP) but envisioned a reduced role for central government in the financial sector, once the banking crisis had passed. The postal privatisation referendum was a major political coup. However, implementation of postal privatisation was much delayed. Separately, the dilution in practice of new laws governing cross-border investment became apparent in application. Some argue³⁷ that the shortfalls in overall macroeconomic policy, including ineffective fiscal stimulus, has created new problems for policy, including a massive debt overhang.
- iv. **Strengthening economic and legal infrastructure:** The combination of the New Companies Act and FIEL made substantial strides in updating Japanese legal and regulatory infrastructure, incorporating regulatory harmonisation and

³⁶ (APEC Secretariat 2006)

³⁷ (Hoshi and Kashyap, Why Did Japan Stop Growing? 2011)

a legal framework for cross-border investment. Nonetheless, the application of the legal framework remains nontransparent for many foreign investors. With regard to economic infrastructure, despite the availability of new financial products for Japanese households and the rise in popularity of vehicles such as Investment Trusts and Foreign Exchange, risk assets remain a very small part of the household balance sheet. By this measure, Koizumi's "from savings to investment" strategy has enjoyed only limited success (see Appendix 4).

- v. **Corporate governance:** one of the most contested points of Japanese structural reform to date, including those of the Koizumi era, is related to corporate governance. Underlying the debate are questions of the appropriateness and applicability of the model of shareholder primacy. The Corporations Act disappointed both domestic and foreign investor expectations for improved governance in 2006 (see TSE Saito's comment, above). As a result, growth in inward FDI has not persisted. Moreover, interest regarding corporate governance seemed to die down after Koizumi stepped down (Figure 37: Indicator of Corporate Governance awareness, Japan). However, the Corporations Law has undergone further reform since enactment, from 2008 to 2012. Meanwhile, PM Abe's work on Japan's stewardship code as well as the Tokyo Stock Exchange's corporate governance code since then have revived interest in corporate governance. The debate on governance is one we expect to escalate in the APEC region, particularly as reforms to China's financial systems and state owned enterprises progress.

Bottom-up evaluation: Case Studies

The following individual case studies highlight key lessons learned from 2006 reforms:

1. The Japanese Investment Trust market was a clear beneficiary of the FIEL, expanding in size and range under new streamlined regulations.
2. Two high-profile cases first built then dashed hopes for a new market for corporate control under the New Corporations Act. Subsequent revisions to the Act and new Stewardship and Corporate Governance codes however give investors reason to hope for (albeit slow) change.
3. The spectacular legislation of Postal Privatisation demonstrated the benefits of policy sequencing and its disappointing implementation, the pitfalls of policy gradualism. Subsequent developments meanwhile show that reform is not completed with privatisation alone; additional regulatory and structural adjustments are often necessary accompaniments to large-scale government privatisations.

3.1. LESSONS FROM THE FINANCIAL INSTRUMENTS AND EXCHANGE LAW: CASE STUDY OF THE INVESTMENT TRUST MARKET

Although it would be overstating the benefits of FIEL to say it “completed” Japanese reforms in a general sense, there were some examples of “market completing” functionality. Legislators had learned lessons from reactive and incomplete market-opening reforms in the 1980’s, and sought to strengthen the

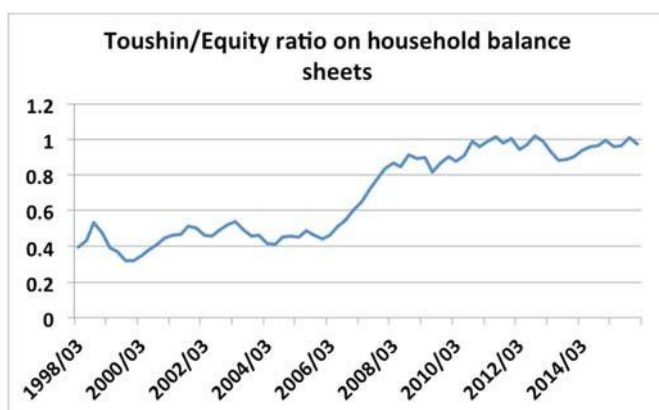


Figure 14: The ratio of investment trusts to equities on the Japanese household balance sheet

Source: BOJ, Europacifica

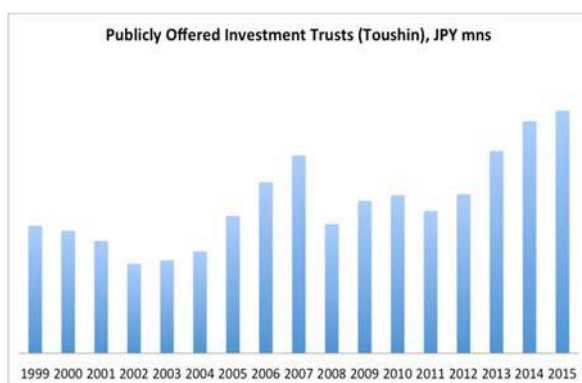


Figure 15: Publicly Offered Investment Trusts

Source: Japan Investment Trust Association

FIEL in September 2007, investment trust registrations declined, as they fell subject to new reporting and disclosure regulations, where prior to FIEL they were exempt.

legal, regulatory and macroprudential aspects of Japan’s securities law in keeping with developments overseas (specifically, Sarbanes-Oxley).

Examination of the investment trust (*toushin*) market reveals both benefits and costs associated with FIEL. The introduction of new registration and disclosure requirements in the *toushin* market imposed clear compliance costs upon a growing industry (which was setting up for expansion alongside planned postal privatisation). Upon inception of

It is unclear how much of the decline, in absolute terms, was due to tighter regulation and how much was due to risk-aversion associated with volatile risk assets alongside the outbreak of the Global Financial Crisis. However, we might adjust for the effects of the crisis on the household balance sheet by examining the ratio of *toushin* to stocks (thus comparing two classes of risk assets and adjusting for fluctuations in risk tolerance (see Figure 14).

The ratio of *toushin* to equity investments shows a clear structural shift in late 2006, testifying to the success of reforms within this industry sector.

This was due to the streamlining effects of the FIEL upon registration and disclosure of new products. Introduction of cross-sectional consolidated regulation was broad in scope, covering not only investment trust beneficiary rights and mortgage securities but also collective investment schemes. Not only did this framework of application do away with the necessity for redundant regulatory adjustments product-by-product, but allowed for some flexibility, extending the scope of application of existing regulation to new products sharing similar aspects to products already covered at inception of FIEL.

It is possible that the immediacy with which the Financial Services Agency went to work on updates to the newly implemented regulations (its “Plan for Strengthening the Competitiveness of Japan’s Financial and Capital Markets” was made public in December 2007, and was approved in the Diet in 2008) also created a springboard for further growth in Investment Trusts

After an initial setback in expansion of the Investment Trust market in 2008 (due largely to effects of the Global Financial Crisis), the *toushin* market resumed expansion to new highs in net asset value (see Figure 15: Publicly Offered Investment Trusts). The result suggests that the benefits of well-designed regulatory reform, even in the presence of compliance costs, may be realised over the long term.

With regards to impact to Global Value Chains, the benefits provided by streamlined approval of new investment trust products under FIEL may facilitate and enhance participation in region-wide initiatives such as Asia Regional Funds Passport.

3.2. LESSONS FROM THE NEW COMPANIES ACT: CASE STUDIES IN CORPORATE GOVERNANCE

In the words of Columbia Professor Curtis Milhaupt, Japan has chosen “enabling” over “mandatory” reforms to corporate governance. This is a significant difference between US and Japanese corporate governance systems, and one that international investors find hard to appreciate.

One “enabling” facet of Japanese law is that it is left intentionally vague, as to allow flexibility of interpretation. Less charitably, vagaries may have paved the way for discretion by bureaucrats, who have incentives to preserve their policymaking power. Protection of Japan’s traditional model of stakeholder capitalism (rather than Anglo-Saxon shareholder primacy) was “enabled” in the process of legislation of the commercial code reforms, and its arena following 2006 reforms was the market for corporate control.

Hostile takeovers, which were alien M&A practices to Japan until the mid-2000’s³⁸. The scene was set in the early 2000’s, when, prior to the legislation of the New Companies Act, banks began to unwind cross shareholdings (with the help of the Bank of Japan), as to reduce systemic risk. The sale of cross-held shares eroded one pillar of the “stable shareholding” system prevalent from the time of the *zaibatsu* system, exposing firms to the rising prospect of unfriendly takeovers.

³⁸ As mentioned in section 2.1, the threat of forced mergers was traditionally used as an incentive for lagging firms to boost performance and thus takeovers historically carried a social stigma

Figure 16: Key Events surrounding the Livedoor-Fuji TV takeover battle for NBS (2005)

- Jan. 17 -- Fuji TV announces a public tender offer to acquire a more than 50 percent stake in Nippon Broadcasting.
- Feb. 8 -- Livedoor boosts its stake in Nippon Broadcasting to 35 percent in terms of outstanding shares by acquiring a 29.6 percent portion through the Tokyo Stock Exchange's off-hours trading system.
- Feb. 9 - Fuji TV rejects Livedoor's proposal for business cooperation, saying it will counter the Internet service provider's acquisition of a major stake in Nippon Broadcasting.
- Feb. 10 - Fuji TV cuts its equity stake acquisition goal in its public tender offer for Nippon Broadcasting to 25 percent in a bid to secure its success.
- Feb. 23 - Nippon Broadcasting announces a plan to issue Fuji TV warrants for 47.2 million new shares to ward off Livedoor's takeover bid.
- Feb. 24 - Livedoor takes legal action, asking the Tokyo District Court to bar the radio network from issuing share warrants to Fuji TV. Fuji TV extends the deadline of its tender offer for Nippon Broadcasting to March 7.
- March 8 - Fuji TV says it has secured 36.47 percent of all outstanding shares in Nippon Broadcasting through its successful public tender offer through March 7.
- March 11 - The Tokyo District Court issues a preliminary injunction to bar Nippon Broadcasting from issuing Fuji TV share warrants. Nippon Broadcasting immediately files an objection to the ruling with the same court.
- March 15 - Fuji TV decides on a sharp dividend increase to 5,000 yen per share for the fiscal year to March 31 to raise the price of its stock and make it less affordable for a company pursuing a takeover.
- March 16 - The Tokyo District Court dismisses Nippon Broadcasting's objection over the court's decision. Nippon Broadcasting immediately appeals to the Tokyo High Court. Livedoor's stake in Nippon Broadcasting exceeds 50 percent in terms of voting rights.
- March 22 - Fuji TV says it has filed registration with the government for the issuance of up to 50 billion yen in new shares to existing shareholders.
- March 23 - The Tokyo High Court upholds the lower court ruling banning Nippon Broadcasting from issuing warrants for new shares to Fuji TV. Nippon Broadcasting gives up on the "poison pill" plan.
- March 24 - Softbank Investment Corp. becomes Fuji TV's largest shareholder by borrowing a 13.88 percent stake held by Nippon Broadcasting.
- March 31 - Nippon Broadcasting fixes the record of shareholders.
- April 18 - Fuji TV and Livedoor amicably settle their battle for control of Nippon Broadcasting.
- Late June - Nippon Broadcasting will hold a regular general shareholders meeting.

Source: Kyodo News

In early 2005, the high-profile domestic takeover attempt of Nippon Broadcasting System (NBS), a subsidiary of Fuji TV by upstart internet firm Livedoor (targeting the 22.5% stake NBS held in Fuji) suddenly brought the corporate governance debate to the fore (see Figure 16: Key Events surrounding the Livedoor-Fuji TV takeover battle for NBS (2005)). The Tokyo High Court ruling that the Fuji TV takeover defense strategy was “grossly unfair” was a landmark precedent which in turn could have marked the beginning of a market for corporate control in Japan. Things looked promising for activist investors when only days after the first Tokyo District Court

ruling in the Livedoor-Nippon Broadcasting case in March 2005 (in favour of Livedoor), the Tokyo Courts also struck down a poison pill strategy adopted by Nireco, a maker of hi-tech measuring devices.

But Nireco turned out to be an outlier; in the two years subsequent to the Livedoor/NBS case, over 400 firms officially adopted takeover defence strategies. In hindsight, the alarm regarding hostile takeovers was excessive. There were only 23 reported hostile takeover attempts between 2000 and 2013, according to Dealogic, of which only seven were successful.³⁹

This may have been because the incipient market for corporate control was met by a disproportionately vehement reprisal by a combination of bureaucratic intervention and idiosyncratic interpretation of the law. Widespread fear of hostile takeovers triggered by the Livedoor case prompted bureaucrats (METI and MOJ) to compile Japan's "Takeover Defense Guidelines" in May 2005. This was a logical response to prospects of a rise in hostile takeovers but the fervor with which firms adopted takeover defences was disproportionate to the number and scale of actual attempts.

The outcome of subsequent contests for corporate control, this time involving foreign stakes, sent a discouraging message to foreign investors, who may have reached the conclusion that reform had once again been hijacked by bureaucrats and non-market actors with vested interests.

One such high-profile case was *Steel Partners Japan Strategic Fund (Offshore), L.P. v. BullDog Sauce Co* (see **Figure 17**). Steel Partners, an activist US hedge fund, set out to acquire a controlling stake in BullDog Sauce, a manufacturer of condiments and sauces which also had a real estate division. BullDog Sauce adopted takeover defences, diluting Steel Partners' interest, which Steel Partners tried legally to contest, and was ultimately unsuccessful.

One of the key determinants of the case was the approval of defence measures by resolution at a general shareholders' meeting. In itself, a court of law upholding shareholders' decisions is not unusual. Yet many foreign investors perceived the response to Steel Partners' appeal to the Tokyo High Court's ruling in favour of BullDog sauce as pointedly aimed against their interests and against those of "free fair and global" markets.

A second (more nuanced) reason for foreign investors' dismay over the outcome may have been that the validity of the shareholder resolution - the most consistently upheld argument in defence of BullDog Sauce came not from law or precedent, but from the

³⁹ As cited in the *Wall Street Journal*:

<http://www.wsj.com/articles/SB10001424127887324216004578482943175923954>

bureaucracy's interpretation of the New Companies Act - from METI and MoJ Guidelines.

3.3. LESSONS LEARNED FROM POSTAL PRIVATISATION: CASE STUDY IN POLICY SEQUENCING

Although perceived as the boldest of Koizumi's reform measures and one that could have reshaped the financial sector entirely⁴⁰, postal privatisation has, in

Figure 17: Key Events in the "BullDog Sauce" case

May 2007: US activist hedge fund Steel Partners' Japan Strategic Fund owns 10.25% equity stake in BullDog Sauce, a manufacturer of sauces and condiments with a real estate division.

18 May 2007: Steel Partners makes tender offer for BullDogSauce, of JPY1584 per share. BullDog's board responds by questioning how the company would be run were the bid successful.

7 June 2007: BullDog Sauce rejects the bid, claiming that it is not in the shareholders' interests, at the same time announcing plans for to propose a special resolution before the general shareholders' meeting on 24 June to authorise the company to issue warrants to the company's shareholders.

Conditions of the warrants:

- All other shareholders who owned shares on 10 July would receive three warrants for every share owned.
- Warrants could be exercised in September for the price of JPY1.
- The company would exercise unused warrants for three shares.
- If exercised, Steel Partners would be left with only 2.82% of outstanding shares; thereupon BullDog Sauce would purchase Steel Partners' warrants for JPY396 each, allowing Steel Partners to purchase sufficient shares to take holdings back to their pre-warrant percentage.
- If the offer were abandoned before 5 July, BullDog sauce would not issue warrants.

13 June 2007: Steel Partners seeks an injunction from Tokyo District Court to prevent new share issuance on the basis of (a) shareholder inequality (article 109 of the Corporation Law) and (b) unfair issuance (article 247 of the Corporation Law)*

24 June 2007: 83% of BullDog Sauce shareholders on record vote to adopt the resolution.**

28 June 2007: Tokyo District Court rules in favour of BullDog Sauce, on the grounds that shareholders have equal rights to new issues and that the decision was approved by the majority of shareholders, per METI/MOJ guidelines. Steel Partners appeals the decision to the Tokyo High Court.

9 July 2007: Tokyo High Court affirms the ruling in favour of BullDog Sauce, ruling that (i) Steel Partners is an abusive acquirer; (ii) the offer was not made in good faith; and (iii) the offer was detrimental to the value of BullDog sauce and its shareholder (justifying unequal treatment of Steel Partners as shareholders); Steel Partners appeals the decision to the Supreme Court.

7 August 2007: Supreme Court rejects Steel Partners' appeal opening the way for new share issuance, declining however to endorse the ruling of the Tokyo High Court that Steel Partners is an abusive acquirer, instead upholding the validity of a shareholder resolution, in line with METI/MOJ guidelines.

* Steel Partners sought precedence in the Livedoor ruling, where Fuji TV's plan to issue warrants was deemed "grossly unfair".

** Two aspects of this meeting to note; the meeting was held on a Sunday (to ensure maximum turnout), and the Articles of Incorporation were amended in line with the New Companies Act, approved by more than the required two-thirds majority of shareholders.

Source: (Padgett 2011), (Lessambo 2016), (Linklaters 2007)

⁴⁰ (Fink 2010)

implementation, fallen far short of its original ambitious goal. Lessons learned might be divided into three parts – firstly the elements of its successful legislation, secondly the characteristics of its much delayed⁴¹ and scaled-back implementation and thirdly, the necessity for ongoing reform following privatisation.

As highlighted above, the Koizumi administration’s institutional framework – specifically the Council on Economic and Fiscal Policy (CEFP) - was pivotal both to resolving Japan’s banking crisis and to the success of legislating the subsequent structural reforms of 2006. The sequence of these reforms was of paramount importance.

Indeed, one of the most valuable lessons learned by Koizumi and his team of reformists while in office was that of “reflation before reform”, in policy sequencing⁴². Koizumi’s reform experience taught us that in Japan’s case (an aging, stagnant developed economy plagued by deflation and ever-expanding public sector debt), reflation creates more palatable conditions for introducing structural reform.

At a visceral level, even moderate wage growth and asset reflation made all the difference in the world when asking the public to accept an unpalatable reform (with implicit job losses and removal of a popular risk haven). Given the significant number of jobs as well as influential regional votes influenced by the Postal lobby, it is argued

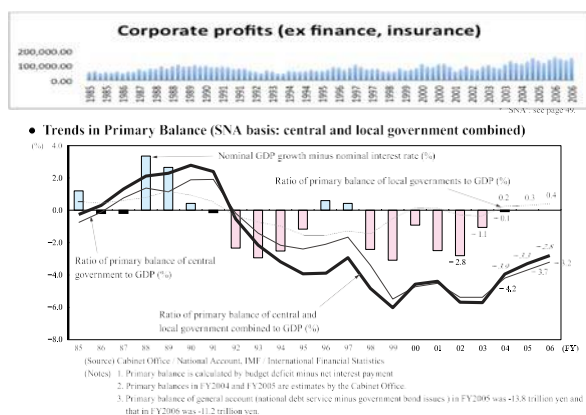


Figure 18: Reflation helped Japan surpass fiscal targets

Source: Ministry of Finance, Japan

assisted in another policy objective, of fiscal reform. As may be seen in Figure 18: Reflation helped Japan surpass fiscal targets, as a greater proportion of corporate Japan became profitable (and went from paying 0% to 40% tax), fiscal revenues exceeded

that, absent reflation and concomitant prospects for employment growth, there would have been no postal reform referendum and thus no reform legislation. Conversely, reflation turned the postal referendum from an issue of great public concern into a contest among bureaucrats and politicians.

The benefits of reflation in lubricating policy reforms are manifold. Reflation allowed

⁴¹ The original target date for full privatisation was 2010; currently, the target date for partial privatisation (full float of *Yucho* and *Kampo* is 2017).

⁴² Emergency Countermeasures to Deflation (Japan Cabinet Office 2002)

targets, curtailing the government's primary balance deficits at a faster pace than expected.

The benefits of reflation were eminently applicable to postal privatisation. Japan Postal Savings was a necessary partner in Koizumi's reform of the Fiscal Investment and Loan Program (FILP), one major avenue of cutting down on public expenditure. Prior to FILP reform, postal savings as well as pension reserves were obligatorily made available to the FILP, a major government programme for social welfare and infrastructure finance. FILP reform established independence in management of both pension reserves and Postal deposits, upon which Government Pension Investment Fund as well as Japan Post holdings of FILP paper was wound down⁴³.

Although much delayed from its initial target date of 2010, the JPY1.4 trillion float of the postal savings and insurance arms of Japan Post Holdings in November 2015 showed, a public offering more easily absorbed in an environment of rising stock prices (thus increasing direct revenue associated with the stock float). There are further benefits yet to accrue from postal privatisation; as demonstrated above, revenues to the government from a privately operating firm also tend to improve during times of economic expansion and reallocation of debt-heavy portfolios toward stocks might also assist in both reflation and fiscal reconstruction.⁴⁴

That reflation is a necessary condition for fiscal as well as structural reform is a pivotal assumption to test for sequencing of PM Abe's "three arrows" of reform today.

Unfortunately, the benefits of policy sequencing only enjoyed a limited window of success. The same year as the Postal referendum, Koizumi's term as leader of the LDP expired, upon which he was required to step down as Prime Minister. The reforms spearheaded by Koizumi were dependent on succession, which alongside the advent of the Global Financial Crisis proved damaging for the implementation of postal privatisation.

⁴³ see http://www.mof.go.jp/english/filp/filp_report/zaito2011/zaito2011-4-05.html

⁴⁴ (Fink, *The Business Case for Reforming Japan Post* 2010)

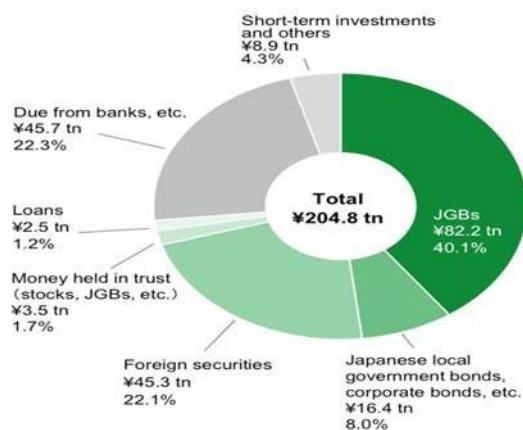


Figure 19: Composition of assets, Japan Postal Insurance (Kampo)

Source: Japan Post

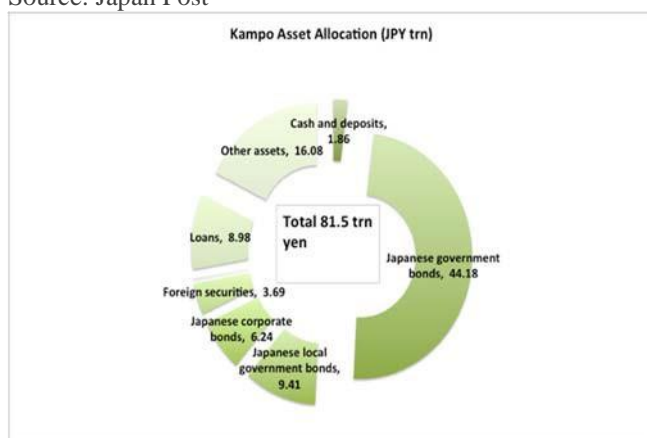


Figure 20: Composition of assets, Japan Postal Insurance (Kampo)

Source: Japan Post

strategy” rather than on a central structural policy platform.⁴⁶

Again however, reflation came to the rescue – a rebound in asset markets and growth since the start of the Abe administration provided favourable conditions to renew the

After several years of rapid leadership turnover within the LDP and deteriorating sentiment accompanying the Global Financial Crisis, a frustrated Japanese electorate handed the reins to the opposition party. The CEFP as we knew it was subsequently dismantled by the Democratic Party of Japan in 2009⁴⁵, which may have undermined credibility in the party’s leadership credentials, giving rise to difficulties in legislating further reform measures.

Though reinstated by Prime Minister Abe upon the LDP’s return to power in 2013, the CEFP’s policymaking power was no longer as centralised as under the Koizumi administration, with many of the central policy reforms siphoned off to a “growth

⁴⁵ Japan’s ruling Liberal Democratic Party lost a 2009 election to the DPJ, led by PM Yukio Hatoyama. The Hatoyama administration rebranded the CEFP as the “National Strategy Office” and divested it of one of its key policy functions, the compilation of *Honebuto no Houshin* or “Big Boned Policy”. The *Honebuto no Houshin* were reinstated in 2013 (with the CEFP reverting to its original nomenclature) upon the LDP’s subsequent return to power under current PM Abe.

⁴⁶ (H. Takenaka, 久々の「骨太方針」をどう読むか? [How to evaluate the revived Honebuto-no hōshin?] 2014)

privatisation process, and as such Japan Post Bank and Insurance arms of Japan Post Holdings were listed and partially privatised in 2015.

The partial float of November 2015 (in which retail investors were heavy participants, divesting themselves of cash) represented progress in structural reform. Both *Yucho* (postal savings) and *Kampo* (postal insurance) are diversifying their investment portfolios away from Japanese Government Bonds, increasing their allocations in foreign assets. Japan Post Bank increased its allocation to foreign bonds from 15.9% as at the end of fiscal 2014 to 22.1% (JPY45.39trn) as of April 2016; *Kampo* meanwhile raised its foreign bond allocation from 2.5% to 4.9% of its JPY81.5trn portfolio over the same period.⁴⁷

Bringing the case study analysis to its last point, despite progress in the privatisation of Japan Post, the flow-on benefits of privatisation to Global Value Chains still appear limited. At time of writing, Japan Post remains a largely government-controlled juggernaut in the financial and insurance sectors. *Yucho* (postal savings) and *Kampo* (postal insurance) balance sheets remain inflated by cash that flowed in from households when the Japanese banking crisis was in full swing and sentiment was at its worst.

Because of Japan Post's long history as a government-owned institution and also because of the government's ongoing interests in the holding company, many private sector competitors in financial services and insurance remain skeptical of the benefits of privatisation. Competitors are apprehensive that in the absence of regulatory harmonisation, privatisation might merely transform an explicit government guarantee to the largest, government-protected players in financial services and insurance to an implicit one. An implicitly protected Japan Post, if awarded a more extensive mandate than before, might dampen rather than promote competition in the financial sector. Some of the same concerns voiced by foreign competitors in the late 2000's have been repeated again under the Abe administration.⁴⁸

Complete privatisation (release of government control) *alongside* harmonisation of regulation for all institutions (including Japan Post) in these sectors would approximate the creation of a "level playing field" for both domestic and international players in the financial and insurance sectors, which is likely to have a positive impact to global value chains.

⁴⁷ Japan Post website, 2016

⁴⁸ American Chamber of Commerce in Japan 2016)

3.4. CONTRIBUTIONS TO REGIONAL AND GLOBAL VALUE CHAINS

Compared to the principal role Japan played in economic diplomacy following the Asian crisis as well as the resulting regional financial infrastructure⁴⁹, Koizumi's regional legacy is mostly indirect; free market values were internalised in Koizumi's reforms rather than aggressively pursued; the use of “*gaiatsu*” (external pressure) as a policy tool may have been under-utilised. This perhaps explains stunted growth in competitiveness of Japanese financial sector exports (see Figure 7: Financial and Insurance Services, % of total exports).

Under the current Abe regime however, pursuit of TPP and other multilateral trade accords may assist in promoting internal structural reforms.⁵⁰

Within the region, the indirect benefits of structural reform are well recognised as substantial. In its *Asia Pacific Regional Economic Outlook* in April 2015, the IMF remarked that, “Structural reforms remain critical to boost productivity growth across

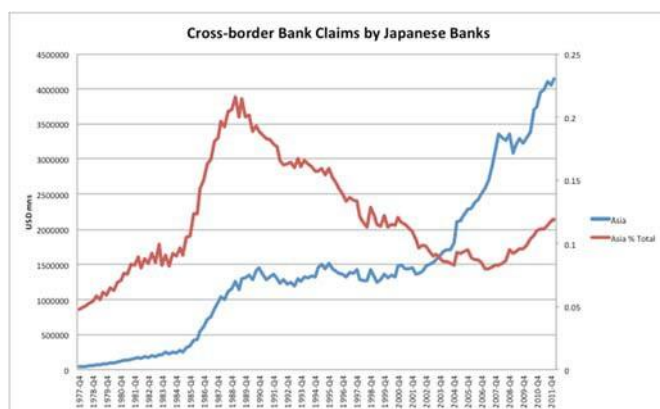


Figure 21: Surge in Japanese cross border bank claims, Asia Region

Source: Bank for International Settlements (BIS)

economy, of which consumption still remains the largest share of GDP (above 60%); of this, imported goods and services comprise a significant share. Japan's successes or failures in stoking domestic recovery cannot help but exercise an impact upon both regional and global supply chains and production.

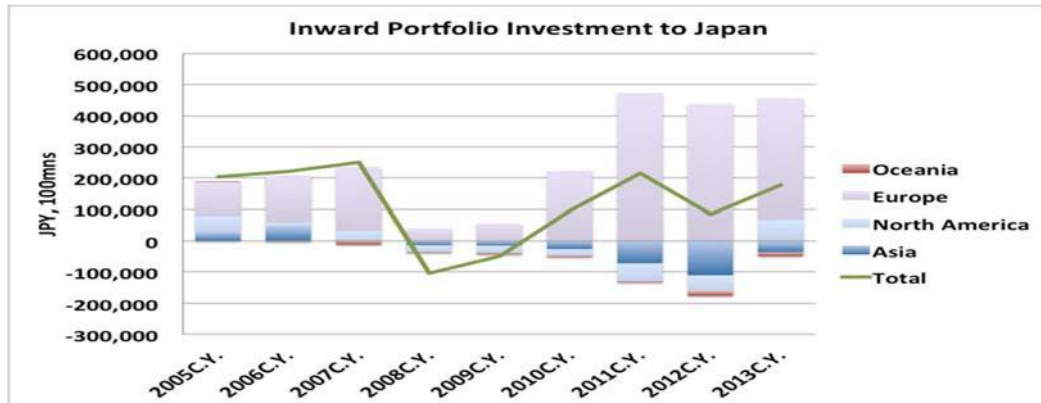
the region, including... initiatives to raise services productivity and labor force participation in Japan.” Recalling that services comprise over 70% of Japanese output, understanding the drivers of Japanese services sector underperformance is a vital input to successful structural reform.

Until recently, Japan was the world's second-largest

⁴⁹ The Chiang Mai Initiative, or network of bilateral Central Bank swap agreements was built upon facilities originally established by the New Miyazawa Initiative in 1998, agreed in ASEAN + 3 discussions.

⁵⁰ (Urata 2016); also see, from Keidanren (Japanese Business Federation): <https://www.keidanren.or.jp/english/policy/2000/033/proposal.html>

Figure 22: Net liquidation of Japanese securities by Asian investors



Source: Bank for International Settlements (BIS), Japan Ministry of Finance (MOF)

The impact of Koizumi’s financial services reforms upon the Japanese economy was mostly positive. As demonstrated above, the resolution of Japan’s banking crisis removed one barrier to growth of the world’s second (now third) -largest economy. Domestic bank lending recovered; cross-border claims also recovered as Japanese banks renewed overseas lending. Cross-border loans to Asian borrowers grew at a more subdued pace than to North American and European borrowers, until the time of the Global Financial Crisis, whereupon they rebounded (see Figure 21: Surge in Japanese cross border bank claims, Asia Region).

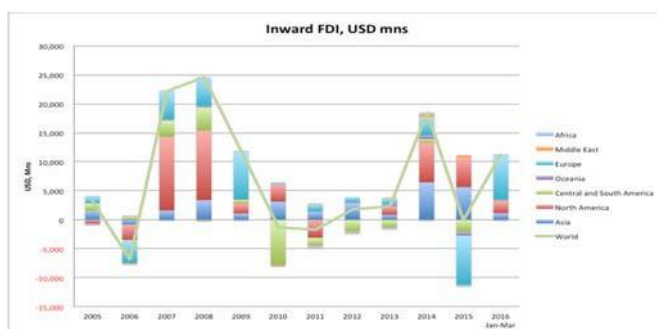


Figure 23: Asian Investors show smaller but steady interest in Japanese FDI



Figure 24: Strong interest in Oceanic currency-denominated investment trusts

Source: JETRO, ITA

since 2006.

To highlight specific contributions of the 2006 reforms to regional market development, we point firstly to the ongoing growth in the Japanese Investment Trust market since the introduction of FIEL. It is interesting to note the disproportionately high share of Australian and NZ dollar assets among investment trusts' foreign currency-denominated offerings (see Figure 24), thanks to higher yields associated with these currencies among developed economy assets.

Going forward, the ability to extend the scope of existing regulation to new products sharing similar aspects to products already covered at inception of FIEL should prove beneficial for regional initiatives such as Asia Regional Funds Passport, which aspires to establish region-wide fund portability.

There was, on the positive side, a surge in awareness of matters concerning corporate governance alongside the implementation of the New Corporations Act. Some regional trade partners welcomed the reforms. APEC credited the code with success in promoting business growth (pointing to a 10% increase in the number of business start-

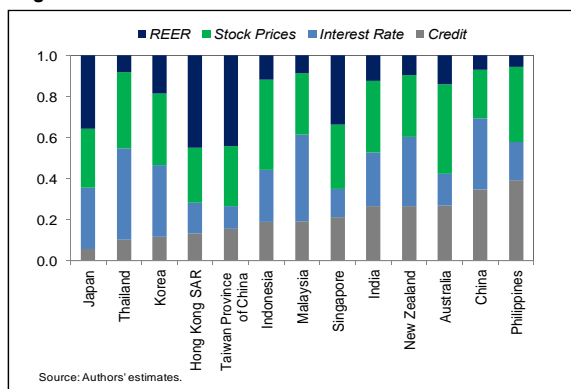
Outward portfolio investment grew as investment trusts flourished and large public pools of funds (such as Postal Savings, Postal Insurance and the Government Pension Investment Fund) diversified away from domestic bonds, into foreign assets. Inward direct investment only temporarily recovered moreover remained muted compared to outward direct investment by Japanese firms. Interestingly however, the Asia Pacific region was a smaller but steadier source of FDI inflows into Japan

ups since the abolition of minimum capital requirements) even as it “strengthened certain corporate disclosure requirements”. Other large market participants were less generous in their evaluations. In 2007, TSE President Atsushi Saito aired his exasperation with the state of Japanese corporate governance at a UBS conference, pointing to the role of poor disclosure and oversight in dimming the attractiveness of Japanese shares to foreign investors.

Eventual recognition of those inadequacies however gave rise to further regulatory amendments. Boding well for greater representation of minority shareholders, if not full convergence toward a model of shareholder primacy, Japan’s government pension investment fund (GPIF) has shown incipient signals of activism. Japan’s stewardship code was drafted in 2014, which included both a more activist remit for the GPIF as well as endorsement of the Nikkei 400 Index⁵¹, which lists firms meeting specific governance criteria.⁵² The Stewardship Code builds upon reforms enacted during the Koizumi era.

There remains much work to be done, however. Although GPIF is a signatory to the code, it has yet to incorporate the code into its own investment principles. Corporate governance “best practices” remains a work in progress in Japan, and is a matter of region-wide interest, as global financial systems become ever more interrelated. APEC highlights the importance for corporations within the region to “hold the resources of their investors in good stewardship and to act in the interests of shareholders by transparently ensuring that investments create the highest possible rate of return” (APEC Secretariat, 2006). Moreover, differences in the financial and economic structures are reflected in these relative contributions. Figure 3 shows the average contribution of financial variables to the overall FCI of a group of Asia and Pacific economies over the last 10 years. In China and the Philippines, the contribution of credit growth to the FCI is relatively larger, reflecting a relatively greater role for banking intermediation in these economies. On the other hand, the contribution of exchange rates is relatively greater in more developed economies, such as Hong Kong SAR and Taiwan Province of China.

Figure 3. Relative Contribution of Financial Variables in FCI



3.5. APPLICABILITY OF LESSONS LEARNED FOR THE APEC REGION

In order to evaluate the impact of Koizumi’s reforms on the region, it is useful to recall APEC’s definition of structural reform (see Section 2), and also added clarification from

APEC’s 2006 policy report that the spotlight has naturally shifted to the structural and regulatory

Economies with a relatively greater contribution from financial variables, such as Hong Kong SAR, Taiwan Province of China, and Singapore, tend to experience greater volatility in GDP growth (Figure 4), while economies where changes in interest rates and credit provide a greater contribution to the overall financial conditions, such as India and China, the

Figure 4. Contribution of Exchange Rate and Stock Prices to FCI and GDP Growth Volatility

⁵¹ see: <http://www.jpx.co.jp/english/markets/indices/jpx-nikkei400/>

⁵² Japan Financial Services Agency, 2014



obstacles that inhibit cross-border trade by creating behind-the-border barriers to doing better business”. Keeping this theme in mind the following are areas in which APEC economies may benefit from Japan’s experience in overcoming – or at least attempting to overcome – such barriers:

- The complementarity of capital reforms to reforms in financial services: China is learning the pitfalls of partial reforms in implementation, yet necessity to move forward in the process of capital account deregulation given ballooning shadow banking, “hot money” flows.
- Policy sequencing: economic expansion makes structural reform more palatable. This may be another policy lesson useful for China in its market-opening reforms (noting delay in capital market reforms following bouts of market volatility).
- Policy sequencing must account for “news shocks” to capital markets. Other economies vulnerable to capital market shocks (Malaysia, Thailand, Korea – see Figure 27).
- Compliance costs associated with harmonisation to global regulatory standards in financial systems where banks operate a traditional model of lending and deposit taking. This is relevant in discussions pertaining to Basel IV reforms. Many Asian economies see compliance costs as weighty against the perceived benefits of these reforms.
- Idiosyncratic application of the rule of law may diminish the comparative appeal of investment into a regional economy. Rule of law is one of the items many investors look for in all Asian economies (Ease of Doing Business Index)
- “Mandatory” corporate governance regimes might be more transparent than “enabling” regimes in the eyes of foreign investors; e.g. Korea is moving toward more “mandatory” governance– Milhaupt & Gilson (2004)
- Given the greater role of non-shareholding stakeholders in many Asian models of governance, there may be merit in collectively exploring alternative models to Anglo-saxon governance models. Good corporate governance may not rely on shareholder primacy alone (e.g. cross-shareholdings in Korea (Kim and Sung 2009)), but does require standards of “best practices”.
- Strong and centralised political leadership may be a pre-requisite to achieve success when battling vested interests to enact reform (this depends however on appointment of a reformist leader, in any nation)
- Gradualist financial reform agendas run the risk of falling behind global trends and failing to achieve desired reform. This concept may be applied to other economies with tightly regulated industries or capital controls (e.g. China, India) who are gauging speed and sequencing of deregulation.

4. NEXT STEPS IN THE ECONOMY REFORM PROCESS

Areas of the reform process where further developments are expected are:

- i. Continuing sell-off of cross-held shares and reform of corporate boards, alongside the restructuring of main bank relationships. These measures remain pivotal to productivity improvements in the financial sector.⁵³
- ii. Ongoing efforts to diversify the Japanese household balance sheet “from savings to investment”.
- iii. Ongoing adaptation of FIEL (Financial Instruments and Exchange Law) and Corporations Law to reflect new products and technological development, as well as in favour of further market opening measures.
- iv. Use of multilateral agreements and regional initiatives as levers to speed domestic reforms (e.g. the Trans-Pacific Partnership and Asia Regional Funds Passport)
- v. Target creation of a “level playing field” for competitors in the financial and insurance sectors in Japan’s ongoing postal privatisation.
- vi. Ongoing promotion of corporate governance including enhancements to Japan’s Stewardship Code, transition from passive to more active investment by GPIF and new products focused upon governance.

Since the advent of financial globalisation, there is evidence that foreign pressure (*gaiatsu*; see section 2.1) has been, in some cases, successful in motivating domestic reform. Trade partners’ lobbying for reduction of trade barriers in agriculture in the negotiation of the Trans-Pacific Partnership (TPP) has given rise to hopes for domestic agricultural reform. Regional accords may similarly become catalysts for reform in the Japanese financial sector. One such example is Japan’s signing on to the Asia Regional Funds Passport (ARFP). The need to adapt domestic practices for regional cooperation might yet motivate further domestic reform, and produce greater efficiencies in the sector. The benefits that the investment trust market has reaped from market-opening reforms so far make it a promising platform for market-leading reform in the financial sector.

There are likely to be benefits to be achieved from full privatisation and reduction of Japan Post’s power in the financial and insurance sectors (providing a “level playing field” is established for all market participants). There is empirical evidence that reducing the power of oligopolies in sectors of high market concentration (such as the

⁵³ The hostile takeover debate is related, but not interchangeable with the argument of reduction in cross-shareholdings. Although the latter presents systemic risks, as seen during Japan’s financial crisis and their decline may create greater opportunities for hostile takeovers, there is evidence against the argument that absence of hostile takeovers owes primarily to cross-shareholdings. (Kim and Sung 2009)

financial sector) and boosting services sector productivity not only boosts GDP but an expansion in the elasticity of GDP to services sector productivity.⁵⁴

⁵⁴ Tyers and Asano, 2015

5. POLICY RECOMMENDATIONS

In addition to advancing policies enumerated in section 2.5 (next steps), we recommend the following:

- a. Design deregulation incentives in the non-IT services sector not only to boost innovative capital but also to reallocate capital away from non-innovative “dead weight” capital, which dulls productivity. Strengthening corporate governance is vital to such incentives, given high likelihood that improvements to corporate governance will lead to improved asset allocation.
- b. Collect and publish further empirical data on characteristics of “good corporate governance” at firm and industry level; development of trackable metrics would prove an important complement to existing empirical analysis on asset allocation and productivity.
- c. That the GPIF adopt a more formal Statement of policy for corporate governance to supplement its existing Investment Principles⁵⁵:
- d. Introduce clearer metrics when in regard to market-opening reforms going forward, with the aim of increasing the ease of doing business in Japan. One option is that proposed by Haidar and Hoshi in 2015.⁵⁶
- e. In order to more thoroughly quantify the impact of reforms on the entire Japanese economy independently of cyclical and idiosyncratic non-policy factors simulation-based modeling techniques such as CGE (Computable General Equilibrium) may be appropriate. Compilation of a CGE model inclusive of both benefits and compliance costs might better account for the instantaneous impact of reforms upon the Japanese economy.
- f. The accuracy of cost-benefit calculations of reforms within the financial sector will be a vital input to CGE calibration. A comprehensive ex-post facto cost-benefit review of FIEL and the New Corporations Law, inclusive of compliance costs, for example might hone the accuracy of the model.
- g. A Dynamic General Equilibrium framework could be developed when in regard to policy sequencing accounting also for the sensitivity of Japanese productivity to “news shocks”.
- h. Consider once again consolidating the CEFPP’s structural reform policymaking platform under the *Honebuto no Houshin* (Big-boned policy) framework, which was instrumental to PM Koizumi’s policymaking successes.

⁵⁵ see http://www.gpif.go.jp/en/about/pdf/investment_principles.pdf

⁵⁶ Haidar and Hoshi, 2015

APPENDICES

Appendix 1 – Empirical studies on productivity

APEC cites the benefits of market-opening structural adjustments in allowing an economy to “better capitalize on technological growth” (APEC Secretariat, 2006). It is possible to examine, empirically, the ability of Japan to capitalise on technology by examining developments in Japanese Total Factor Productivity.

Hayashi and Prescott demonstrated in their groundbreaking analysis in 2002 the applicability of the Neoclassical Model of Growth in explaining the source of Japan’s “lost decade” of growth. In it, a slump in exogenous total factor productivity (TFP) was the shock that dragged Japan’s potential growth (it’s “balanced growth path”) lower.

Decomposing growth accounting using the same methodology as Hayashi and Prescott, Fink (2015) singles out the services sector (inclusive of financial services) as a candidate for structural reform. Further studies decomposing productivity are reviewed below, focusing specifically on (a) the relationship between regulation and total factor

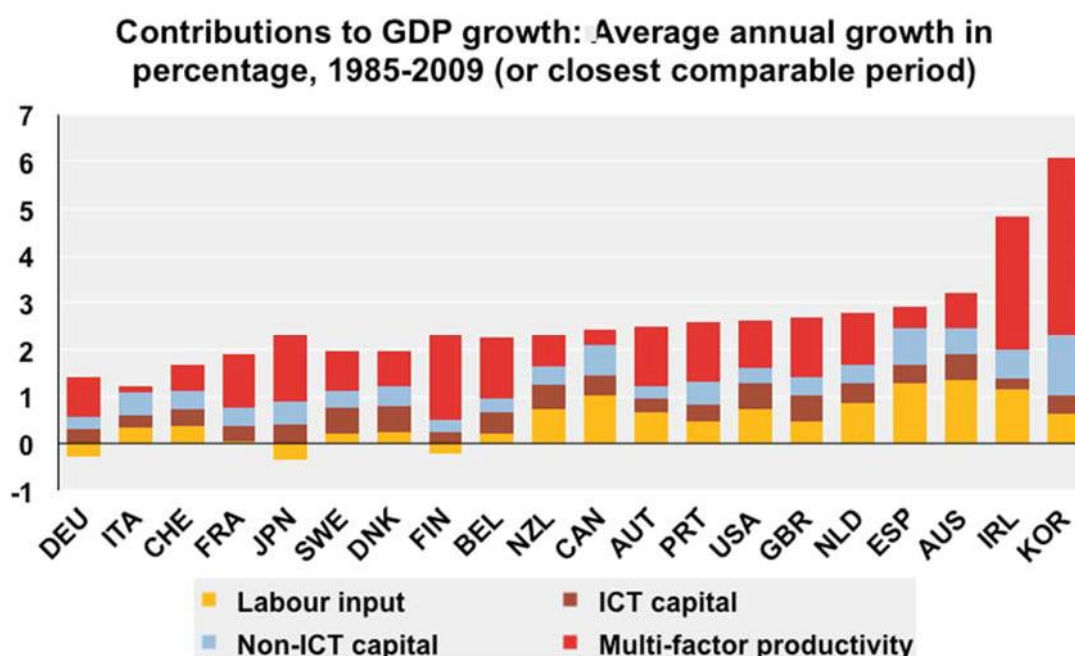


Figure 26: Growth Accounting in the OECD

Source: OECD

productivity and (b) the ability of disparate sectors to capitalise on technological growth.

The argument finds basis in three stylised facts on total factor productivity, as well as their implications.

Fact 1. Total factor productivity is the #1 contributor to growth: In comparison with other OECD economies, TFP (or multifactor productivity, to use OECD conventions) is a significant contributor to overall output growth, offsetting the negative contribution of labor input growth between 1985 and 2009:

As might be seen from the below graphic (a growth accounting exercise from (Fink, 2015)), output per capita correlates strongly with total factor productivity (the Solow Residual, or $A^{\alpha/(1-\alpha)}$ in the graphic):

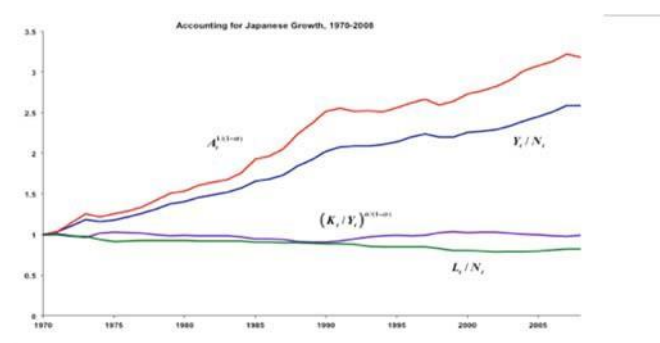


Figure 27: Japanese growth accounting, 1970-2008

Source: (Fink, 2015)

Fact 2. There is a significant divide (heterogeneity) in productivity between sectors

Japan experienced a high rate of TFP growth until 1990, upon which there was a period of significant stagnation. Hayashi

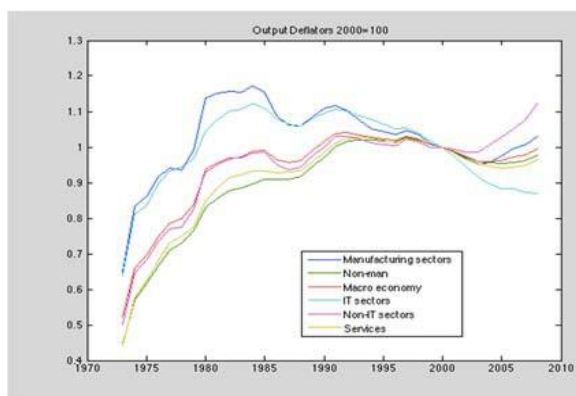


Figure 29: Deflation in the IT sector

Source: (Fink, 2015)

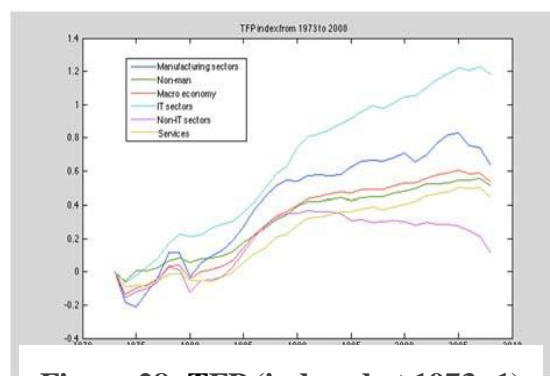


Figure 28: TFP (indexed at 1973=1)

Source: (Fink, 2015)

and Prescott put forward in 2002 (using the neoclassical model of growth) that Japan’s “lost decade” owed mostly to slumping total factor productivity. Although the tech boom of the late 1990’s brought renewed growth, there

was a significant split between productivity in the manufacturing and services sector, and in the IT versus non-IT sectors:

It is clear that productivity in the services sector lagged behind manufacturing; even starker is the divide between IT-related businesses and non-IT related businesses (see **Figure 29**).

Fact 3. IT sector deflators posted negative growth from 2000 onward

Fink (2015)⁵⁷ examines the sources of the divide in total factor productivity growth, putting forward the hypothesis that relative deflation in the IT sector (see **Figure 5**) represented technological advancements represents a positive contribution to productivity, in the form of Investment-specific technology.

The explanation: Investment-specific technology (IST) growth

Fink (2005) finds a much-improved fit when simulating Japanese growth accounting using the neoclassical model of growth with Investment-Specific Technology, versus base-case (Hayashi-Prescott) model⁵⁸. Simulations use the Conesa Kehoe and Ruhl model (Conesa, Kehoe, & Ruhl, 2007). Fink (2005) estimates that IST explains roughly one-third of total factor productivity growth since the 1970's.

Implication: Productivity is heterogeneous, and IST a differentiator

The implication of the large role of IST in overall TFP growth is that sectors closer to the technology frontier – manufacturing and IT - are likeliest to benefit from the gains in IST – and services, particularly non-IT services are likeliest to suffer. The opposing forces of cost-saving technological gains in IT sector output combined with a slump in economic activity accompanying Japan's financial crisis gave rise to a two-speed economy in Japan that persists to this day.⁵⁹

⁵⁷ (Fink, Heterogeneity in Japanese TFP, Part 1: Why Overcoming Deflation Alone is Not Enough 2015)

⁵⁸ (Hayashi and Prescott 2002)

⁵⁹ (Fink, Heterogeneity in Japanese TFP, Part 2: Regulation, Capital Allocation, and TFP in Japan, 2016)

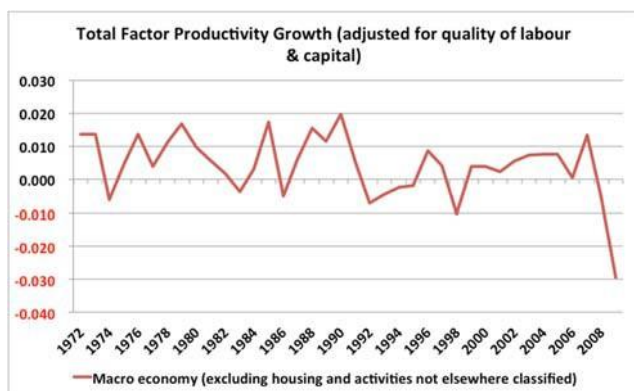


Figure 30: Japanese TFP growth, Adjusted

Source: JIP Database, Europacifica

1990's onward; both economies are also characterized by significantly lower productivity in their services sectors than their manufacturing sectors, even though Korean productivity rebounded shortly after the Asian crisis.

Poor growth in capital services, particularly non-IT capital services

In their analysis of Japanese growth accounting inclusive of capital services compared to that of other developed economies, Fukao et al find the most egregious difference in the *contribution of non-IT capital services to overall growth*. When decomposed at the industry level, the researchers find that (non-IT) services industries are the largest offenders.⁶¹

One important hypothesis arising analysis by Fukao, Miyagawa et al. was that the low comparative productivity witnessed in services sectors is most likely attributable to “excessive regulation and a lack of competition in service sectors” which in turn “seem to have impeded introduction of ICT in service industries”.⁶²

Hypothesis: excessive regulation + poor asset allocation = poor TFP growth

This hypothesis motivated industry-level fixed effects panel analyses by Fink in 2016, which found that both deregulation and greater allocation to innovative capital were consistent with TFP growth in the services sector (both IT and non-IT services sectors).⁶³ The period of analysis of regulation and productivity (1978 to 1998) were inclusive both of the globalisation and accompanying deregulation of manufacturing as well as of “Big Bang” reforms.

⁶⁰ (Fukao, et al. 2012)

⁶¹ (Fukao, Miyagawa, et al. 2012) p. 19. Miyagawa et al single out Distribution Services, finance and business services and personal and social services as under-performing industries in terms of capital services input growth.

⁶² Ibid, p. 1

⁶³ (Fink, 2016)

Deregulation may work for highly regulated services, up to a point

Nonetheless, Fink is unable to generalise the result to the entire economy; the regulation coefficient inverts for highly deregulated manufacturing; a marginal decrease in regulation is consistent with a drop, not a rise in manufacturing productivity. Fink's findings suggest that deregulation may be consistent with a rise in TFP up to a certain point, beyond which deregulation may not help.

In a subsequent panel regression, Fink finds that a firm's investment in innovative capital (a subset of intangible capital) tends to be consistent with rising productivity across most sectors.⁶⁴

Productivity during the Koizumi administration

Taking a look at cycle-adjusted total factor productivity (adjusted for quality of labor and capital), Total Factor productivity growth was positive over most of the Koizumi administration (2001-2006), surging in 2007 before falling prey to a steep decline amid the global financial crisis from 2008 onward:

Financial sector productivity

Separately, it may be observed that total factor productivity growth in the financial sector accelerated in the early years of the Koizumi administration, but the improvement was temporary. The sector subsequently succumbed to a decline in 2004, as Japanese banks deleveraged. Nevertheless, financial sector productivity troughed in the midst of the Global Financial Crisis, even as productivity in both manufacturing and other services sectors underwent a steep slump:

⁶⁴ Ibid, p. 18

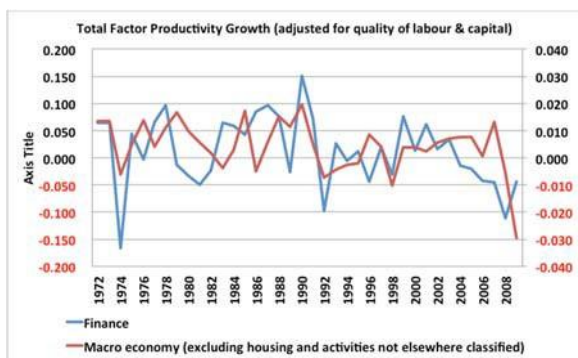


Figure 31: TFP growth - Overall, Financial Services

Source: JIP Database, Europacifica

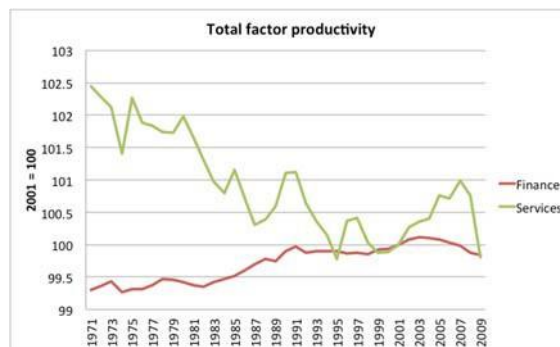


Figure 32: TFP (indexed) in Services vs Finance

Source: JIP Database, Europacifica

Did deregulation help recovery in Japanese financial sector productivity?

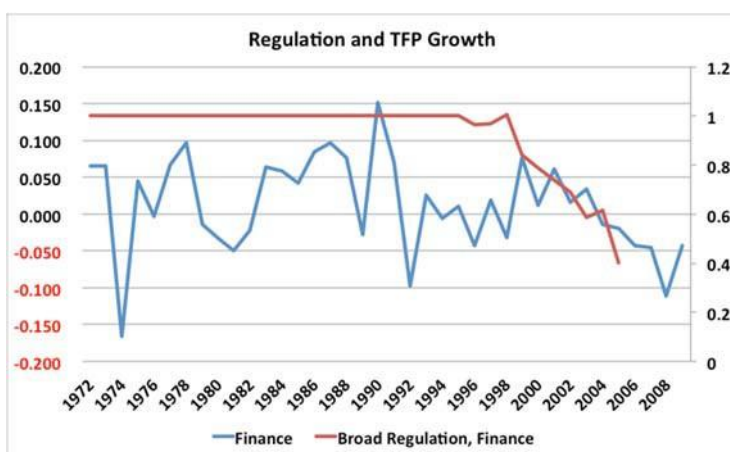


Figure 33: Regulation and TFP growth in Financial Services

Source: JIP Database, Cabinet Office, Europacifica

It is possible that deregulation, starting with the “Big Bang” and extending into the Koizumi era were responsible in part for the rise in cyclically adjusted productivity in the financial sector from the late 1990’s into the early 2000’s, as may be seen in **Figure 33**.

High intangible investment: positive for financial services productivity:

As Fukao, Miyagawa and Hisa note, the financial industry was one of those industries in which the ratio of intangible investment to gross value added (GVA) is highest, and in which the ratio of innovative property to GVA (consistent with TFP growth (Fink, 2016) was also highest (Figure 34). Consistent with the idea that deregulation may be consistent with better

capital allocation; the financial industry raised its investment in intangibles in the wake of the Big Bang (Table 1).

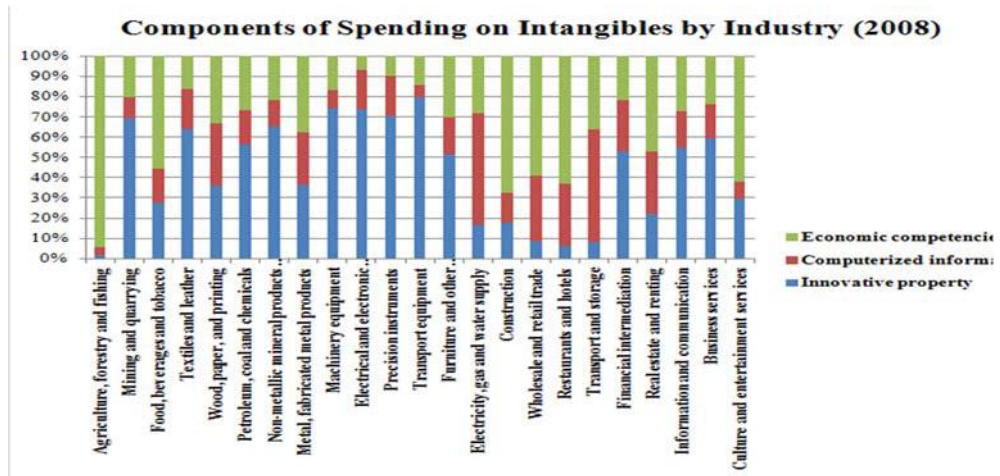


Figure 34: Components of Spending on Intangibles by Industry (2008)

Source: (Fukao, Hisa, & Miyagawa, 2012)

Appendices

Industry name	1980	1985	1990	1995	2000	2005	2008
Agriculture, forestry and fishing	2.11%	1.95%	2.12%	2.68%	3.12%	2.56%	4.53%
Mining and quarrying	36.29%	41.13%	37.28%	51.85%	50.37%	24.44%	11.50%
Food, beverages and tobacco	3.96%	5.65%	7.49%	7.80%	8.16%	8.54%	7.79%
Textiles and leather	4.60%	5.43%	6.93%	8.80%	10.41%	11.83%	16.85%
Wood, paper, and printing	3.73%	5.19%	5.84%	6.84%	7.99%	8.18%	9.86%
Petroleum, coal and chemicals	13.13%	15.63%	18.77%	20.16%	23.00%	20.74%	22.51%
Non-metallic mineral products except petroleum and coal	4.55%	6.88%	7.64%	8.86%	9.31%	6.44%	8.35%
Metal, fabricated metal products	6.67%	5.61%	6.15%	7.12%	7.73%	7.58%	6.78%
Machinery equipment	6.73%	7.64%	8.87%	11.66%	14.03%	13.32%	12.93%
Electrical and electronic equipment	18.47%	21.45%	23.44%	24.37%	29.58%	34.75%	42.71%
Precision instruments	12.55%	18.77%	22.96%	32.69%	39.26%	48.16%	36.84%
Transport equipment	10.68%	12.80%	17.13%	17.64%	20.94%	20.97%	20.83%
Furniture and other manufacturing industries	8.90%	12.96%	13.02%	16.54%	29.06%	15.45%	18.71%
Electricity, gas and water supply	1.93%	2.77%	4.25%	4.47%	5.85%	6.51%	8.93%
Construction	2.41%	3.36%	3.47%	3.90%	4.32%	3.69%	3.34%
Wholesale and retail trade	3.90%	5.47%	6.16%	5.66%	6.63%	5.64%	5.38%
Restaurants and hotels	2.51%	3.81%	4.77%	4.22%	5.01%	5.55%	4.93%
Transport and storage	2.32%	2.13%	2.63%	2.90%	3.26%	4.85%	4.69%
Financial intermediation	11.55%	14.79%	12.05%	15.76%	19.00%	20.15%	25.46%
Real estate and renting	0.70%	0.97%	1.09%	1.20%	1.29%	1.24%	1.24%
Information and communication	5.90%	11.23%	18.01%	15.08%	20.69%	21.10%	21.95%
Business services	4.72%	6.33%	7.94%	7.53%	9.86%	9.37%	10.87%
Culture and entertainment services	4.31%	6.78%	4.73%	5.90%	6.39%	5.88%	5.25%

Table 1: Expenditure on Intangibles/GVA Ratio by Industry

Source: (Fukao, Hisa, & Miyagawa, 2012)

Caveat: financial intermediation shocks a bottleneck for other sectors

However, it may also be demonstrated that shocks to balance sheets of financial sector firms were also responsible for “lost decade” dynamics (Muto, Sudo, & Yoneyama, 2016), dulling the intermediation function of financial intermediaries and prompting inefficient allocation of firm balance sheets.

In light of these results the resolution of the Japanese financial crisis under Koizumi is at least likely to have contributed positively to productivity; we lastly demonstrate that the dip in productivity and output following the 2008 Lehman shock follows the “news shock” pattern (Beaudry & Portier, 2006), where expectations are encapsulated in stock prices (“news shocks”) rather than policy shocks, which in turn may influence business cycles short-term.

“News shocks” of GFC greater than Koizumi impact on TFP

We run an orthogonalised VAR (4) on quarterly Japanese TFP growth (Solow residual, using similar methodology to Fink (2015)), examining two shocks – one to TFP and the other to stock prices. When we observe the 5-quarter lagged negative “news shock” to TFP (upper right corner), we note that the “news shock” for the entire data set is greater than the data set prior to the GFC. Conversely, we note that the lagged impact of the news shock is little changed in the data sets before (1972 – 2001) and after Koizumi (1972-2008), but before the GFC. We achieve the similar results if we set the ‘Koizumi’ period to 2006 (implementation of the reform packages). The results argue that it is more likely the GFC shock rather than policy failure that motivated the subsequent slump in TFP and thus in output.

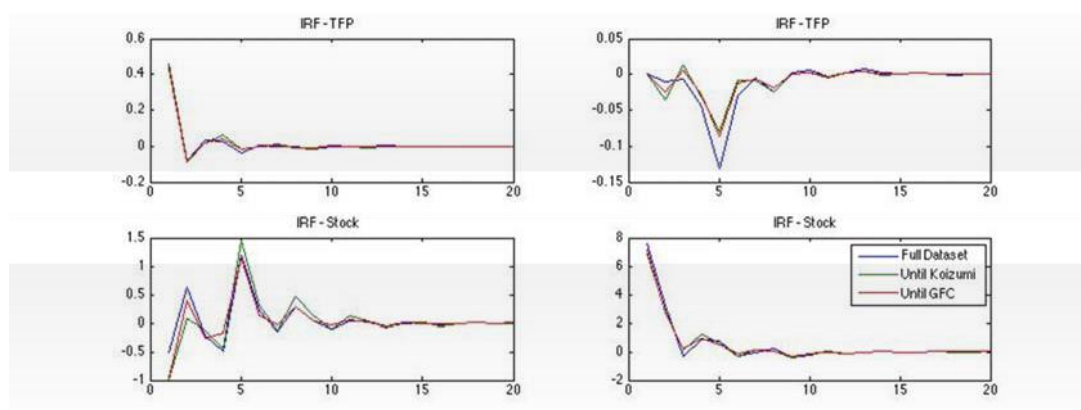


Figure 35: Impulse Response Functions for Japan "News Shocks"

Source: Europacifica

Empirical basis of policy recommendation (see Section 3): Koizumi’s policy of *tokku* or “special zones” (experimental zones where policy was relaxed) while hailed by APEC in 2006 as an “innovative solution” appeared to fade into obscurity until revived under Abenomics. The policy was not viewed as a success in retrospect. Apart from the obvious difficulties involved with preventing regulatory arbitrage in the absence of capital controls, government-led “innovation zones” may not have addressed the right problems.

Failure of this policy might have had more to do with a poor understanding of the relationship between regulation and productivity, which varies between sectors. Results obtained by Miyagawa and Hisa (2013) and again by in Fink (2016) demonstrate that policies designed to promote growth via intangible investment in services sector in the early 2000’s may have been misplaced. Increasing intangible capital alone has proven no indicator of rising TFP in the services sector. Per results obtained by Fink (2016), incentives designed both at once to decrease “dead weight capital” as well as to increase investment in innovative capital (a subset of intangible investment) might prove more appropriate; meanwhile, as Fink (2016) demonstrated, deregulation can only go so far.

Meanwhile, corporate governance is one major determinant of capital allocation in a market-determined economy (see Appendix 2). Further empirical analysis on characteristics of “good corporate governance” could complement existing analysis on productivity. Development of trackable metrics at firm and industry level would be desirable.

Appendix 2 – Outline of contemporary issues surrounding corporate governance

What constitutes good corporate governance? This is one of the most currently pressing topics in the APEC region, as well as for investors in global financial markets. In a general economic sense, good governance should aspire to efficient allocation of limited resources as to maximise the profits of the firm, which if generalised, should lead to higher productivity growth for the economy.

For many regional stakeholders however, an important related question is whether good governance necessarily follows the model of shareholder primacy, characteristic of American-led financial globalisation?

If the answer is yes, this puts the traditional Japanese model of administrative guidance (*gyōsei shido*) at odds with global best practices. Yet expecting political, bureaucratic or private sector leaders in Japan, all those with vested interests in their model of “bargained-for, negotiated policymaking and implementation by reciprocal consent”⁶⁵ to summarily abandon it is irredeemably naïve and thus doomed to failure. To differing extents, this may many states in the East Asian region, in which there is a higher level of involvement by the public sector than in Anglo-Saxon liberal market economies, face the same quandary.

It is useful, for the purpose of developing Japanese corporate governance best practice, to assume that “good corporate governance” may still exist without strict shareholder primacy. The example of Koizumi however has shown us that despite widespread resistance within the governing LDP toward deregulation, privatisation and free-market principles, a place may be made for them within the Japanese model, even though finding it will inevitably involve compromise.

To generalise, vested interests are powerful, yet ongoing economic stagnation will repeatedly invite questioning of the *status quo*, particularly given increasing globalisation of the political economy. Likewise, we would expect variants of the process of finding a “middle ground” to be present in many East Asian economies. Japan, as the second-largest economy in the region and home of the largest stock market by capitalisation, might have a considerable say in the debate

⁶⁵ Haley as quoted in (Hook 2005), p.5

over corporate governance, if only its large institutional investors (such as public pension funds) would engage in the debate.

APEC economies may benefit from lessons learned by Japan (both positive and negative) in the search for alternatives to US-style shareholder capitalism, in the attempt to balance unique inherent structural factors with need for greater market-driven financial sector efficiencies. Some of the pivotal topics in the debate are framed, as follows:

Why the focus on corporate governance?

According to Nicholas Benes of the Board of Directors Training Institute,

The main reason why the Japanese economy is sluggish is because Japanese companies do not withdraw from unprofitable operations and/or engage in sufficient industry consolidation, and as a result corporate assets are not reallocated to their best uses.⁶⁶

As described above, total factor productivity growth is the main driver of growth in Japan. APEC cites findings by Nicoletti and Scarpetta (2003) that “reforms to private sector governance and competition policy have a positive impact on total factor productivity... a key determinant of economic growth.” In the context of empirical analysis presented in Appendix 1, the combination of deregulation and better capital allocation conducive to greater productivity in the services sector might best be served by improving the capital-allocating function of firms themselves. This may be done by improving corporate governance.

Why do investors expect Anglo-Saxon governance norms (of shareholder primacy)?

As demonstrated in Appendix 4 (below), US households (either singularly or due to pension savings programmes) tend to have a greater bias toward equities than their OECD counterparts in Asia. Although the US is a net external debtor, the institutional savings pool in the US is massive. According to OECD figures, US pension savings constituted almost 60% of pension savings in the OECD. Pension funds in the US tend to be particularly activist, having their say in corporate governance reforms.

One example of a large institutional activist investor is Calpers (the California Public Employees Retirement System). Calpers sees proxy voting as “the primary way [Calpers] can influence a company’s operations and corporate governance.” Calpers publicly post their “Statement of Investment Policy for Global Governance” which clearly state expectations on “shareowner rights,

⁶⁶ see: <https://bdti.or.jp/en/blog/en/proposals-for-raising-productivity-in-japan-by-nicholas-benes/>

board quality and diversity, executive compensation, corporate responsibility, and market conduct”. Calpers also clearly states that, “[i]n instances where companies fail to meet the standards of conduct defined by our Global Principles, CalPERS may file shareowner proposals to achieve governance reforms.”⁶⁷

Separately, over 40% of world market capitalisation (of listed companies) resides in the US,



Figure 36: Composition of world market capitalisation

Source: World Federation of Exchanges

another reason why expectation setting for shareholders is dominated by the US model.

Within Asia, many regional economies have made strides in improving corporate governance, to the satisfaction of global institutional investors. Regional economies in which corporate governance is considered to be strong include Singapore and Hong Kong, China. Others such as Malaysia, Thailand and India have shown improvements in recent years.⁶⁸ Many of these economies experienced inflows into their stock markets following the withdrawal of Japanese bank

loans at the time of the Japanese banking crisis.

Who could be catalysts for change in this model?

Japan’s pension market accounts for roughly 6% of the total OECD pension pool (a large part of which resides in Japan’s mammoth Government Pension Investment Fund), the second largest within the OECD. Presently, the GPIF outsources its proxy voting to fund managers (under periodic supervision), though there have been discussions of bringing the corporate governance function in-house. Greater activism from the GPIF could be one marginal catalyst for a “middle way” between more shareholder-centric US-style governance and the traditional stakeholder model. Liberalisation of the Chinese capital account would be another large catalyst for change in this mix. The ongoing review of Chinese equities’ inclusion in the MSCI indices highlights the importance of global market standards in the internationalisation of the Chinese bourse.

Are hostile takeovers necessary for “good corporate governance”?

⁶⁷ see <https://www.calpers.ca.gov/page/investments/governance/proxy-voting>

⁶⁸ ACGA; see http://www.acga-asia.org/public/files/CG_Watch_2014_Key_Charts_Extract.pdf

One of the central debates dividing Japanese and Anglo-Saxon modes of governance concerns the role of hostile takeovers. As shown in Sections 2.2 and 2.3, hostile takeovers tend to carry a stigma in consensus-loving Japan, while in the liberal market economy model favoured by the US, they represent discipline that investors efficiently mete out to corporate managers as to optimise the management of scarce resources. Research in the legal field is divided on the matter. Dore (2007) proposes an alternative framework in Japan that would facilitate takeovers in a more consensus-driven fashion. Meanwhile, Puchniak (2009) suggests that viewing hostile takeovers as symptomatic of efficient corporate governance is a “dubious assumption”. Milhaupt (2011) provides a comparative summary of hostile takeover practices around the world, and suggests that emerging market governance could learn from the Japanese approach to its own “hybrid” takeover policy, which remains a work in progress.

Do cross shareholdings preclude hostile takeovers?

As footnoted in section 2.5, the hostile takeover debate is related, but not interchangeable with the argument of reduction in cross-shareholdings. Although the latter presents systemic risks, as seen during Japan’s financial crisis and their decline may create greater opportunities for hostile takeovers, there is evidence against the argument that absence of hostile takeovers owes primarily to cross-shareholdings. (Kim and Sung 2009)

How important are outside directors?

Although the presence of independent directors cannot prevent corporate misdeeds, their participation may be crucial in challenging management decisions that could be damaging to company prospects. As such, the inclusion of stricter compliance pressures under Japan’s Stewardship Code to appoint one or more independent directors is a step forward, noting that in 2012, the industry federation (Keidanren) successfully lobbied against its inclusion in updates to Company Law.⁶⁹

Proposed metrics for improvement of overall governance

As noted in section 3, Haidar and Hoshi propose the use of the World Bank’s Doing Business rankings to measure and propose improvements to governance in Japan.⁷⁰ Overall, Japan ranks 24 out of 34 OECD economies and 34 globally (out of 189). One of the ranking metrics is “protection of minority investors” in which Japan ranked #36 out of 198 worldwide, down from #33 in 2015.

⁶⁹ See <https://bdti.or.jp/en/blog/en/jefferies-naomi-fink-unrevolutionary-governance/> for a review of some aspects of 2012 policy see.

⁷⁰ (Haidar & Hoshi, 2015)

There is clearly room for improvement; that Japan however ranks much lower in “starting a business” (#81), “getting credit” (#79) and Trading Across Borders (#52) suggests that there may be more pressing industry-improving reforms than legislation of hostile takeovers. There remains room however for development of additional metrics dealing with best corporate governance practices in Japan.

Stewardship code: one step forward, but further ground to be covered

In light of Japan’s deep-seated reticence toward hostile takeovers, historically passive institutional investors and recent resistance to appointment of external directors, the Stewardship Code recently put forward by the Abe administration is a big step forward. Nicholas Benes of the Board of Directors Training Institute (BDTI) suggests that raising awareness about corporate governance is

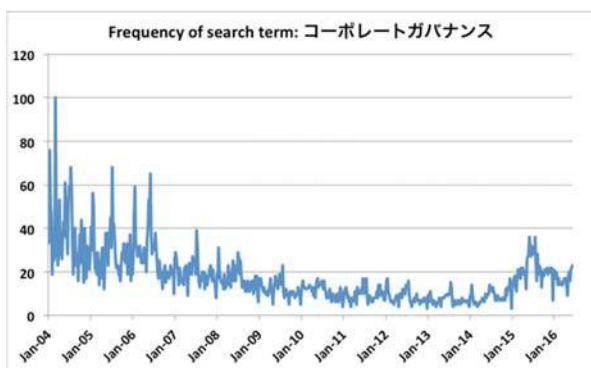


Figure 37: Indicator of Corporate Governance awareness, Japan

Source: Google, BDTI

an important precursor to governance-boosting legislation. One metric useful in tracking the priority of corporate governance is the search frequency of the term “corporate governance” in Japanese. Benes points out that interest dropped after Koizumi left office but revived with the advent of the Stewardship code (see Figure 37: Indicator of Corporate Governance awareness, Japan).

PM Abe has but laid the foundations for further work on a more cohesive set of guiding principles for Japanese corporate governance.

The role of “gaiatsu” in promoting domestic reform, redux

Although it may be unrealistic to assume that Japan will conform unconditionally to a US-style model of shareholder primacy, there is a role for foreign trade partners in pushing for improved governance (even if ultimately “improved” does not imply “American”). The American Chamber of Commerce in Japan highlights the absence of corporate governance or proxy voting principles at Japan’s largest pension fund and urges GPIF to “set a good example of modern pension fund management and stewardship for other pension funds in Japan”, to officially recognise the

Stewardship code (to which GPIF is signatory) as well as the importance of corporate governance in its investment principles (which it has yet to do).⁷¹

GPIF: recommending a greater voice in Japanese governance

To capitalise on the stewardship code, we recommend that the GPIF assume more active leadership in shaping a Japanese approach to corporate governance. This may be done not only via proxy voting but also by clearly stating its principles regarding key issues in governance (similarly to Calpers), also participating in regional fora on the topic. As a first step, we recommend that GPIF adopt a more formal Statement of policy for corporate governance to supplement its existing Investment Principles⁷².

⁷¹ The American Chamber of Commerce in Japan 2016

⁷² see http://www.gpif.go.jp/en/about/pdf/investment_principles.pdf

Appendix 3 – Significant updates to FIEL and the New Corporations Act

FIEL

- In March 2008 (one year after promulgation) the FSA submitted a bill to revise FIEL. Amendments included:
 - Diversification of ETFs,
 - Creation of markets oriented toward professional investors
 - Revision of firewall regulations among securities firms, banks and insurance companies, with a broadening of scope for banks and insurance groups.
 - Broadening of scope of listed investment trusts (ETF's) to invest directly in commodities.
- In 2011 (effective 2012), registration requirements were relaxed for investment management businesses dealing exclusively with professional clients.
- In 2013, the Diet approved the revised Financial Instruments Exchange Act and Act on Investment Trust and Investment Corporations, reviewing disclosure regulations for investment trusts (tightening) and introducing new products covered in the REITs market, including J-REITS in existing insider trading regulation and removing barriers to investments in overseas real estate (loosening).⁷³
- Japan is moving toward IFRS (International Financial Reporting Standards) as specified by IASB (International Accounting Standards Board). In 2010, internationally active companies have been able to voluntarily adopt IFRS. Given few companies voluntarily adopted the standard, requirements were relaxed in 2013.
- In 2013, there were major reforms to insider trading regulations, driven by abuse of privileged information around secondary offerings (capital increases). Regulations around communicating sensitive information and recommending transactions were introduced, and monetary penalties for violation were stiffened.

Corporations Law

- MOJ Legislative Council started work on revision of the Corporate Law in 2010.
- A bill to amend the act was put to the Diet in 2013 and approved in June 2014. Key issues addressed in the amendment were relevant to corporate governance, including:
 - New regulations on procedures and disclosure designed to deter abusive cash-out (squeeze-out) of minority shareholders
 - Injunction against fundamental changes to the corporate structure (with similar motivation to minority shareholder protection)
 - Regulation over large share placements (again to mitigate conflicts between controlling and minority shareholders)
 - Expansion of scope of liability to be pursued by derivative action (to increase minority shareholder rights).

⁷³ see (Japan Investment Trusts Association, 2015)

- Addition of a third option for the governance of large, public companies – to set up an “audit and supervisory committee” dominated by outside directors and no statutory auditor, under which⁷⁴
- One notable recommendation by the Legislative Council – the mandatory appointment of at least one outside director - was blocked by Japan Business Federation (*Keidanren*) in 2012.

⁷⁴ Previously, the two available options were either a two-board system with the board of directors plus a board of statutory auditors or (alternatively), a three-committee board of directors (dominated by outside directors) in charge of nomination, audit and remuneration.

Appendix 4 – checkered results for “from savings to investment” policies

Koizumi’s “from savings to investment” policy pillar enjoyed some certain success: between 2005 and 2010, the ratio of Japanese savings to investment did, in fact decline, and that ratio remains the lowest among many of its East Asian neighbours.

Still, whatever the instigators, Japanese households remain staunchly conservative in their allocation of financial assets by developed economy standards. In comparison to American households, who invest 45.2% of their funds in securities and only 51.9% in cash deposits, Japanese households still invested 81.4% of their funds in cash deposits, insurance funds and pension funds as of 2013, with only 14.5% of their funds in securities (including *toushin*).⁷⁵

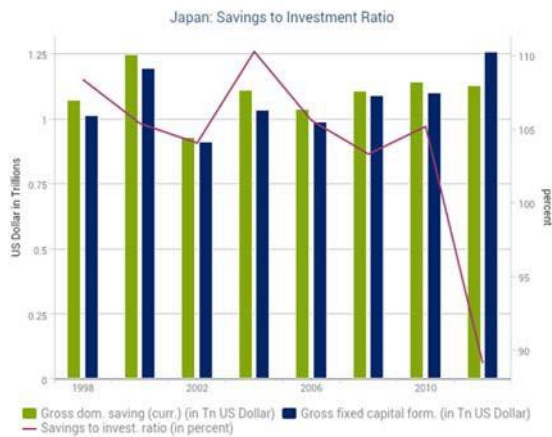


Figure 38: Decline in Japanese savings/investment ratio

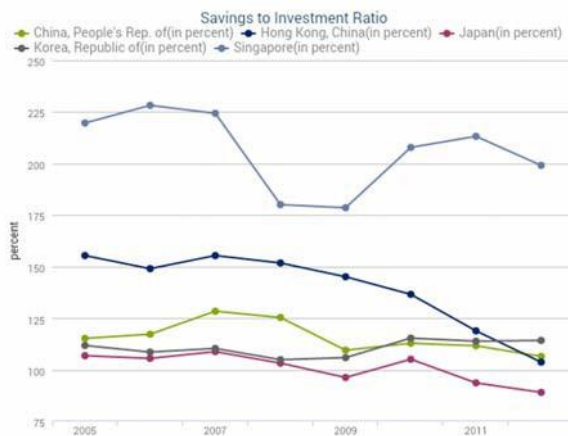


Figure 39: Comparative savings/investment ratios in Asia

Source: ADBi

As **Figure 40: Japanese vs US Household Balance sheets** shows, the Japanese household held half of its balance sheet (including insurance funds, pensions and other financial assets) in cash as of 2014; American households, in contrast hold only 13% in cash. Investment in equities is a far greater proportion of US household balance sheets (nearly one-third) as opposed to only 8% of Japanese household balance sheets. Remarking the relevance of equity share as indicative of risk preferences, we calibrate OECD risk preferences (**Figure 43: Risk preferences in the OECD**) and find that Japanese investors are one of the most risk-averse in the OECD. This is a poor testimony to the success of “from savings to investment”. Part of this has been due to risk-aversion and valuation surrounding the global financial crisis. As **Figure 41: Japanese household balance sheet** shows, there was a drop in household shareholdings between

2005 and 2010. However, that there was no rebound between 2010 and 2012 (the first year of “Abenomics”, a good year for equities) is symptomatic of high risk-aversion.

⁷⁵ (Japan Securities Research Institute 2014)

Unless there is risk reallocation, demographics do not favour growth in Japanese household stock investments; the Tokyo stock exchange reports that the number of individual shareholders has been stagnant since around 2009 (Figure 42: Number of Individual Shareholders, Japan) the year the Japanese population started to shrink.

Conversely, the market for investment trusts (*toushin*) has expanded, and may soon occupy a similar place on the Japanese household balance sheet as in the US. Responsible in part for the rise may have been increasing deregulation around this market, with ongoing enhancements to FIEL (see Appendix 3).

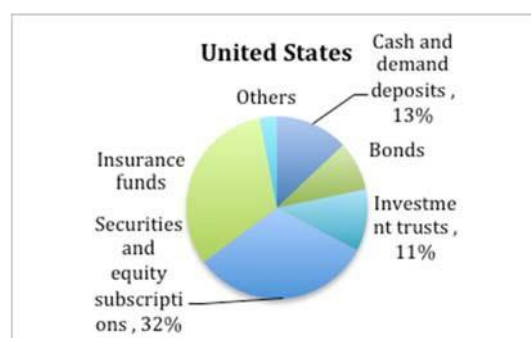
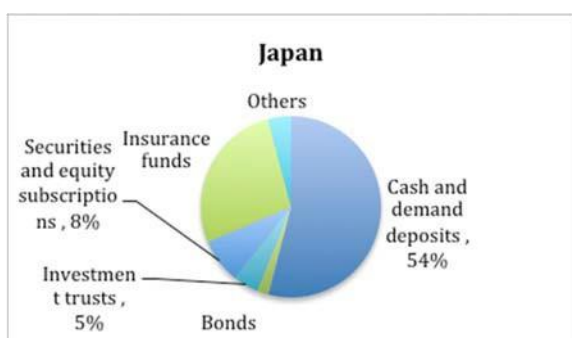


Figure 40: Japanese vs US Household Balance sheets

Source: JSRI

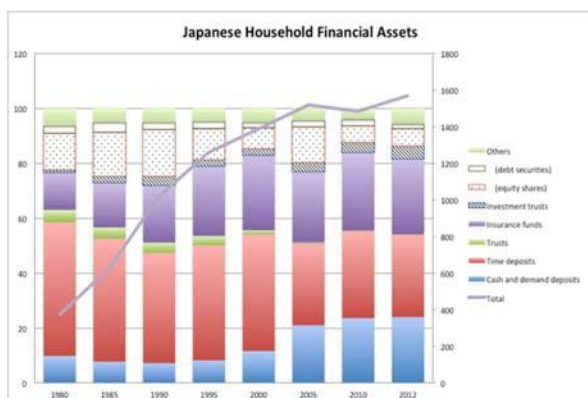


Figure 41: Japanese household balance sheet

Source: Bank of Japan's, JSRI

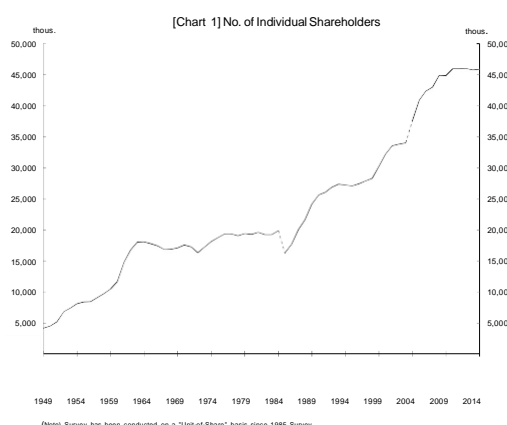


Figure 42: Number of Individual Shareholders, Japan

Source: JPX

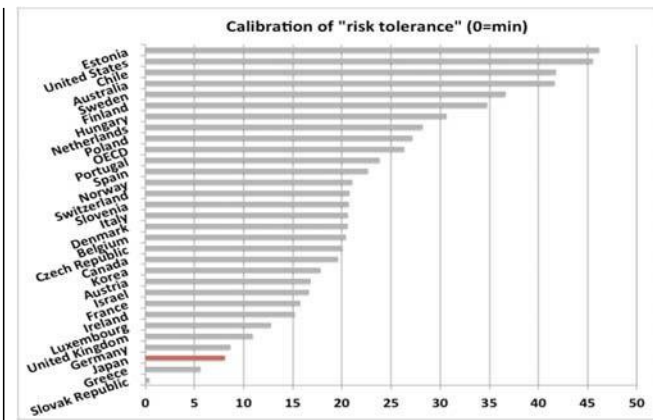


Figure 43: Risk preferences in the OECD

Source: Europacifica Consulting

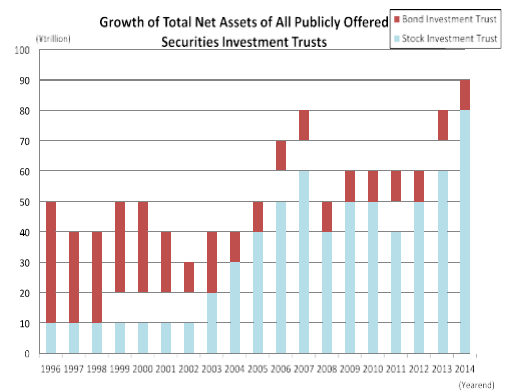


Figure 44: Growth in the Tousein market

Source: Japan Investment Trust Association

Appendix 5: Japanese financial sector reform and regulation in historical context

Immobilist tendencies postwar:

Despite the political and economic upheaval of the 20th century, Japan has demonstrated strong resistance to institutional change. Some experts argue that revolutionary institutional change in Japan last took place in the late 1800's, with the Meiji Restoration. James Malcolm's *Financial Globalisation and the Opening of the Japanese Economy* (2001) provides a comprehensive review of the history of Japanese financial regulation, up to the time of Japan's "Big Bang" reforms of the 1990's. As Malcolm points out, occupational reforms to Japan's financial sector following the Second World War were superficially new but strongly shaped by pre-war institutional and regulatory structures. Key characteristics of the system included a bias toward indirect financing, low levels of explicit legal codification and indirect state involvement in private sector activities.⁷⁶ Malcolm argues that Japan's adoption of the US banking system post-war was essentially cosmetic; its main legacy was Article 65 of Japan's Securities and Exchange Law (based on the US Glass-Steagall Act, separating the activities of banks and securities businesses).

The overt public sector direction of private sector assets during wartime merely went underground postwar, with the government retaining significant influence over the allocation of private capital. Government involvement in the banking system took both direct and indirect forms. Government patronage of the four main banks at the centre of financial-industrial conglomerates (or *zaibatsu*) is an example of the latter. Direct assistance from the Bank of Japan to troubled firms (via *madoguchi shidō* or window guidance) exemplified the former.

Conversely, no support was offered to stock markets, which as a result remained volatile and underdeveloped for many years. As a result, individual investors preferred either postal deposits (with an explicit government guarantee) or bank deposits (with an implicit government guarantee). The bias toward cash deposits on household balance sheets exists to this day; cash accounts for nearly half of Japan's 1.2 quadrillion yen in household assets, while investments in stocks accounted for less than 10% as of 2013 year-end, a low percentage in comparison with the OECD average.

This is not to say that the system was devoid of competition, specialisation or development of economies of scale. Instead however, a heavily structured and segmented financial system took shape in the early 20th century. Divisions of financial activities were based on functions of client institutions rather than size or financial product. This segmentation of the financial sector, on one hand, contributed to its stability for many years; on the other hand, these structural characteristics were – and remain – extremely resistant to change.

⁷⁶ (Malcolm 2001)

On the other hand, rigid segmentation by client function created market distortions. While suppressing competition between segments of the financial sector, segmentation gave rise to fierce intra-segment competition. As a result, many firms resorted to non-price means of competition, which led to market distortions.

Gyōsei shido (administrative guidance) as principal regulatory tool: The primary financial rule-maker and enforcer in postwar Japan was the Ministry of Finance (MOF), whose main tool was extrajudicial “administrative guidance” or *gyōsei shido*. Banking laws of the early 20th century had been kept purposefully vague to confer maximum benefits to government-directed financial support to industrial-financial conglomerates (*zaibatsu*); postwar reforms failed to strengthen the rule of law and in this respect, ensured that the Ministry of Finance remained the sole interpreter of Japan’s legal code. Via *shingikai* (or administrative committees), the Ministry of Finance exercised hawk-eyed supervision over financial institutions and the development of new financial products in order to preserve the existing division of labor and allocation of assets.

The prevalent institutional structure was an “escorted convoy method” (*gosōsendan hōshiki*)⁷⁷, over which the MOF reigned virtually uncontested, using branch and licensing restrictions to slow the pace of leading firms and the threat of forced mergers to hurry the development of lagging firms.⁷⁸ Its main regulatory vehicles were *shingikai* or oversight committees, who engaged in *ex ante* monitoring. Although this structure ensured a significant degree of diversification of financial intermediaries, it also contributed to the rigidity of the system, with little incentive to innovate, with conservative guidance hemming in the distribution of new financial products (and thus discouraging their development). The original rule of thumb was “no rule means prohibition”.⁷⁹

Although the convoy method worked well when Japan was developing and mobilising resources, by the time the economy reached maturity in the 1970’s, the drawbacks of the system had started to outweigh the benefits. A spate of industry consolidation in the 1960’s demonstrated that asset allocation was of greater importance to economic growth than asset mobilisation alone; efficiency of asset allocation began to matter much more than before. No longer a mere tool to prevent monopoly power, the convoy system contributed to the misallocation of financial resources, thanks in part to the

⁷⁷ Alternatively *gosōsendanteki gyousei* (or convoy-based group administration)

⁷⁸ (Malcolm 2001), p.67-68; Malcolm notes that the MOF enjoyed an unusually broad regulatory mandate within the OECD, exercising powers usually shared between central banks and branches of national or local government. Instead of overt checks and balances, conflicting mandates within the MOF, interministry competition and vested political interests (such as powerful lobbies among regional Post Office employees and agricultural groups) exercised a type of “organic” check to the MOF’s power.

⁷⁹ Ibid; Characteristics of Japanese postwar regulation and the MOF’s role in interpretation of a skeletal legal code are somewhat reminiscent of Chinese financial regulation currently undergoing reform within Shanghai’s Free Trade zone, where liberalisation includes introduction of a “negative list” of prohibited activities in place of blanket prohibition of activities not expressly permitted.

practice of *amakudari* (dispatch of MOF retirees to private sector firms). Unwilling to damage post-retirement prospects, active MOF officials of the 1970's had clear incentives to discourage consolidation, also to cave into political pressures to oppose hostile takeovers of clearly inefficient firms.

Arguably, by this point, the damage to market mechanisms had been done. Generations of negative associations with and political incentives to oppose hostile takeovers left a strong social imprint. Despite subsequent reforms that gradually eroded the unilateral rulemaking power of the MOF, opposition to hostile takeovers of firms had become deeply ingrained, and persists to this day.

1970's - Globalisation was mostly one-way: Deregulation of Japan's bond markets in the 1970's conformed to APEC's description of externally motivated structural reform. The breakdown of Bretton Woods contributed pressures for yen revaluation and overhaul of Japan's foreign exchange controls. Meanwhile, the escalating pace of financial globalisation manifested in the rapid expansion of the eurodollar market, which in turn contributed to the weakening of the rigid rate structure prevalent until the late 1970's.

As Malcolm (2001) emphasises, reforms of this period however were reactive and piecemeal.⁸⁰ Moreover, even after some degree of internationalisation, the convoy system was very much intact.

As a result, although Japanese banks were heavy participants in the eurodollar market, flows tended to be one-way and the playing field was far from level. As Japanese industry found a foothold overseas, their main banks accompanied them by opening branch offices, intermediating "foreign" financing in foreign currencies. Conversely however, foreign players were still largely excluded from domestic banking operations in Japan.

Even despite significant consolidation and restructuring in the Japanese banking system since the 1970's, domestic banking operations to this day remain dominated by Japanese banks. Moreover, outward foreign direct investment (undertaken now by Japanese nonfinancial firms and large banks in foreign markets) by far exceeds inward investment. Otherwise stated, "internationalisation" of Japanese markets has remained mostly one-way.

1980's – *Gaiatsu* as an effective driver of domestic policy reform: In the 80's, Japan began to face the two opposing pressures of harmonisation with accelerating financial globalisation and conservation of its traditional financial model, pressures which persist to this day.

⁸⁰ (Malcolm 2001)

Substantial deregulation in the 1980's, driven greatly by developments abroad and foreign pressure (or *gaiatsu*) for reform, changed the financial scenery but failed to shift the underlying institutional structure, to disastrous ends.

Under pressure from the Reagan Administration as trade surpluses burgeoned, Japan's New Banking Law of 1981 claimed to espouse harmonisation to OECD standards in opening the banking system and treatment of foreign firms in Japan. In reality however, banking reform remained very much dictated by the MOF's administrative guidance, under which the rigid structure of Japan's domestic banking system remained little changed.⁸¹

Still, external pressures had a hand in propelling a number of market-opening reforms to implementation; pressures from the Reagan Administration culminated in the Yen-Dollar agreement of 1983.⁸²

Under PM Nakasone (1982-1987), the government consulted private advisory groups of professionals and academics, culminating in the Maekawa report of 1986, in which three of six proposals for industry deregulation related to financial sector reforms. The implementation of the Plaza Accord in 1985 to restrain further appreciation of the dollar cemented this period of externally driven change, as Finance Minister Takeshita voluntarily proposed a 10% appreciation in the yen. In 1989, the US and Japan began the bilateral Structural Impediments Initiative, mostly designed to address economic policies and business practices in Japan perceived by the US as barriers to exports and investment⁸³. At least superficially, it appeared as though *gaiatsu* achieved every success in motivating domestic reform.

As a result, the structure of Japan's manufacturing sector underwent fundamental change, with corporations relocating facilities (as well as revenues) overseas. Banks' overseas operations and revenues surged alongside those of their principal customers. As outward FDI surged, the contribution of export revenues to the current account decreased, as investment income increased.

Nevertheless, the combination of incomplete deregulation in Japan (recalling that the MOF still held iron-fisted autonomy over domestic financial infrastructure) combined with the reactive – and hence delayed – nature of Japan's market-opening measures ultimately led to market failure and crisis.

⁸¹ (Shimojo 1982)

⁸² The Reagan administration came forward with a formal list of demands to PM Nakasone for Japanese reform, which culminated in the Yen-Dollar accord of 1983, committing Japan to financial services reform.

⁸³ (Posen and Changyong 2013), p. 25

1990 - Regulatory arbitrage, bubble, bust: However effective foreign pressure may have been in speeding up market-opening measures, it was ineffective in completing market reform. Not only did the rigid domestic market structure remain in place (under the MOF’s strict administrative guidance) but it was incapable of competing with newly liberalised and globalised markets in the US and UK. Meanwhile, market opening measures in the absence of macroprudential regulations or administrative reform created inefficiencies for domestic monetary policy. As the yen strengthened, the Bank of Japan (BOJ) cut rates, attempting to follow the examples of the Federal Reserve and Bank of England in fighting currency strength in the mid-1980’s. It is possible that the BOJ had miscalculated the effects of yen appreciation; current account surpluses in the mid-80 have remained intact (in contrast to persistent US and UK external deficits) even as private capital poured out of Japan (with little concern for

investment risks) into “cheaper” foreign markets. The BOJ’s drastic cuts meanwhile gave rise to double-digit growth in the Japanese money supply in the late 1980’s, fuelling a bubble in stock and property markets.

Paradoxically, the veneer of success projected by booming markets relieved both domestic and foreign pressure for ongoing regulatory reform. Housing affordability plunged even as the inflation rate remained firmly below 5%. The central bank, fearing its reaction function well and truly broken, aggressively hiked rates from a low of 2.25% in 1987 to 6% in 1990, piercing the property and stock bubbles. The immediate result was a

simultaneous sell-off in Japanese stocks, property and bonds – an enormous destruction of domestic wealth. The mid-term consequence was domestic financial crisis. Long-term, the subsequent surge in depreciation costs and plunge in productivity heralded the start of Japan’s “lost decades” of growth, from which Japan has yet to recover.

Figure 45: Japan's Big Bang

Legislation

- Commenced in November 1996 under principles “free, fair and global” with aims to compete with New York and London
- Foreign Exchange Law adjustment in 1998, totally liberalizing cross-border transactions.
- Revisions to Banking Law, the Securities and Exchange Law, and the Insurance Business Law enforced in Dec 1998 as Financial System Reform Law

Key reforms

- **Asset management:** introduction of new investment trusts, over-the-counter sales of investment trusts by banks and other financial institutions; liberalization of dealings in securities derivatives
- **Inter-sector competition:** switching from the licensing system to a registration system for securities companies, fully liberalizing brokerage commissions, scrapping obligatory use of premium rates set by the non-life insurance ratings agencies
- **Diversifying markets and channels for fund raising:** permitted off-exchange stock trading and electronic trading systems. Tokyo Stock Exchange establishes MOTHERS, a new market for start-up firms
- **Disclosure and transparency:** fair trading rules (stricter insider trading control, protection against bank failure). From March 1999: financial institutions required by law to disclose information on non-performing assets, under standards based on those set by the US SEC

Source: (Japan Financial Services Agency 2000)

1990's – “Big Bang” undermined by crisis; MOF authority lingers: Market failure and banking crisis, exacerbated by insider trading and loss-compensating scandals in the 1990's⁸⁴ revived calls for administrative reform. A plan was formulated by the Hashimoto administration in 1996 that culminated in the “Big Bang” financial reforms.

The “Big Bang” reforms were put forward to the Diet in 1998 as the Financial System Reform Law. The reforms were heralded as the “most extensive revamping of the Japanese Financial System since the end of World War II”.⁸⁵ Alongside the introduction of new products and technologies, reforms promoted de-segmentation of Japan's financial services sector, greater codification and regulatory transparency (see Figure 45: Japan's Big Bang).

The boldness of the plan lay in its call for the end of the “convoy” system of regulatory protection that compelled healthy banks to share the burden of would-be failed institutions.⁸⁶ Prospects for true administrative reform had never been greater.

Nonetheless, the legislation still bore the imprint of the MOF's *shingikai* (deliberative committees). Predictably, substantive portions of administrative reform components – such as the set-up of Japan's own version of the US Securities and Exchange Commission and to break up the MOF - were ultimately diluted. Upon the creation of the Financial Services Agency (FSA) under the jurisdiction of the Cabinet Office in 1998, Planning and Financial Policy remained under the MOF umbrella.

Reforms were not entirely lacking in substance. The revision of the Bank of Japan Law in 1997 did enhance the central bank's independence from the central government and policy-making transparency (Dwyer 2004). One of the biggest achievements of the Big Bang was convergence between the cost of capital in the US and Japan, if temporarily.⁸⁷

Yet when put to the test, traditional methods prevailed. As soon as domestic crisis struck the financial sector⁸⁸, slapping a risk premium on Japanese funding, the MOF was quick to backtrack on reforms, resuscitating the interventionist convoy system to keep widespread bank failures at bay. Externally, as the Asia crisis roiled regional markets in 1997, major regional lenders (the Japanese Banks), saddled with mounting nonperforming loans, were powerless to lend support to regional recovery. The target completion date of 2001 for the “Big Bang reforms” was missed. Meanwhile,

⁸⁴ Loss-compensating and accounting scandals at Daiwa, Yamaichi Securities and 18 other securities companies, the crisis among *jūsen* (nonbank mortgage lenders) and the 1997 *sōkaiya* racketeering scandal underscored the need to update Japan's commercial code.

⁸⁵ (Malcolm 2001), p. 107

⁸⁶ (Ito and Melvin 1999)

⁸⁷ Ibid

⁸⁸ The Long-Term Credit Bank (LTCB) and Nippon Credit Bank (NCB) failed in 1998. The bank failure put a swift end to LTCB's asset management joint venture with the Swiss Bank Corporation (later UBS). LTCB was later nationalised.

comprehensive reform remained elusive as an aging demographic, slumping productivity and deflation gripped Japan.

For Japan, the interruption of Big Bang reforms by domestic banking crisis echoed a recurring theme; once again, intended structural reforms, grand in scale and intention, were wound back in crisis circumstances. Expectations for revolutionary changes in Japanese financial services and reform-driven resurgence in growth were disappointed.

Meanwhile, the failure of banks to rapidly dispose of non-performing assets eroded their ability to serve as effective arbiters of financial liquidity; even as existing bad loans crowded out new lending, banks' eroding balance sheets posed a threat to their own existence and a systemic risk to the Japanese financial system. The shock of Japan's financial crisis may have led firms in the services sector in particular to lag their global counterparts in adopting new technology, thereby depressing services sector productivity. See Appendix 1 for an empirical analysis of Japanese productivity.

Meanwhile, laws remained sufficiently vague as to allow selective interpretation by key administrative stakeholders (particularly the MOF).

Japanese financial reform is cumulative, gradualist and iterative

On the other hand, the sum of financial services reforms over the postwar period to the time of the Big Bang reforms was considerable. Japan had broken down barriers to international financial transactions, liberalised interest rates, updated legal frameworks to accommodate new products, and enhanced the functioning of its capital markets. Market deregulation (culminating in the Big Bang) did assist corporations in relying more on capital market financing and less on bank loans.⁸⁹ And by 2001, the MOF's interventionist power of administrative guidance had been diluted, although not fully checked.

The main lessons from Japan's postwar history of financial reform are that traditional administrative structures have compelled piecemeal and gradualist reform, and as a result reform has been a cumulative, iterative process, tending to lag other major global centres when responding to financial globalisation. These are lessons that must be kept in mind when evaluating the Koizumi reforms.

⁸⁹ (Hoshi and Kashyap, *The Japanese Banking Crisis: Where Did It Come From and How Will It End?* 1999)

Appendix 6: Current structure of the Japanese financial sector

The structure of the financial services sector, though no longer rigidly segmented, retains the traces of postwar “escorted convoy” system, as may be seen in Figure 46: Structure of the Japanese Banking Sector

Source: Zenginkyo.

We provide further graphics (below) on the composition of overall financing among Japanese nonfinancial corporates, noting that bank borrowing comprises less than 30% of corporate financing; the balance comes mostly from capital markets or intercompany credit.

A breakdown of bank financing (loans and discounts) is provided (from Zenginkyo). It is useful to note that services, wholesale and retail sectors together comprise over 20% of overall bank lending. These sectors typically contain many small businesses particularly reliant upon bank financing with limited recourse to capital markets. To provide additional detail, we contrast the lagging lending environment among small services sector firms when in comparison to large firms. This is a factor affecting many employers in the Japanese economy – with reference to the Bank of Japan’s chart on composition of Japanese firms by size.

Finally, we include the asset management industry, which alongside foreign investors, form the market for capital market securities issued by Japanese corporations. We observe that households and pension funds (and among them, the GPIF) are the largest beneficiaries of the industry’s assets.

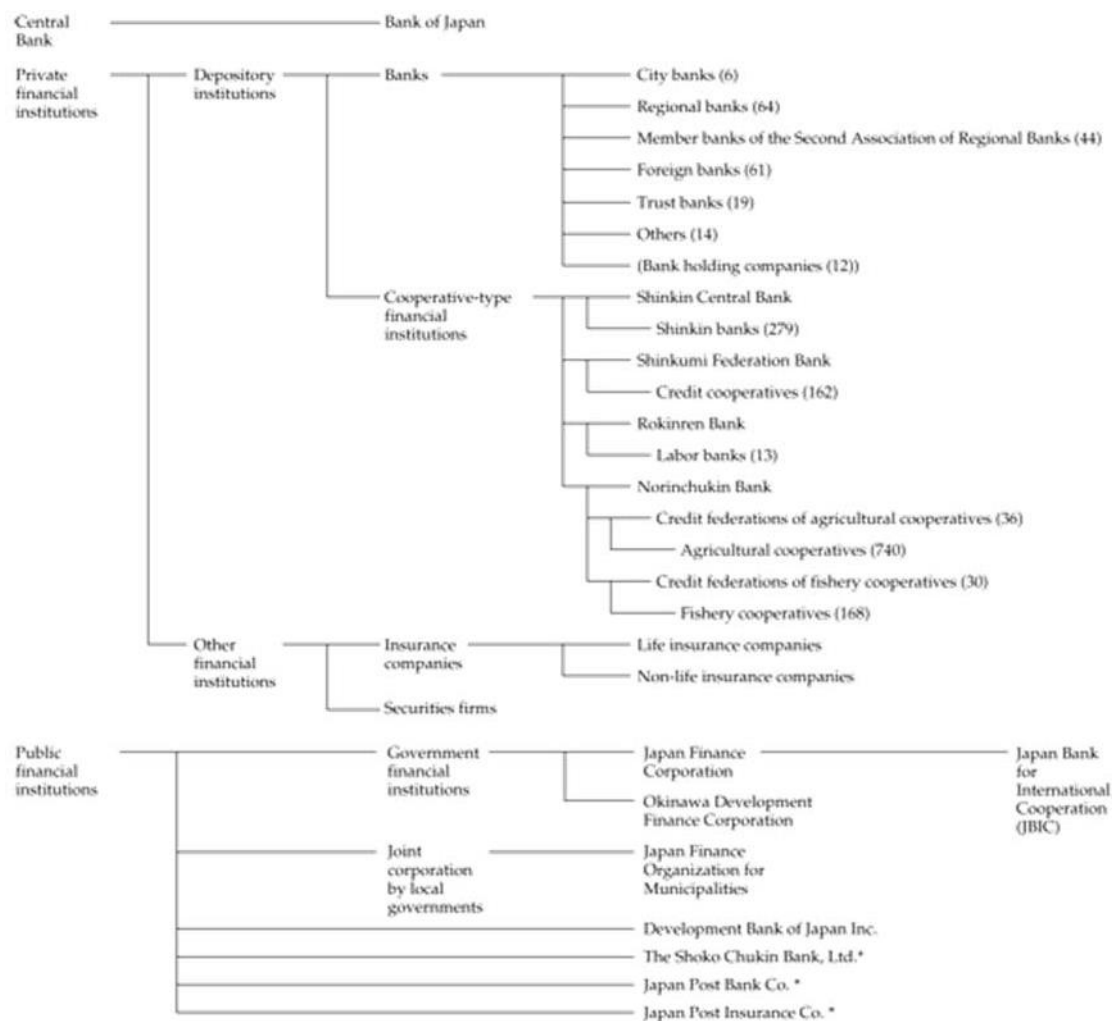


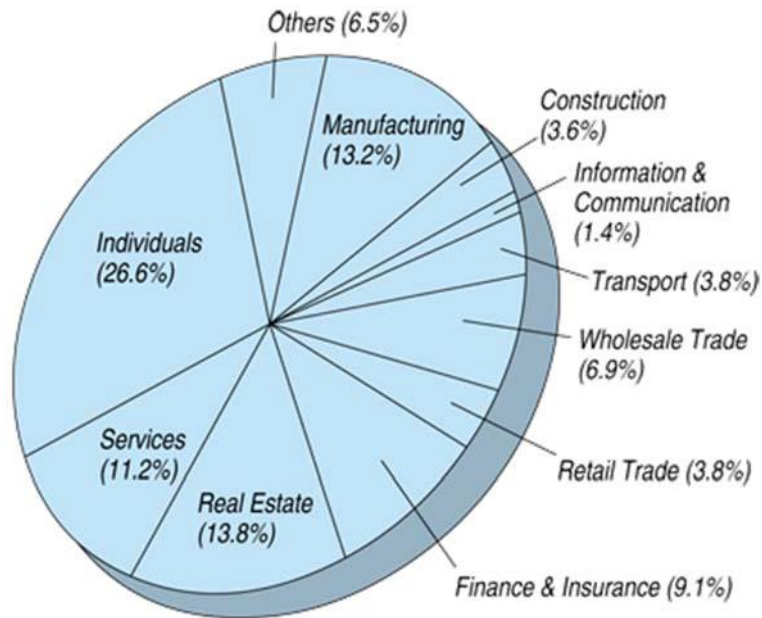
Figure 46: Structure of the Japanese Banking Sector

Source: Zenginkyo

Zenginkyo notes that the numbers in parentheses represent number of institutions in each category. The Banking Federation classifies Postal Savings and Insurance as “public financial institutions” because they are “in a transition period toward final privatization slated for the end of September 2017 at the latest”. Zenginkyo finally notes that the Development Bank of Japan, Inc. and The Shoko Chukin Bank, Ltd. are scheduled for sometime during the period from 2017 to 2019.

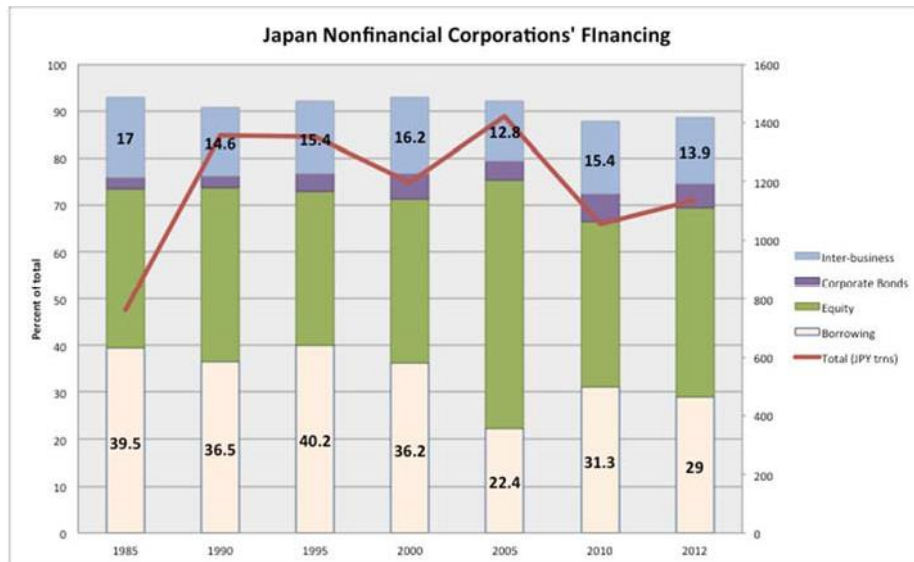
Further information on the structure of the Japanese banking sector (such as the function of each type of institution) may be found on <http://www.zenginkyo.or.jp/en/banks/banking-businesses/>

Figure 47: Sector breakdown of Bank Loans & Discounts



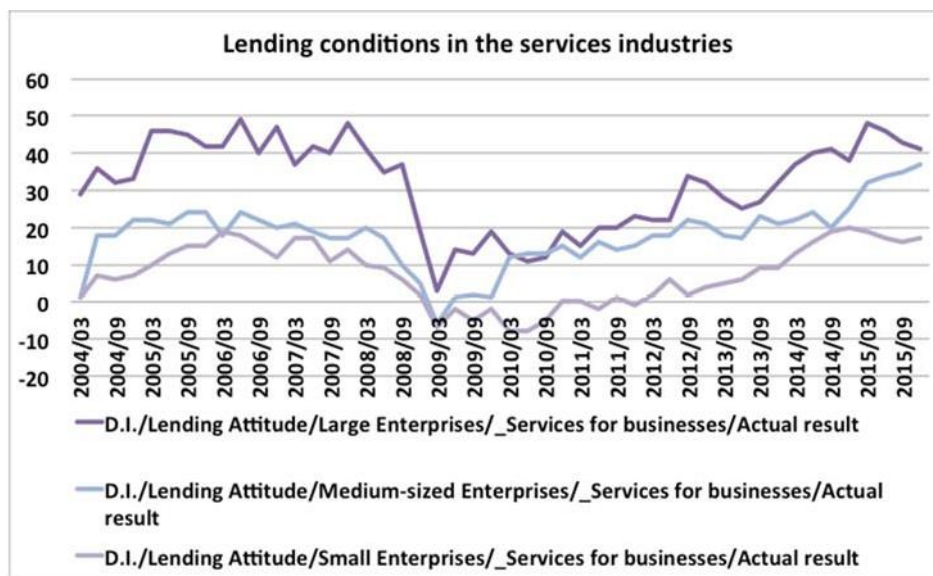
Source: Zenginkyo

Figure 48: Decomposition of Japanese nonfinancial firm financing



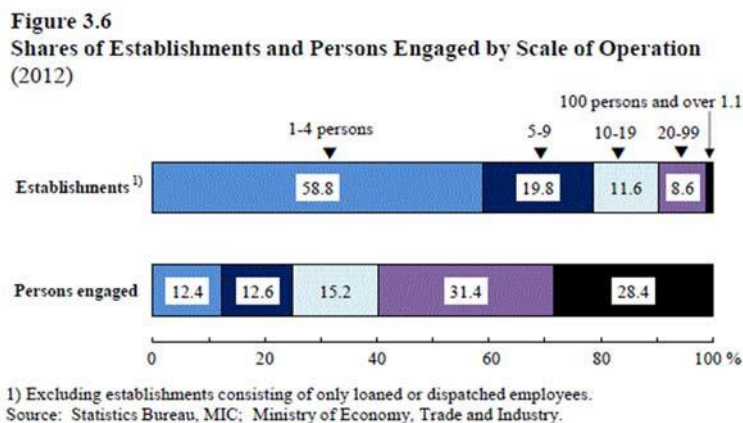
Source: Bank of Japan

Figure 49: Dispersion in bank lending conditions (Small vs. Large Businesses)



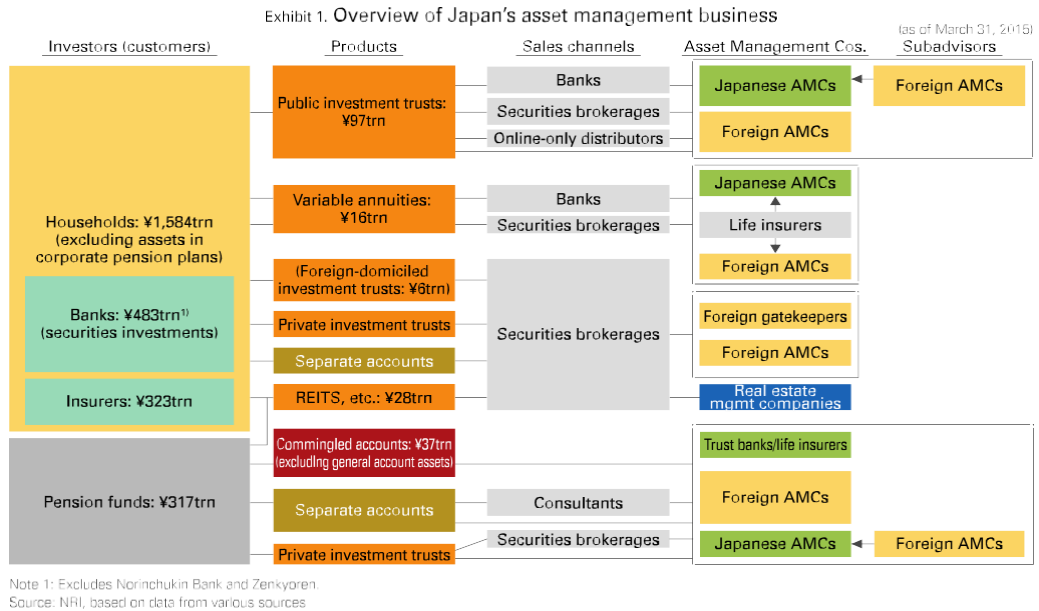
Source: Bank of Japan

Figure 50: Composition of Japanese Industry by firm size



Source: Bank of Japan

Figure 51: Japan's savings and investment industry structure



Source: NRI

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APEC Economic Policy Report Case Study

New Zealand: Electricity Retail Services Market Reform

EXECUTIVE SUMMARY

PURPOSE OF THIS REPORT

This case study examines the reforms to the electricity retail market in New Zealand between the early 1980s and 2016, with a particular focus on two key phases of change in 1999 and 2010. The analysis is based on literature review and extensive consultation with the government, regulators, electricity industry, consumer complaints Commissioner, and other relevant stakeholders. The consultants visited Wellington in May 2016 to meet and interview relevant government and non-government stakeholders.

The case study illustrates the process, issues, problems, solutions and benefits associated with the reform of the New Zealand retail electricity sector. The lessons for APEC members from this case study are that services reform:

- Cannot occur in isolation from other elements in a supply chain and market;
- May evolve over time and result in market failures or unintended outcomes which market participants need to cooperate together to address;
- Delivers benefits for business and other consumers when governments remain committed to and consistently apply a clear set of principles that promote market based solutions and competition;
- Requires significant government commitment to ongoing structural, regulatory and policy change founded on evidence based learnings over time; and
- Involves an evolution in the behavior of all market participants and activity.

THE NEW ZEALAND ELECTRICITY SYSTEM

New Zealand consists of two main islands. The geographic spread of the population and rainfall patterns between the islands affects the demand for electricity and also its supply, particularly because New Zealand relies primarily on hydro power.

The electricity system is a network industry combining four key components.

Generation. Hydro power is the main source of electricity, contributing about 54 per cent. The generation market is contestable with deregulated pricing based on the cost of production and investment in future supply. There are five main generators, which have vertically integrated retail businesses.

Transmission. A government corporation (Transpower) owns and operates the national grid of transmission poles and wires which is a natural monopoly. The maximum average price it can charge is regulated.

Distribution. There are 29 companies owning and controlling the local lines and cables that connect transmission to residential and business end users. These companies are natural monopolies. About 50 per cent of distributors are owned directly by local communities. The maximum average price non-community owned businesses can charge is regulated.

Retail. The retail market is contestable with deregulated pricing based on the cost of providing electricity. This cost is based on network (transmission and distribution) charges and the wholesale price for electricity. There are 31 companies selling electricity to residential and

business end users. End users are free to switch between retailers and the market enjoys the world's fastest rates of switching.

The electricity system is regulated by different bodies.

Electricity Authority. The Authority is the regulator of the generation and retail markets. It applies a light touch facilitative regulatory approach to achieve its main objective which is market efficiency. It also approves the methodology for transmission prices and grid reliability standards.

Commerce Commission. The Commission is the regulator of generally applicable competition law in New Zealand. In relation to the electricity sector it sets total regulated revenue that natural monopolies (transmission and non-community owned distribution) can receive.

Ministry for Business, Innovation and Employment (MBIE). The MBIE advises the Minister for Energy on energy strategy and policy. The Minister has no power to direct the market activities and regulation of the electricity sector.

Electricity and Gas Complaints Commissioner. The Commissioner has legislated functions to independently resolve disputes between electricity providers and consumers. Electricity retailers are legislatively required to fund the activities of the Commissioner.

HISTORY AND NATURE OF REFORM

The reform process has witnessed a change in asset ownership and shift towards the separation of natural monopoly and contestable assets and services in all parts of the energy supply chain.

At the beginning of the reform process the national government owned transmission and generation services, while distribution and retail activities were under local government or community ownership operating within a statutory geographic franchise.

However, by the end of the reform process the sector was separated into two distinct parts. One was a regulated natural monopoly part (transmission and distribution) with mixed government and local community ownership. The other was a contestable part (generation and retail) with mixed government (through a shareholding rather than direct control arrangement) and private ownership.

Key motivations for the reforms included the desire by governments to:

- Introduce commercial incentives to promote efficiency (in the first phase from 1987 to 1993);
- Improve competition in the contestable parts of the energy sector to align prices with costs, encourage innovation, and improve the quality of services; and
- Improve the security of supply and its management by market participants. This is particularly because the economy relies primarily on hydro power and supply can be unreliable in years with lower than normal rainfall and snowmelt.

While strengthening consumer protection was not a specific motivation for reform, the process increased the responsibilities of market participants to protect users from potential adverse consequences of reform. These consequences included the removal of historic cross-subsidies between urban and rural consumers.

The 1999 reforms were a key phase because they included the first major structural asset and services separations to create a mix of generators and retailers and facilitate competition in those markets. It also established the frameworks for regulated pricing of the natural monopoly parts of the supply chain (transmission and distribution). These reforms permitted vertical integration between generators and retailers, but excluded distributors from the retail market.

Vertical integration of generators and retailers was not a public policy concern during the 1999 reforms because the government considered such integration to have economic benefits. The benefits of vertical integration, recognised in economic theory, include exploiting vertical economies of scale, decreasing transaction costs between firms with highly co-specialised assets, and eliminating the inefficiencies of double marginalisation that occur when the downstream market is not perfectly competitive.

The 2010 reforms were a second key stage because they included further structural and regulatory changes in the generation and retail sectors to address unintended outcomes in the electricity retail market. Specifically these were a lower than expected level of competition arising from the 1999 measures, and concerns about security of supply.

One of the main issues hindering competition was the insufficient capacity of new retailers to enter the market if they did not have a relationship with a generator. Thus when considering options to improve competition in the retail market the government considered ending vertical integration between the five main generators and retailers. However this option was rejected because the economic benefits of retaining vertical integration outweighed the costs of removing it, and other more efficient options were available to improve competition.

These options included actual and virtual asset swaps between generators and making the hedge market more liquid to reduce barriers to entry for retailers not integrated with generators. It also included defined funding for education campaigns to raise public awareness about switching between retailers, and required retailers to fund and collaborate with the independent Electricity and Gas Complaints Commissioner to improve consumer protection.

The current data shows that the 2010 reforms have had the results that they were intended to achieve. These include encouraging new entrants in the retail market, promoting increased innovation and product choice for consumers, and ensuring that residential pricing does not increase faster than the costs of producing and supplying electricity. The number of retailers in the market (31 with a further 13 investigating market entry) is at an all-time high, and customer switching rates are the fastest in the world.

KEY LESSONS OF REFORM

The key lesson from the process and approach to reforms in New Zealand is that when pursuing change successive governments have never deviated from a commitment to promoting market based responses and competition, and the clear set of principles that were established at the beginning of the reform process to underpin this commitment. This commitment has remained intact even though it was put to the test by several major reviews during the period of reform.

These principles are as follows.

Learning by doing. Successive governments have not been risk averse and have applied reforms even when there was no model or precedent to guide them. They have been willing to

accept that market failures may occur and address them as they arise. As a result the reforms have been evolutionary in nature.

Commitment to market based competition, even when addressing market failures. Successive governments have consistently ensured that their reactions to issues are based only on supporting and encouraging market based responses. The most critical test to the government's faith in market based solutions occurred as part of the 2010 reforms. Leading up to 2010 residential prices were increasing, not falling, and this was opposite to public expectations about the benefits of the 1999 reforms. To address this problem the then government considered a range of publicly popular regulatory options including capping residential prices, but nevertheless maintained a commitment to measures that encouraged market based solutions.

No price signals to distort market based responses. Successive governments have not been tempted to introduce consumer price concessions or controls, feed-in tariffs to support solar and other alternative local generation sources, subsidies to encourage renewable energy, or any other kind of financial support or exemptions. This has not dissuaded investment in renewable generation sources such as new development options for hydro power, wind farms or the use of solar panels.

Accordingly, behaviour in the retail market is driven solely by market based pricing. One advantage that New Zealand has enjoyed is that it is naturally more reliant on renewable sources of energy (hydro and geo-thermal) than thermal sources (coal) with higher emissions profiles. This has meant that its responses to electricity market issues have not needed to be driven by emissions reduction objectives as much as in some other jurisdictions.

However, consistent with its commitment to market based principles, New Zealand also phased in an emissions trading scheme (ETS) from 2008 to 2015 to reduce carbon emissions in its economy.

Regulatory intervention is only used to improve market efficiency, where competition cannot. The approach of the regulators is based on facilitating outcomes through guidelines rather than rule setting and prescriptions for behaviour. For example, there is no prescriptive licensing regime for retailers to meet as a condition of market entry.

BENEFITS

The consistent commitment to market based solutions and competition and application of these clear principles at each stage of reform has enabled New Zealand to maintain a course of continually improving reform that builds on and learns from successes and failures within a robust and defined framework.

This approach has delivered a range of economic benefits including reducing electricity costs for business; enabling business to better control their energy supply and price risks; providing investors in the energy market with certainty to the extent that has stimulated a diversity of development options for new generation; and encouraging the listing of the five major retailers on the Australian stock exchange and promoting the strength of their shares and trading in NZ electricity derivatives on the futures exchange.

The government, regulators nor industry have formally assessed the social and economic value of the reforms as they have operational evidence of their positive impact.

1. METHODOLOGY

The case study was prepared using a wide ranging desktop review of relevant literature sources and extensive consultation with key stakeholders.

The analysis considers reforms from the early 1980s to 2016, but the focus is on two key phases of change in 1999 and 2010.

The assessment considers effects of changes in the retail market arising from reforms in generation, transmission and distribution markets. This because energy markets are network industries with integrated components which don't operate in silos.

The case study is based on a literature review and extensive consultation with the government, regulators, electricity industry, consumer complaints Commissioner and other relevant stakeholders. The literature review relied on market regulator data and Ministerial review documents, Cabinet papers and regulatory impact assessment informing 2010 reforms.

There is no available government or independent assessment of the socio-economic impact of the reforms that the assessment could draw from. Specific economic data for the electricity sector is not reported by Statistics New Zealand. Performance data for the electricity sector is reported in combination with the gas, waste and water sectors and accordingly the case study cannot draw definitive links between the reforms and economic benefits for New Zealand.

However, economic uplift could potentially occur from increased investment in generation assets and the effects of improved competition and energy supply reliability on productivity.

Desktop Review

The literature review considered primary sources of information available from and provided by the:

- Electricity Authority, the energy market regulator.
- Ministry of Business Innovation and Employment, which has responsibility for advising the government on energy policy.
- Electricity and Gas Complaints Commissioner, which is responsible for facilitating dispute resolution between participants in the energy market.
- NZ Energy Retailers Association, which represents most of New Zealand's energy retail companies.
- Commerce Commission, which regulates consumer and competition law, and administers economic regulation of natural monopolies.
- Reports and assessments by academics and research houses.

The literature considered included:

- Discussion papers released during reform processes to gain views and information to inform recommendations.
- Cabinet papers associated with the New Zealand government's decisions about the direction and nature of reforms.
- Regulatory Impact Statements supporting the consideration of reform options by the New Zealand government.

- Independent reviews and assessments of government decisions and options considered about reforms.
- Historic and current data and information about market performance and trends.

Stakeholder Consultation

The consultants visited New Zealand in May 2016 to meet with and interview a range of key stakeholders involved in the energy market. These were:

- The Chair of the Electricity Authority.
- Principal Policy Advisor, Energy Markets Policy, Ministry of Business Innovation and Employment.
- The Electricity and Gas Complaints Commissioner and her team.
- The CEO of the NZ Energy Retailers Association.
- A number of energy retailers including Genesis and Nova representing large formerly government owned retailers and smaller new market entrants.
- The Principal Economist, New Zealand Institute for Economic Research.

A series of questions were developed based on a preliminary literature review, and these were used to structure stakeholder interviews. Questions were provided to interviewees in advance of meetings and some participants provided written responses to these questions.

Other stakeholders who were consulted included the former Electricity and Gas Complaints Commissioner.

2. THE ELECTRICITY SYSTEM AND MARKET

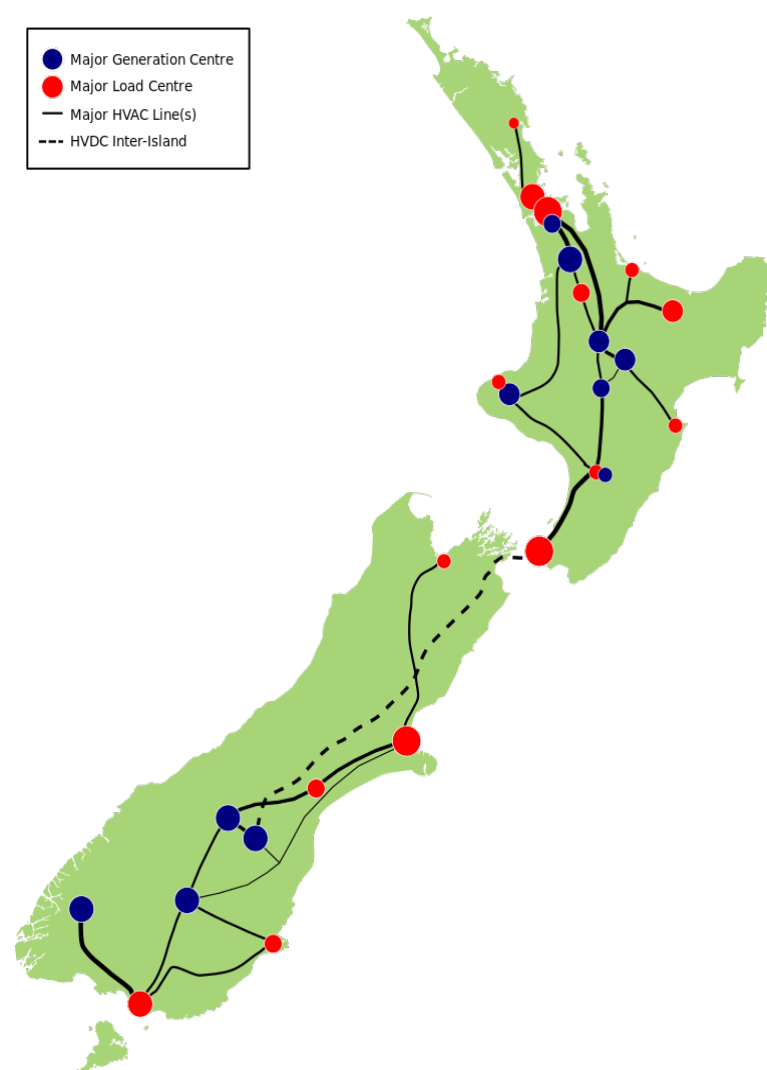
2.1 OVERVIEW

New Zealand consists of two main islands, the North and South Islands. Of the total population of about 4 million people, approximately 75 percent live in the North Island, and 25 per cent in the South Island. While there are key urban and industrial centres, creating the bulk load of energy demand the population is also spread amongst all areas of the islands.

The rainfall patterns between the islands varies, and the South Island contains alpine mountain ranges which experience snowfall. This is important for hydro power.

The geographic spread of the population and rainfall patterns affects the demand for electricity and also its supply, particularly because New Zealand relies primarily on hydro power.

Figure 1: Generation and transmission in New Zealand¹

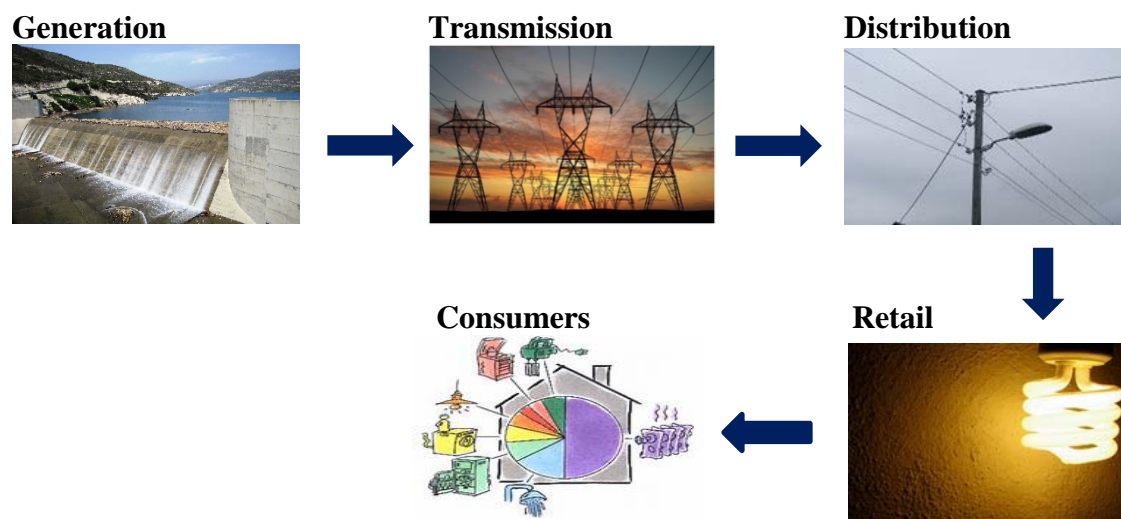


¹ Drawn from various sources including Ministry of Business, Innovation and Employment, Government of New Zealand and the New Zealand Electricity Authority, May 2016

2.2 HOW THE ELECTRICITY SYSTEM WORKS²

The electricity system in New Zealand, like all similar systems in the world, is a network industry consisting of generation, transmission, distribution and retail. Accordingly, it relies on these various separate components working in an integrated way for the whole system to operate effectively and efficiently. In network industries, reform to achieve outcomes in one component often also requires complimentary change in other parts of the system.

Figure 2: Components of the electricity system



Source: Please see footnote

Generation

Hydro power is the main source of electricity, contributing about 54 per cent. Other sources of electricity include natural gas, geothermal, wind and coal, but 80 per cent of energy supply is derived from renewable sources.

The generation market is contestable with deregulated pricing based on the cost of production and investment in future supply.

All generators connected directly to the transmission grid are dispatched by the system operator on the basis of their price offers. A market-clearing spot price is determined every 30 minutes by the pricing manager for each point of connection on the national grid. The spot price can vary depending on supply and demand.

There are five main generators, three of which are mixed owned corporations with majority (51%) government ownership, and two are private companies. All of the generators have vertically integrated retail businesses and therefore are referred to as gentailers. Most of these gentailers are listed on the New Zealand Stock Exchange (NZX) and Australian Stock Exchange (ASX).

² All the information in this section is based on discussions with and information provided by the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Electricity Authority, and New Zealand Energy Retailers Association May 2016

Other smaller generators also compete. This includes businesses and households which sell their surplus electricity generally produced from thermal (industrial processes) or solar power to the central clearing manager or directly to retailers.

There are no subsidies or feed in tariffs to support renewable energy or supply by users into the grid.

The major gentailers publish performance information under their stock exchange disclosure obligations and statutory financial reporting. Lines companies must publish performance data such as pricing data, quality measures, financial information, or forecasts of future supply, expenditure and network investment.

Transmission

A government corporation (Transpower) owns and operates the national grid of transmission poles and wires which is a natural monopoly.

The Commerce Commission sets the total regulated revenue Transpower can receive. This is done via a price quality path which includes the maximum average price that Transpower can charge. This is intended to provide certainty about a key network charge that must be absorbed by contestable parts of the market.

The Electricity Authority approves the methodology Transpower uses to allocate revenue requirements among its transmission customers and sets grid reliability standards.

Transpower must publish performance data such as pricing data, quality measures, financial information, or forecasts of future expenditure and network investment.

Distribution

There are 29 companies owning and controlling the local lines and cables that connect transmission to residential and business end users. These companies are natural monopolies. They can compete in the generation and retail markets, but affiliated generation and retail businesses must operate at 'arm's length' to the monopoly distribution business when generation exceeds 50 MW and annual retail sales exceed 75 GWh.

About 50 per cent of distributors are owned directly by local communities through trusts.

For non-community owned companies the Commerce Commission sets the total regulated revenue via a price quality path which includes the maximum average prices distributors can charge. This is intended to provide certainty about a key network charge that must be absorbed by contestable parts of the market.

Companies must publish performance data such as pricing data, quality measures, financial information, or forecasts of future expenditure and network investment.

Retail

The retail market is contestable with deregulated pricing based on the cost of providing electricity. This cost is based on network (transmission and distribution) charges and the wholesale price for electricity.

There are 31 companies selling electricity to residential and business end users. About 75 per cent of households have smart meters which facilitate the remote measurement of actual usage. End users are free to switch between retailers and the market enjoys the world's fastest rates of switching.

Retailers manage risk of spot price volatility via contracts to hedge against future risk. Examples of hedging contracts include fixed price and fixed volume, and fixed price and variable volume. Hedging is explained in the box below.

Box 1: Concepts explained: The meaning of hedging

An active hedge or futures market with transparent and robust forward prices and easy accessibility for new entrant generators, retailers and consumers is critical to promote competition, reliability and efficiency in the wholesale and retail markets.

A hedge is a risk management contract. It is used to manage the price volatility of the spot market for both generators and electricity purchasers. The spot price which is published every 30 minutes at every connection point in the national grid guides wholesale prices. The spot price can vary with supply and demand and therefore creates risks for generators and electricity purchasers.

Hedges are either agreed upon directly between the parties (known as over-the-counter - OTC) or purchased as derivatives on the Australian stock exchange (ASX) electricity futures market.

There is also a separate specialised financial transmission rights (FTR) market to help parties manage the risk they face from large, unpredictable differences in wholesale electricity prices between the North and South Islands.

Source: Electricity Authority 2016

2.3 REGULATION OF THE ELECTRICITY SYSTEM³

The two main regulators of reliability of supply, market efficiency and competition in the electricity system are the Electricity Authority and Commerce Commission.

The Electricity Authority has an oversight role of the entire electricity system. The Commerce Commission has a role in determining acceptable pricing for natural monopoly elements of the system (transmission and distribution) to ensure competitive outcomes in the sector as a whole.

The Authority is funded by the New Zealand Government, but the cost of this is fully recovered by a levy that the government collects from electricity industry participants. The levy also funds

³ All the information in this section is based on discussions with and information provided by the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Electricity Authority, and New Zealand Commerce Commission May 2016

the electricity efficiency programmes delivered by the Energy Efficiency and Conservation Authority (EECA).

The Commission is also funded by the New Zealand Government, but the costs of regulating transmission and distribution services are fully recovered by a levy on the regulated companies.

Electricity Authority⁴

The Electricity Authority is an independent Crown entity responsible for the efficient operation and regulatory oversight of the electricity sector. The Authority is responsible for achieving long term benefits for consumers by ensuring that electricity prices are reasonable, electricity supply is reliable, consumers have choice, and innovation is occurring in the market.

The Authority seeks to achieve these benefits in the various following ways.

It administers, enforces and continually improves the *Electricity Industry Participation Code* (the Code), which is a set of rules that govern almost every aspect of the electricity sector, including generation, transmission, system operation, security of supply, market arrangements, metering, distribution and retail.

The Authority performs the role of the market administrator under the Code. This includes administering the day-to-day (real-time) operation of the electricity system and markets to ensure efficiency and reliability. As the market administrator, the Authority contracts different service providers to perform the range of functions that market participants require and must comply with under the Code. These functions are as follows:⁵

- The system operator is responsible for the real-time operation of the power system, including scheduling and dispatching electricity, in a manner that avoids undue fluctuations in frequency and voltage on the transmission grid.
- The whole information trading system is used to transfer information among participants, especially the uploading of bids and offers.
- The reconciliation manager allocates volumes of electricity to generators and purchasers. It uses metering information supplied by participants and calculates unaccounted for electricity.
- The pricing manager calculates and publishes final prices, which are used by the clearing manager to calculate invoices.
- The clearing manager invoices and settles physical electricity sales and purchases identified by the reconciliation manager, ancillary service payments and any financial hedges required to be taken into account in the prudential calculation. It also maintains prudential security requirements.
- The registry manager maintains a database that identifies every customer point of electricity connection to a local or embedded network. The database enables customer switching between retailers and contains key information for the reconciliation process.
- The FTR manager is responsible for running regular auctions of financial transmission rights (FTRs), which is an instrument for hedging price risk.

To support compliance with and identify required changes to the Code the Authority monitors the electricity industry for competitiveness, efficiency and supply reliability. It assesses these issues on the basis of information supplied the industry including the performance of participants as well as its own examinations.

The Code and the Authority's monitoring of the market are a substitute for the kind of strict licensing regime common in many jurisdictions. Licensing regimes are generally based on assumptions that the market must be protected from unfettered self-interest of participants.

⁴ The discussion in this document is based on information provided by the Electricity Authority 2016

⁵ New Zealand Electricity Authority May 2016

These regimes therefore create eligibility criteria for initial and ongoing market participation, and are therefore often barriers to entry.

By contrast, in New Zealand the Code and approach of the Authority create a light touch regulatory regime that encourages market participants to operate in the collective interest of the market as well as themselves.

One reason this occurs is because the Authority has the capacity to monitor market outcomes, not just inputs, in a detailed way. For example, it monitors accuracy of metering, meter reading and customer switching between retailers, including ways to minimise entry barriers to new retailers.

Much of the information relied on by the Authority to make its assessments is provided by market participants as part of regulatory obligations. For example the Code and/or the *Commerce Act 1986* requires generators, Transpower, distributors and retailers to publish information on their past, current and forecast business performance, financial health, capital expenditure, investment strategies and other information relevant to understanding market dynamics. In addition the Authority conducts its own investigations.

The other reasons the Code and monitoring can work as, if not more, effectively than a strict licensing regime is that all market information is transparent. The nature of this and reliance placed on it by market participants and investors means that the regulatory approach cannot be a ‘set and forget’ one.

The Authority makes information available through a website dedicated to Electricity Market Information. This website provides detailed analysis on wholesale, natural monopoly and retail pricing, market concentration, supply and generation capacities, customer switching rates and other information.

This transparency of information is critical to supporting market efficiency and competition. For example, prices play a critical role in the electricity market by providing information that forms the basis of investment decisions by generators, Transpower, distributors, and retailers and the consumption decisions by consumers.

Transparent access to information is also essential to investment decisions by existing and future shareholders of the five gentailers listed on the ASX, as well as other companies in the sector which may seek stock market listing. It also supports the investment decisions in future generation development options across any generation type, particularly as there are no non-market prices signals, such as subsidies, for renewable or other generation sources.

In addition to these activities the Authority supports the development of the industry through education, guidelines, information, and model arrangements. This is consistent with a facilitative, rather than prescriptive approach to regulation. It can also be an integral part of promoting competition.

For example, the Authority runs a specific campaign (funded since the 2010 reforms) to educate consumers about process and benefits of comparing and switching retailers.⁶ The campaign

⁶ What’s My Number?’ – this campaign was one of the outcomes of the Ministerial Review that led to the 2010 reforms

provides consumers with transparent information that enables them to judge whether their retailer is offering them the best pricing and other deal. The capacity of consumers to switch is made easier because as part of the Code obligations the Authority contracts a registry manager to manage points of connection information in the retail market. These points of connection make it a simple process for consumers to switch power companies.

The regulatory approach is also assisted by the complementarity that is embedded in the functions of the Authority and Commerce Commission. For example, the Commission has the role of determining the regulated revenue for Transpower based on input methodologies (see discussion below). This is because the Commission, as the competition authority, has responsibility for regulating natural monopolies in industry sectors.

However the Authority approves the transmission pricing methodologies and also approves the grid reliability standards Transpower is required to meet. This is because of the intersection between transmission prices and reliability and the efficiency of the contestable parts of the electricity sector.

Commerce Commission⁷

The Commission is an independent Crown entity and is not subject to direction from the government in carrying out its enforcement and regulatory control activities.

The Commission is the regulator of generally applicable competition law in New Zealand. It also has specific roles in relation to a variety of regulated industries that have natural monopoly characteristics, including the electricity industry.

In relation to the electricity sector it sets total regulated revenue that natural monopolies (transmission and non-community owned distribution) can receive. It does this by providing Transpower and distribution companies with a price quality path which includes maximum average prices they can charge.

Transpower and distribution companies are obliged under the *Commerce Act 1986* to publish information about their performance, pricing, forecasts, expenditure, and network investments.

Box 2: Concepts explained: The meaning of price quality paths for Transpower

From April 2011 Transpower was regulated under Part 4 of the *Commerce Act 1986* by way of individual price-quality regulation. The individual price-quality path governs Transpower's revenues for each pricing year, with the paths being reset either every four or five years. The current individual price-quality path was reset for the 2015-2020 regulatory period on 1 April 2015.

The price quality path is determined according to input methodologies for asset valuation, cost allocation, regulatory tax treatment, the cost of capital, capital expenditure proposals and regulatory rules and processes.

Source: Commerce Commission 2016

⁷ The discussion in this section is based on information provided by the Commerce Commission 2016

Box 3: Concepts explained: The meaning of price quality paths for non-community owned distribution companies

Price-quality regulation is designed to ensure that distributors have similar incentives and pressures to suppliers operating in competitive markets to innovate, invest and improve their efficiency. It also aims to limit their ability to earn excessive profits, while also ensuring that consumer demands on service quality are met.

The default price quality path has a number of key features.

- It sets the 'default path' that applies to all regulated distributors for a regulatory period between four and five years.
- During the regulatory period individual distributors can apply for an alternative or 'customised' price-quality path to better meet their particular circumstances.
- It sets the maximum prices/revenues that are allowed at the start of the regulatory period (the starting prices).
- It sets the annual rate at which all distributor's maximum allowed prices can increase (the rate of change). This is expressed in the form of 'CPI-X', meaning prices are restricted from increasing each year by more than the rate of inflation less a certain number of percentage points.
- It sets the minimum service quality standards that must be met.

Source: Commerce Commission and Electricity Authority 2016

There are some other bodies that also play an important role in the regulation of the electricity market.⁸

Ministry for Business, Innovation and Employment (MBIE)

The MBIE advises the Minister for Energy on energy strategy and policy. The Minister has no power to direct the market activities and regulation of the electricity sector.

However the MBIE obtains key retail electricity price and other performance data through a regular quarterly survey. It provides analysis and information which it makes publicly available. It also monitors the performance of the Electricity Authority and Commerce Commission.

Another government agency, the Energy Efficiency and Conservation Authority, is responsible for developing policies and programs to promote energy efficiency and sustainability.

Electricity and Gas Complaints Commissioner

The Commissioner has legislated functions to independently resolve deadlocked disputes between electricity providers and consumers. Electricity retailers are legislatively required to fund the activities of the Commissioner. The majority of disputes relate to billing and disconnection issues. The Commissioner is not a consumer advocate, but plays a critical consumer protection role in the market.

⁸ The discussion about these bodies is based on information provided by the Ministry for Business, Innovation and Employment, Government of New Zealand and the New Zealand Electricity and Gas Complaints Commissioner 2016

3. HISTORY OF REFORMS

3.1 OVERVIEW

The New Zealand electricity market has been subject to a range of ongoing services and structural reforms since the early 1980s. Since their commencement and throughout their progress these reforms were not based on an existing structural or service reform model. Rather the reforms evolved over time and included unintended outcomes which successive governments sought to address as they arose.

Nevertheless, the reforms were based on a clear set of principles for electricity markets including the need for a reliable power pool; financial contracts governing the sale and distribution of energy; competition; regulatory certainty to the extent required for investment; and the capacity to address market failure when required.

Tables 1 and 2 below provide an overview of reforms since the early 1980s, including the kinds of reform measures applied over this time.⁹

⁹ Tables 1 and 2 are based on discussions with and information provided by the Ministry of Business, Innovation and Employment, Government of New Zealand, May 2016

Table 1: NZ electricity sector key structural reform from the early 1980s to 2016

	Early 1980s	1987	1988	1993	1994	1996	1999	2003	2010	2016
Transmission	Controlled by NZ Ministry of Energy: Electricity Division, a government agency.	Controlled by Electricity Corporation of NZ (ECNZ), a government corporation.	Controlled by Transpower, a specifically created subsidiary of ECNZ.	Transpower retain control.	Controlled by Transpower, a specifically created State Owned Enterprise (SOE).	No change.				
Wholesale price setting			ECNZ retains control.	Controlled by M-Co, a market company created by a joint venture between ECNZ and energy suppliers. Trading was regulated via 1 st multilateral agreement.	M-Co retains control. Creation of energy market with trading controlled via 2 nd multilateral agreement in 1996.			Controlled by new Electricity Commission (EC), marking the end of industry 'self-governance'.	Controlled by Electricity Authority (EA) which was the reformed EC.	No change.
Generation				ECNZ retains control.	No change.	Controlled by ECNZ and a new independent generator in the form of Contact Energy, a SOE created from ECNZ.	Controlled by a mix of created independent companies: <ul style="list-style-type: none"> • Contact (privatised) • Meridian (SOE) • Genesis (SOE) • Mighty River Power (SOE) 	No change.	Physical generation assets and virtual asset swaps via long term contracts occur to promote competition in retail market.	No change.
Retail	Controlled by Electricity Supply Authorities (ESA), owned by the, local	No change.	No change.	ESAs rationalised and corporatised and control transferred to	No change.		Retail companies are created by separating them from monopoly distribution businesses. Retail	No change.	Measures introduced to improve liquidity in the hedge market to	There are 31 retailers with 13 others at different

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	Early 1980s	1987	1988	1993	1994	1996	1999	2003	2010	2016
	government and/or local community trusts. There was one distributor (Southland Electricity Public Supply)			40 Electric Power Companies (EPCs). Geographic retail franchises removed, and competition commenced for customers with half hourly metering.			companies merged and vertically integrated with generators. Retail competition commenced for consumers without half hourly metering.		enable new entrants in retail market.	stages of market entry.
Distribution	that was managed by government under statutory management after a financial failure. ECNZ managed this until it was handed back to community control in the early 90s.						EPCs are reduced to 29 Distribution companies and excluded from retail market.	No change.	Distribution companies permitted to enter retail market subject to constraints within their network areas..	No change.

Table 2: Key structural reform measures used over reform timeline

1987-1993	1993-94	1994-99	1999	2010
<p>Corporatisation</p> <ul style="list-style-type: none"> 1987: creation of Electricity Corporation of NZ (ECNZ) to manage transmission, wholesale price setting and generation. 1993: corporatisation of distribution authorities to create companies. 	<p>Joint Ventures</p> <ul style="list-style-type: none"> 1993 and 1994: Creation of M-Co to manage wholesale price setting. M-Co was a joint venture between ECNZ and energy suppliers. Electricity trading was regulated via a multilateral agreement between parties to M-Co. Retail competition also commenced in 1993, but was generally restricted to commercial and industrial consumers with half hourly metering. Retail competition was governed by rules developed by the incumbent retailers and wholesaler (ECNZ). 	<p>State Owned Enterprise (SOE)</p> <ul style="list-style-type: none"> 1994: Transpower created as a SOE to manage transmission in the market. 1996: creation of an independent generation company (Contact Energy) as a SOE. 1999: separation of Contact Energy assets and functions to create 4 new independent generation companies as SOEs. These were Meridian, Genesis and Mighty River Power. 	<p>Privatisation</p> <ul style="list-style-type: none"> 1999: privatisation of Contact Energy, previously a SOE. 1999: privatisation of some local government owned distribution companies. 	<p>Other Structural Mechanisms</p> <p><i>Rationalisation</i></p> <ul style="list-style-type: none"> Used in a phased way from the early 1980s to 2010 to reduce Distribution networks from 61 to 29. <p><i>Separation</i></p> <ul style="list-style-type: none"> Used in 1999 to delineate retail and distribution functions and preclude distribution companies from the retail market. <p><i>Vertical integration</i></p> <ul style="list-style-type: none"> Used in 1999 to encourage generation and retail company mergers to create economics of scale for competition. Used in 2010 to enable distributors to merge with retailers to address anti-competitive effects of generator/retailer integration. <p><i>Hedge Markets</i></p> <ul style="list-style-type: none"> Efforts made in 2010 to ensure hedge market liquidity to support new entrants in retail market. <p><i>Asset swaps</i></p> <ul style="list-style-type: none"> Forced physical and virtual asset swaps in 2010 to address anti-competitive effects of vertical integration and promote competition in retail market.

One of the key lessons to note from the history of reform is that the current market is a result of the phased introduction of structural change over about 25 years. Some of the stages of reform were intended to address problems created by earlier initiatives. This is specifically the case with the 2010 reforms implemented by the *Electricity Industry Act 2010* (EIA). Many of these reforms were introduced to address unforeseen anti-competitive effects arising from the 1999 reforms which were contained in the *Electricity Industry Reform Act 1998* (EIRA).

During the 25 years of reform, key changes were as follows.¹⁰

Natural Monopoly Transmission and Generation Infrastructure and Services

The reforms have retained government ownership of transmission but introduced limited privatisation in the generation sector. However the nature of public ownership and executive government control of assets and services has changed. This has occurred by shifting the control of transmission and generation from government departments to government corporations within Ministerial control and then eventually to State Owned Enterprises which operate independently of executive government and apply the same commercial decision making and investment decisions as private sector companies.

The last phase of reform (2010) included executive government mandated physical and virtual asset swaps between SOE generators to improve competition in the retail market.

The five major generators (including SOEs), Contact Energy, TrustPower, Genesis Energy, Meridian Energy and Mighty River Power are all listed on the stock exchange. The later three are Mixed Ownership companies with 51% government ownership under the *Public Finance (mixed ownership model) Amendment Act 2012*.

Natural Monopoly Distribution Infrastructure and Services

The reforms have shifted some local government owned distributors from public to private ownership. Many of those distributors which were historically owned and operated by local government or local community trusts (primarily in regional areas) have been retained in their control but have been exposed to commercialisation or corporatisation.

Over the entire period of reform the number of distributors has reduced (through voluntary mergers and acquisitions) from 61 to 29 to improve efficiencies and economies of scale. In 1999 when distribution and retail functions were separated in order to promote retail services competition, distribution companies were prohibited from competing in the retail market.

In the last phase of reforms (2010) distribution companies were permitted to re-enter the retail market without restraint outside of these areas they owned lines and subject to a number of constraints or thresholds within the area where they are the monopoly lines company. This was intended to address poorer than expected competition outcomes arising from the 1999 reforms.

¹⁰ Based on discussions with and information provided by the Ministry of Business, Innovation and Employment, Government of New Zealand and the New Zealand Electricity Authority, May 2016

Contestable Retail Services

Historically these services were provided by supply authorities which included a mix of local government and local community ownership based on geographic franchise areas. As a first tranche of reform these authorities were commercialised or corporatised to form companies, and all geographic retail franchises were removed (1993). Retail competition emerged for large commercial and industrial customers, but did not emerge for the mass market due to an industry agreement that restricted competition to customers with half hourly metering.

The second tranche of reform involved the separation of retail and distribution functions of these companies and the introduction of measures, such as provisions to support mass market retail competition without half hourly metering (known as ‘deemed profiling’), to promote competition in the retail market including new entrants (1999). This second stage of reform included the horizontal break-up of the generation sector and the capacity for generators to vertically integrate with retailers, but specifically excluded distributors from competing in the retail market.

Vertical integration was supported because of the economic benefits it can provide such as lower transaction costs between companies. It can be a logical approach where a competitive market is being created and where an economy with geographic and population dimensions like New Zealand wishes to preserve economics of scale as a priority. But it can also lead to barriers to entry because retailers which do not have a preferred relationship with generators can face hurdles, such as lesser access to supply at reasonable prices.

The third stage of reform in 2010 sought to address these kinds of barriers to competition created by the vertical integration of retailers and generators. This included measures to make market information more transparent, reduce generator monopolies in geographic areas via asset swaps, and make the hedge market more liquid.

It also included enabling distributors to enter the retail market without restraint outside of these areas they owned lines. This was subject to a number of constraints or thresholds within the area where they are the monopoly lines company. This was a sensible approach as the existing market capacity and knowledge of distributors makes them an immediate competitive threat to incumbents in the retail market.

Box 4: Concepts explained: The innovative use of generator asset swaps to promote retail market competition

In the 2009 Ministerial Review which led to the 2010 reforms it was identified that there was an imbalance in the geographic spread of SOE generators. Specifically, Genesis and Mighty River Power (MRP) had no generation in the South Island and Meridian had almost no generation in the North Island. This geographic based concentration in combination with transmission based constraints meant that SOEs were regionally focussed and their retail businesses did not compete with each other.

To address this the government required Meridian to transfer two of its generation assets to Genesis and Genesis to transfer one of its generation assets to Meridian. It also required all SOEs to virtually swap assets through the inter-transfer of long term supply contracts. These actions rebalanced the spread of generation between the islands and eroded the geographic franchises on which gentailers had based their retail businesses. This successfully encouraged the retail arms of generators to compete with each other more aggressively.

Source: Ministerial Review of the Electricity Market: Regulatory Impact Statement, 2009

3.2 IMPACT OF 1999 REFORMS

The reforms in 1999 represented the most significant change to the structure and operation of the electricity market compared to previous periods of reform. The reforms attempted to stimulate competitive generation and retail sectors, including by permitting vertical integration between generators and retailers (gentailers). This was pursued for clear reasons of economic benefit.

Economic theory has established that vertical integration can improve and also reduce welfare.

On the positive side vertical integration can be a natural incentive to escape regulatory restrictions or maintain the cross subsidies; take advantage of vertical economies of scale and scope; reduce transaction costs between companies; internalise network spillover effects; and eliminate double marginalisation.¹¹

For example, double marginalisation can occur when the downstream market is not perfectly competitive and the prices charged by companies (retailers) in this market do not reflect those being levied by the upstream monopolist. If aggregate profits are lower than the profit of the vertically integrated structure the upstream company will impose restraints to address this. Vertical integration of upstream (generators) and downstream (retailers) companies can eliminate this problem and therefore increase welfare.¹²

In terms of adverse effects vertical integration can encourage price discrimination in downstream markets particularly where a monopolist can charge a higher price in a market with less elastic demand. It can also discourage firms from dealing with rivals for non-profit maximising reasons particularly where downstream markets are not perfectly competitive.¹³

¹¹ Treasury and Ministry for Commerce, Government of New Zealand, Regulation of access to vertically integrated natural monopolies – discussion paper, 1995

¹² Ibid

¹³ Ibid

For example, even if downstream markets (retail) have only a limited capacity to bypass upstream markets (main generators) by accessing some the electricity supply they need from other sources this can incentivise the main generators from dealing with rivals. This can often occur in publicly owned network industries where the reticulation component (retail and distribution) are imperfectly competitive.¹⁴

As the 1999 reforms were stimulating competitive markets in the generation and retail sectors for the first time, it was logical to pursue vertical integration to maximise competition while also optimising the benefits that can flow from vertical integration.

In 2002 the Commerce Commission, commenced an investigation into whether companies in the electricity sector were using market power to an effect that lessened competition.¹⁵ The multi-year review reported in 2009. The investigation did not result in prosecution or other enforcement action being taken against any companies. However the Commission found that several gentailers had used market power to raise wholesale prices and that the nature of vertical integration enabled them to do this.¹⁶ While the government considered the findings of the Commission, it also believed that the Commission's assessment of wholesale pricing had misunderstood the nature of the risks of dry years to electricity supply, and the associated underlying impacts on wholesale pricing.

Accordingly, the Commission's findings were not considered to be a major reason to alter the preferred approach to vertical integration.

3.3 2009 REVIEW OF ELECTRICITY MARKET AND 2010 REFORMS

Around the same time as the Commerce Commission had delivered its report, a change of national government occurred. The incoming government had committed to review the electricity market as part of its election manifesto, and used the Commerce Commission report findings as one element of evidence of the need to do so.¹⁷

The Ministerial Review of the electricity market was completed in November 2009 and the New Zealand Cabinet accepted most of its recommendations which concerned three main areas:¹⁸

- Prices, costs and competition;
- Security of supply; and
- Governance;

The findings of the review and government responses formed the basis for the 2010 reforms.

These are discussed in more detail in section 5 – reasons for and nature of reforms.

¹⁴ Ibid

¹⁵ Wolak F, An assessment of market power in the New Zealand wholesale electricity market, Stanford University: a report for the New Zealand Commerce Commission, 2009

¹⁶ Based on discussions with and information provided by the Ministry of Business, Innovation and Employment, Government of New Zealand and New Zealand Energy Retailers Association, May 2016

¹⁷ Based on discussions with the Ministry of Business, Innovation and Employment, Government of New Zealand, May 2016

¹⁸ Office of the Minister for Energy and Resources, Cabinet Paper – Ministerial Review of the Electricity Market, 2009

4. REASONS FOR AND NATURE OF REFORMS

4.1 PRICES, COSTS AND COMPETITION

Improving Market Performance

In 2009 the Commerce Commission review of the wholesale electricity market found that gentailers had exercised market power in the spot market in years with limited rainfall and snowmelts (dry years) and overcharged by \$4.3 billion between 2001 and 2007.¹⁹ This was particularly relevant for New Zealand because over 50 per cent of its electricity source is hydro power, and variations in rainfall and snowmelt can have a significant effect on the price of wholesale electricity.

The 2009 Ministerial Review also concluded that gentailers could exercise short term market power in the wholesale spot market, especially when demand for power outstripped supply as could occur in dry years or if there was a constraint in transmission of electricity. However it noted that for the period from 1998 to 2008 changes in wholesale prices were largely consistent with underlying costs of generation.

Nevertheless it was the effects of gentailer activities on the retail market that the Ministerial Review was most concerned about. Its key findings were that during the 1998-2008 period:²⁰

- Retail prices, especially for residential customers had increased faster than the rate for underlying generation costs. In fact residential prices had increased since 1987 and it was considered that insufficient retail market competition was driving this trend.
- Margins being enjoyed by retailers were too high when compared to assessed costs and international comparisons. This affirmed the view that insufficient retail market competition was keeping consumer prices higher than normal.
- Competition in the retail market in regional areas was weak. This was particularly driven by the prohibitions on distributors (of which about half operated in regional areas) from competing in the retail market.
- The transparency and liquidity of the hedge contract market was below expectations because:
 - It was risky for retailers to enter markets where they did not own generation assets. This was particularly due to the risk of transmission constraints causing energy price spikes at grid off-take points, and the lack of any mechanism to hedge against this risk.
 - Three State Owned Enterprise (SOE) gentailers were geographically concentrated in the North or South Islands of New Zealand. When combined with transmission

¹⁹ Office of the Minister for Energy and Resources, Cabinet Paper – Ministerial Review of the Electricity Market, 2009

²⁰ Office of the Minister for Energy and Resources, Cabinet Paper – Ministerial Review of the Electricity Market: Regulatory Impact Statement, 2009

constraints, this led to gentailers becoming regionally focused and weakened retail competition.

- The combination of the absence of a mechanism to hedge against transmission constraints, lack of a liquid hedge market and vertical integration of generators and retailers created barriers to entry for new retailers.
- The number of distribution businesses (29), variety of tariffs and complexity of use of system business rules created cost barriers for new entrants in the retail market.
- Consumers appeared reluctant to switch between retailers despite the significant available savings they could make by moving to a cheaper retailer.
- Concentration of thermal generation assets with some generators exacerbated insufficient competitive outcomes particularly in dry years when poor rainfall increases the reliance on thermal instead of hydro power.

To address these issues and improve market outcomes the Ministerial Review considered a range of options and proposed preferred ones which were agreed to by the New Zealand Government.

The actions recommended by the Ministerial Review and agreed to by the government are described in the table below.

Table 3: Key 2010 reforms to improve NZ electricity retail market performance

Problem being addressed	Recommended action	Rationale and benefits	Some key alternatives considered and rejected
<p>Poor competition amongst SOE gentailers (merged generators and retailers) between regions and the North and South Island of New Zealand restricts new entrants in retail market.</p>	<ul style="list-style-type: none"> ▪ Transfer some physical assets of some SOE gentailers in the North Island to other gentailers in the South Island and vice versa. ▪ Require virtual asset swaps between SOE gentailers through long term hedge contracts for energy trading for 15 years. 	<p>The benefits of giving SOE gentailers an actual and virtual presence in generation and retail markets other than those they have been traditionally concentrated included:</p> <ul style="list-style-type: none"> ▪ Increased contestability in the wholesale market by diversifying views about the value of water storage. ▪ Increased security of supply by diversifying views about water storage and management. ▪ Reduced barriers to entry for retailers which are not vertically integrated with generators. 	<p>Various configurations of asset swaps were considered before the preferred option was selected.</p> <p>The asset swaps that were selected had the least anti-competitive and adverse security of supply risks.</p>
<p>Hedge market is not sufficiently transparent and liquid enough to support the efficiency of the wholesale market. This is partly a result of vertical integration between generators and retailers.</p>	<ul style="list-style-type: none"> ▪ Incentivise voluntary participation by generators in the hedge market to acceptable levels by mandating hedge trading requirements where voluntary behavior is insufficient. ▪ Complement this with a mechanism for retailers to hedge against the risks of transmission constraints. 	<p>The benefits included:</p> <ul style="list-style-type: none"> ▪ Helping new entrants in the retail market that did not own generation assets. ▪ Enabling generators to diversify risk by selling their products to other generators and retailers. ▪ Supporting the use of physical and virtual asset swaps. 	<p>Preventing vertical integration between generators and retailers. This was rejected because it was considered that:</p> <ul style="list-style-type: none"> ▪ Vertical integration enables firms to capture risk management efficiencies that may be difficult to obtain via contracts alone. ▪ Reversing vertical integration may increase retailing and generation risk and therefore the cost of capital. ▪ There was no evidence that disaggregation would benefit the hedge market or promote retail competition. ▪ Disaggregation would affect private property rights and disadvantage SOEs compared to private companies.
<p>Preventing distributors from providing retail services in their network areas weakens competition in the retail market.</p>	<p>Permit distributors to participate in the retail market. However to manage the risk that further vertical integration between generation, distribution and retail businesses reduces competition:</p>	<p>The benefits included increasing retail services competition especially in regional areas.</p>	<p>Not applicable.</p>

Problem being addressed	Recommended action	Rationale and benefits	Some key alternatives considered and rejected
	<ul style="list-style-type: none"> ▪ Require corporate separation and arms-length rules between each vertically integrated business. ▪ Prevent large scale vertical integration by requiring ownership separation between distributors and generators with over 100MW of grid-connected generation. ▪ Prevent distribution businesses from purchasing the customer bases of existing retailers. ▪ Prevent community owned distributors (Trusts) from offering rebates to customers that discriminates in favour of the customers of the retail businesses they own. 		
<p>Complex business and system use rules and poor data transparency create barriers to entry for retailers and reduce regulatory efficiency.</p>	<ul style="list-style-type: none"> ▪ Simplify line tariffs. ▪ Simplify use of system rules. ▪ Ensure that all wholesale market data is publicly released each day with no or minimal cost for access. 	<p>The benefits included:</p> <ul style="list-style-type: none"> ▪ Reducing market participation complexity and costs. ▪ Improving transparency to reduce the risks of exercise of market power. ▪ Increasing scrutiny of market participants. 	<p>Not applicable.</p>
<p>Customer apathy reduces retail competition and increases the risks that demand management solutions will fail.</p>	<ul style="list-style-type: none"> ▪ Provide NZ\$15M over three years for a contestable fund to support initiatives that encourage, facilitate and promote the benefits of active customer switching between retailers. ▪ Ensure that guidelines and standards for smart meters support energy efficiency, open access communications, customer switching and the development of smart networks. 	<p>The benefits included:</p> <ul style="list-style-type: none"> ▪ Increased pressure on retailers to offer high value, low cost products to suit varying demands by customers. ▪ Standards for smart meters will support the accelerated implementation of smart meters in 1.3 million homes by 2012. 	<p>Not applicable.</p>

Source: Office of the Minister for Energy and Resources, Cabinet Paper – Ministerial Review of the Electricity Market: Regulatory Impact Statement, 2009 and consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Energy Retailers Association, and Electricity Authority, May 2016

Together this package of reforms was considered to be the most preferred approach to improve retail competition and reduce consumer prices. Some key alternatives that were considered to achieve lower consumer prices were as follows:²¹

- *Wholesale price caps.* This could involve a ceiling or maximum on wholesale prices. This was rejected because it was considered to be a short term solution with the risk of discouraging investment in new generation assets.
- *Retail price caps.* This could involve a ceiling or maximum on retail prices. This was rejected because it was considered to be difficult to set any cap at correct levels and included two inherent and serious risks. Firstly a cap may cause an under-recovery of costs which would discourage retailers. Secondly a cap may cause an over-recovery of costs and consumers may bear these unnecessary costs. It was also considered that both retail and wholesale prices would need to be capped to avoid exposing retailers to volatile wholesale prices.
- *Mandatory price/reliability insurance mechanism.* The 2009 Commerce Commission review had recommended that insurance for retailers should be contingent on retailers guaranteeing that the annual average wholesale price paid by a customer did not exceed a pre-specified level. This was rejected because it was considered to be too difficult to calculate the correct wholesale price and insurance premium (which is used to cover the cost of building new capacity) and also because it was a form of retail price control.

Improving Competition Regulation

Box 5: Concepts explained: Common competition issues in electricity markets

In network industries, like electricity, common issues that can restrict competition include:

- Monopolistic behaviour by owners of natural monopoly infrastructure that reduces competition in downstream contestable markets such as retail and distribution. This behaviour can include inflating prices above the marginal cost of production or supply, price discrimination, and denying competitors access to infrastructure at reasonable prices.
- Use of regulatory, geographic, demographic or other issues by market participants to restrict, lessen or not pursue competition between franchise areas.
- Information asymmetry between market participants which reduces access to and transparency of information necessary for market efficiency.
- Information asymmetry between service providers and consumers which denies consumers the capacity to make the kind of informed choices necessary to switch between service providers.

Source: Aegis Consulting Group 2016

²¹ Office of the Minister for Energy and Resources, Cabinet Paper – Ministerial Review of the Electricity Market: Regulatory Impact Statement, 2009 and consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Energy Retailers Association, and Electricity Authority, May 2016

Regulation of monopoly services in the electricity industry also evolved throughout the reform period. Immediately following the 1993 reform tranche, transmission and distribution services were not subject to price control, but lines companies were required to publicly disclose information about the financial and non-financial performance. Following a ministerial review in 2000, limited price control was introduced in 2001, and subsequently revised in 2008.

The *Commerce Act 1986* is the principle instrument used to regulate anti-competitive behavior in markets in New Zealand. Prior to 2008 the *Commerce Act* included provisions that gave the Commerce Commission:²²

- An oversight role of the pricing methodology of Transpower, the natural monopoly transmission business;
- The power to review asset valuations by Transpower and distribution businesses relevant to energy pricing;
- The capacity to approve changes to control of geographic areas by distribution businesses and Transpower; and
- Other powers to seek and monitor information from energy businesses.

The *Commerce Amendment Act 2008* enhanced the role of the Commerce Commission. These changes included giving the Commission:²³

- The power to require Transpower and distribution businesses to publish information about their performance such as pricing data, quality measures, financial information, or forecasts of future expenditure and network investment. This is viewed by industry as a key incentive for regulated businesses to ensure that they are managing the energy pool, security of supply and pricing paths in a sustainable way to support current and future reliability. Transparency of information about business performance also enables the national government and regulators to plan for the future, identify and respond to any potential reliability problems, and promote consumer confidence in the energy system.
- The power to set price and quality controls for Transpower and distribution businesses which are not owned by consumers (through community Trusts). This does not include the power to set prices for services. Instead the Commerce Commission has the power to set the maximum average price that Transpower and non-consumer owned distribution businesses can charge or revenue they can earn. It also determines the input methodologies used for calculating these average maximum prices.

This is done via default price-quality paths which businesses must meet at a minimum. The Distribution businesses which are consumer owned (about 50 per cent) are not subject to price-quality paths because the Parliament has determined that their ownership by community Trusts gives consumers sufficient control over pricing and quality issues. However, they are subject to information disclosure requirements. See Box 2 and 3.

These measures complimented the actions to improve market performance, particularly those retaining vertical integration between generation, distribution and retailing and permitting distribution businesses to participate in the retail market.

²² New Zealand Commerce Commission

²³ Ibid

4.2 SECURITY OF SUPPLY

Features of Supply and Use

The geography, population spread and energy sources which New Zealand relies on for electricity are significant features influencing the nature of reforms. As the economy consists of two islands, creating a national market for electricity can be challenging. An interconnector was built between the North and South Islands in the 1970s and has been operating effectively since then.

However the nation relies on hydro power for the majority of its electricity supply and therefore energy flows between the islands depend on the degree of rainfall and snowmelt each experiences. The importance of reliable rainfall and snowmelt is especially acute because New Zealand has limited water storage capacity, estimated to be between 6 and 12 weeks.²⁴ The population spread with two-thirds residing in the North Island and one-third in the South Island, creates transmission and supply risks particularly in dry years when energy flows from the South to North cannot meet demand.

Other sources of electricity include thermal (coal, diesel and gas), geo-thermal (heat), wind, co-generation and solar.²⁵ Co-generation occurs primarily where industrial sites produce heat and electricity for the purpose of operating plants, factories and alike, however excess cogenerated electricity can be exported into distribution networks or to the national grid.²⁶ It is not uncommon for industrial users (which account for the largest share of electricity demand) to produce energy and export it to the grid. Some examples include pulp mills, dairy producers and other manufacturing processes. This occurs because of three main reasons:²⁷

- Industrial users have always enjoyed direct relationships with generators;
- Industrial users have been incentivised over a long period of time to develop their own energy production capacity in response to price spikes caused by transmission constraints. However it should be noted that this is a marginal incentive. The industrial users in most cases have added this capability as a by-product of their industrial steam and heat production. Adding generation to this was cost effective; and
- The reforms in New Zealand have never included subsidies, such as feed-in tariffs, for renewables. Thus industrial users have relied on efficient price signals from the market to develop electricity production capacity for their own use first for cost reasons, rather than being encouraged to produce energy for revenue purposes.

Residential customers represent the second highest share of electricity demand in New Zealand. They are able to install and use solar panels and sell excess energy to retailers for use in local networks. This is not supported by any subsidy schemes.

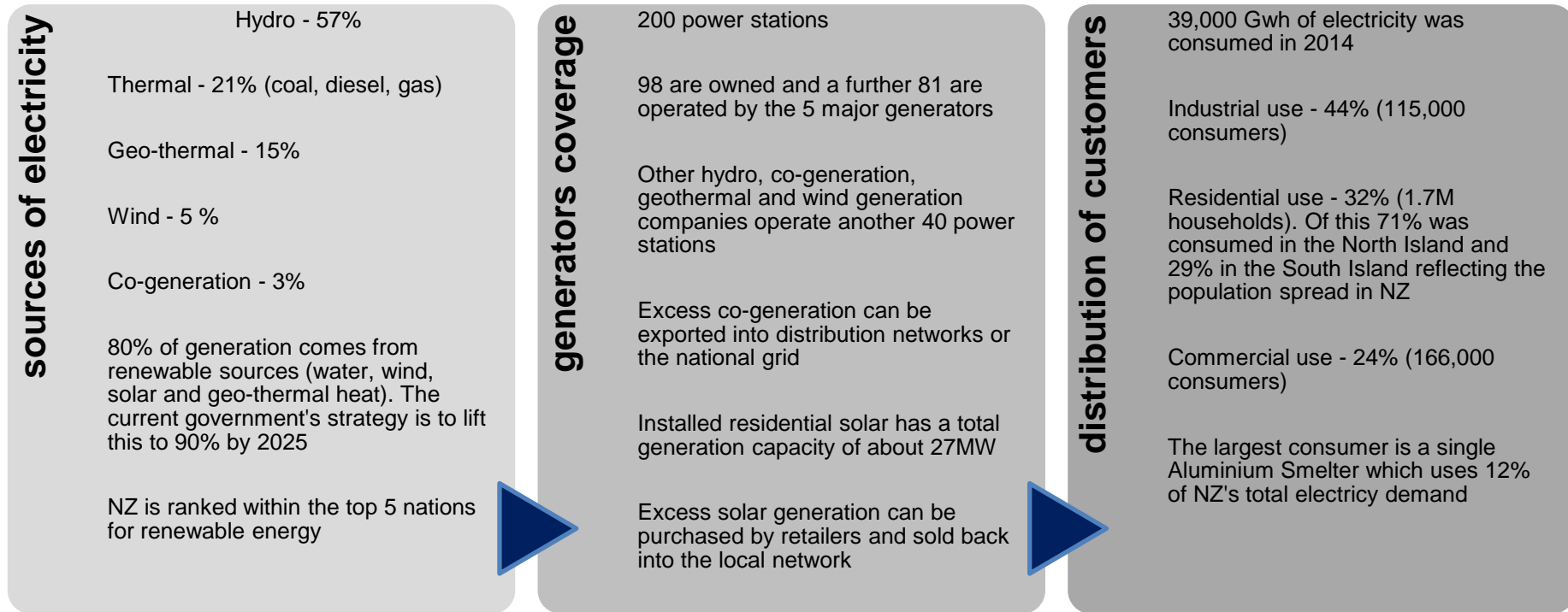
²⁴ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, and Electricity Authority, May 2016

²⁵ Electricity Authority, Electricity in New Zealand 2016

²⁶ Ibid

²⁷ Consultations with New Zealand Institute of Economic Research, May 2016

Figure 3: Key features of the supply and use of electricity in New Zealand²⁸



²⁸ Electricity Authority, Electricity in New Zealand 2016

Motivating Factors for Reforms

New Zealand's reliance on hydropower and limited storage capacity makes it vulnerable to supply issues in years of low rainfall and snowmelts (dry years). During dry years a traditional response of the electricity sector and governments had always been to call on the public to reduce its energy and water use (public conservation campaigns). Leading up to the 2010 reforms public conservation campaigns were initiated in 2001, 2003 and 2008 and planned in 2006.²⁹

One of the major consequences of these public conservation campaigns, particularly when they occur frequently, was an erosion of public and business confidence in the electricity sector and government's capacities to manage the sector and ensure reliability of supply. The public conservation campaign in 2008 occurred at the same time as the Commerce Commission review into the abuse of market power in the electricity sector. The convergence of these events played a major part in exacerbating public and government distrust in the capacity of the electricity sector to forecast and manage supply issues.³⁰ Accordingly, this had a strong influence on the New Zealand's government's approach to the 2010 reforms.

A key effect of public conservation campaigns was that it put downward pressure on wholesale spot prices. While this lowers costs for market participants exposed to spot prices (such as generators and retailers), it equally increases inconvenience for business and residential consumers and also passes the costs of demand reductions onto them. The 2009 Ministerial Review recognised that this outcome encourages market participants to lobby for public conservation campaigns and did not provide the appropriate price signals for the risks of supply constraints.³¹

In response to the dry years in 2001 and 2003, the then government's lack of confidence in the capacity of the electricity sector to manage supply persuaded it to build a 155MW diesel power station as part of a reserve energy scheme. The 2009 Ministerial Review found that this scheme had the unintended and perverse result of reducing the incentive for market participants to manage supply risks because:³²

- Market participants had an expectation that the Electricity Commission would manage those risks as a last resort;
- The price at which energy was offered under the reserve scheme was administered and did not recover the cost of capital involved in building the diesel plant. This could potentially undercut the price at which alternative capacity resources would be offered in the market and discouraged generators from building plants to increase their own capacity to meet peak demand; and

²⁹ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, and Electricity Authority, May 2016

³⁰ Ibid

³¹ Office of the Minister for Energy and Resources, Cabinet Paper – Ministerial Review of the Electricity Market: Regulatory Impact Statement, 2009

³² Ibid and Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Energy Retailers Association and Electricity Authority, May 2016

- The fixed costs of the government built diesel plant were recovered by levy and spread across all consumers even though some may have effectively managed their supply risks via hedging contracts.

It was also concluded that the scheme was vulnerable to lobbying by parties for rule changes and to the Electricity Commission purchasing additional reserve electricity or reserve capacity.³³

Nature of Reforms

To address these issues and improve market outcomes the Ministerial Review considered a range of options and proposed preferred ones which were agreed to by the New Zealand Government. The actions recommended by the Ministerial Review and agreed to by the government are described in the table below.

³³ Ibid

Table 4: Key 2010 reforms to improve NZ electricity security of supply

Problem being addressed	Recommended action	Rationale and benefits	Some key alternatives considered and rejected
<p>The reserve energy scheme creates perverse incentives in the market and discourages market participants from taking responsibility to manage supply risks.</p>	<ul style="list-style-type: none"> ▪ Abolish the reserve energy scheme. 	<p>The benefits included:</p> <ul style="list-style-type: none"> ▪ Creating the appropriate price signals for market participants to manage supply risks. ▪ Increasing certainty of the system by removing the opportunities for participants to lobby government for rule changes and for market interference by the Electricity Commission. 	<ul style="list-style-type: none"> ▪ Mandatory offering of hedges by generators. This involved generators being required to offer 100% of their dry year capacity, net of demand from their retail and direct customers. This was rejected because of its administrative and design complexity which would include the need to determine dry year capacity, reserve prices, hedges and penalty regimes. ▪ Mandatory contracting by load. This involved requiring all energy load to be fully contracted through hedge contracts, internal hedges or own generation. This was rejected because of the design and administrative complexity and the risk that it would drive up the price of hedge contracts.
<p>Public conservation campaigns undermine consumer, public and government confidence in the management of supply issues by the energy sector and can be used too easily as a substitute for effective management of supply risks by market participants.</p>	<ul style="list-style-type: none"> ▪ Require retailers to make payments to consumers in the event of a public conservation campaign or enforced power cuts with a guaranteed scale which reflects the level of nationwide savings. Savings would be determined by the System Operator. 	<p>The benefits included:</p> <ul style="list-style-type: none"> ▪ Discouraging the use of public conservation campaigns as an easy option. ▪ Encouraging market participants to take full responsibility for forecasting and pricing supply risks. ▪ Ensuring that public conservation campaigns are used as a last resort in dry years. 	<p>Not applicable.</p>
<p>Limited consequences for market participants during public conservation campaigns.</p>	<ul style="list-style-type: none"> ▪ Impose a floor on spot prices during any public conservation campaign or enforced power cuts in a dry year. 	<p>The benefits included:</p> <ul style="list-style-type: none"> ▪ Discouraging the use of public conservation 	<p>Not applicable.</p>

Problem being addressed	Recommended action	Rationale and benefits	Some key alternatives considered and rejected
		<p>campaigns as an easy option.</p> <ul style="list-style-type: none"> ▪ Encouraging market participants to take full responsibility for forecasting and pricing supply risks. ▪ Ensuring that public conservation campaigns are used as a last resort in dry years. 	
<p>Limited scrutiny of market participants and their reasons for requesting public conservation campaigns.</p>	<ul style="list-style-type: none"> ▪ Require all major generators, including those which are SOEs, listed and privately owned companies, to disclose information which will inform the market about supply risks and management of those risks. This includes hydro reserves, fuel stockpiles and availability, planned outages and net hedge positions. 	<p>The benefits included:</p> <ul style="list-style-type: none"> ▪ Increasing scrutiny of market participants and incentives for them to manage supply risks more effectively. 	<p>Not applicable.</p>

Source: Office of the Minister for Energy and Resources, Cabinet Paper – Ministerial Review of the Electricity Market: Regulatory Impact Statement, 2009 and consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Energy Retailers Association, and Electricity Authority, May 2016

4.3 GOVERNANCE

Overview

Up until the 2010 reforms the national government participated in the market in four ways. It:

- Determined energy policy and strategy;
- Provided transmission services through Transpower, a State Owned Enterprise (SOE);
- Provided generation services through three SOEs; and
- Regulated the market through the Electricity Commission and the Commerce Commission.

In effect the Electricity Commission (electricity sector regulator) was the agent of the Minister for Energy and Resources. Its operations were funded via a levy on all energy market participants. General competition regulation which applied to the energy sector and price control of natural monopoly transmission and distribution was administered by the Commerce Commission.

The 2010 reforms were designed to create clearer separations between the role of executive government and market regulation for the benefit of competition and consumers.

Rationale for Reforms in 2010

The 2009 Ministerial Review determined that governance arrangements needed amending because:

- The Electricity Commission had too many objectives and functions which was confusing its focus on important rule making. Its objectives included promoting competition, energy efficiency, environmental sustainability and fairness.
- This confusion had contributed to slow progress on some government agreed reforms that were critical to improve competition in the market. This included improving the liquidity of the hedge market and demand side participation.
- The regulation of energy grid planning lacked clarity because of overlapping responsibilities by the Electricity Commission and Commerce Commission, and because of tension between the Electricity Commission and Transpower over the grid planning role.
- The Electricity Commission was not sufficiently independent of executive government and this was reducing investment certainty.
- Stakeholders were not sufficiently involved in rule development and this was undermining confidence in the system.

Nature of Reforms

To address these issues and improve market outcomes the Ministerial Review considered a range of options and proposed preferred ones which were agreed to by the New Zealand Government. The actions recommended by the Ministerial Review and agreed to by the government are described in the table below.

Table 5: Key 2010 reforms to improve electricity sector governance

Problem being addressed	Recommended action	Rationale and benefits	Some key alternatives considered and rejected
<p>The Electricity Commission is not operating effectively to promote investment certainty and competition in the market because it has too many objectives, and is an agent of executive government.</p>	<p>Replace the Electricity Commission with an Electricity Authority (EA) which would:</p> <ul style="list-style-type: none"> ▪ Operate independently of executive government as an entity under the <i>Crown Entities Act 2004</i>. ▪ Have the single objective of promoting competition, reliable supply and efficient operation of the electricity market for the long term benefit of consumers. ▪ Have the power to make market rules via a Market Participation Code without Ministerial approval, although the Minister can ask the EA to review market issues and can make regulations relating to consumer equity and fairness. ▪ Have a narrower set of functions in addition to rule making. These would be market facilitation through education, monitoring Code compliance, enforcing the Code, monitoring market performance, undertaking reviews and inquiries related to market performance and contracting for market operations including pricing, registry, reconciliation and system operations. 	<p>The benefits included:</p> <ul style="list-style-type: none"> ▪ Removing the risks of perceptions of Ministerial interference in the operation of the market. ▪ Enabling the EA to regulate the market having regard to government policy without needing to give effect to it. ▪ Ensuring that the EA was focused on market efficiency and competition. ▪ Making the Energy Efficiency and Conservation Authority responsible for energy efficiency outcomes. ▪ Making the Commerce Commission responsible for regulation of natural monopoly transmission and distribution revenue and grid development. ▪ Making the System Operator (part of Transpower) accountable to the EA for forecasting and provision of information about security of supply. The EA would create a panel of experts (the Security and Reliability Council) to assist it assess the work of the System Operator. ▪ Legislatively requiring market participants to fund the operations of the NZ Electricity and Gas Complaints Commissioner. 	<ul style="list-style-type: none"> ▪ Electricity sector forum and an Electricity Commissioner appointed within the Commerce Commission. This involved the creation of a forum with appointed representatives from all sectors of the electricity industry. The forum would be responsible for market rule development which would be amended, approved and legalised by the Electricity Commissioner in the Commerce Commission. The Commissioner would approve transmission asset upgrades. This option was rejected because rule development may be delayed; the Commerce Commission would be required to expand its remit; and it may confuse accountabilities between two Ministers (energy and commerce commission). ▪ Making the Electricity Commission independent. This involved reconfiguring the EC under the <i>Crown Entities Act 2004</i>. Regulation of transmission would be transferred to the EC from the Commerce Commission. This option was not recommended because the EC would need to develop an expertise in economic regulation duplicating the Commerce Commission; rule making and market operations would not be separated; the EC and Transpower may have competing accountabilities. ▪ Co-regulation. The functions of the EC in relation to market regulation would be transferred to a private company, with the Minister for Energy retaining the power to

Problem being addressed	Recommended action	Rationale and benefits	Some key alternatives considered and rejected
			<p>approve rules. The Commerce Commission would be responsible for approving transmission upgrades. This option was not preferred because it would retain Ministerial control of rules, regulation of transmission would be split and there would be a risk of supply side control of rule-making.</p> <ul style="list-style-type: none"> <li data-bbox="1496 475 2045 874">▪ Industry self-regulation. This is similar to the MCo arrangement that existed prior to the creation of the EC in 2002. Under this arrangement a multilateral agreement would govern the development and enforcement of rules. The Commerce Commission would be responsible for ensuring that the arrangement was consistent with general competition law. This option was not recommended because there were risks of supply side dominance and slow decision making; and no capacity to deliver public policy objectives. <li data-bbox="1496 906 2045 1149">▪ Independent system operator (ISO). This involved creating an ISO. Even though this option would separate the system operation from Transpower’s ownership of the grid, this was not preferred because there may be loss of synergies between grid operation and system operation; and the benefits of the change did not outweigh the costs.

Source: Office of the Minister for Energy and Resources, Cabinet Paper – Ministerial Review of the Electricity Market: Regulatory Impact Statement, 2009 and consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Energy Retailers Association, and Electricity Authority, May 2016

Figure 4: Key changes to governance from the 2010 reforms

Pre 2010

Minister (more power)

- Appoints Board of Regulator
- Makes electricity rules
- Makes regulations

Market Regulation (centralised)

- Electricity Commission (diverse role)**
- Agent of government
 - Wide objectives – efficiency; reliability; fairness; environmental sustainability; and energy efficiency
 - Many functions – develops and recommends rules and regulations for Minister to make; monitors and enforces rules; approves transmission upgrades, pricing methodology and quality; determines distribution pricing methodology; monitors security of supply; promotes energy efficiency; consumer protection.
- Commerce Commission**
- Independent of government
 - Sets distribution revenue and quality
 - Sets transmission revenue



Post 2010

Minister (less power)

- Recommends Board of Regulator for appointment by Governor-general
- Cannot make electricity rules
- Makes regulations

Market Regulation (diversified)

- Electricity Authority (focussed role)**
- Independent of government
 - Narrow objectives – efficiency including reliability for long term benefit of consumers
 - Fewer functions – develops, makes, monitors and enforces rules; approves transmission pricing methodology and reliability standards; approves distribution pricing methodology; promotes and monitors consumer switching.
- Commerce Commission**
- As for pre 2010 plus approval of grid upgrades
- Security and Reliability Council** (reports to Electricity Authority)
- Monitors Transpower’s performance and security of supply
- Electricity and Gas Complaints Commissioner**
- Consumer protection and dispute resolution
- Energy Efficiency and Conservation Authority**
- Energy efficiency programs

5. LESSONS AND BENEFITS FROM REFORMS

5.1 APPROACH TO REFORM AND REGULATION

All of the reform measures adopted since the early 1990s have been progressively underpinned by a core and clear set of public policy principles. These principles have guided government decision making about preferred options and influenced the nature of regulatory intervention. The 2010 reforms can be viewed as the most critical test of the then government's commitment to these principles, particularly because rising residential electricity prices would have put the government under serious political pressure to apply other kinds of interventions. The core policy principles that have been consistently applied by governments to shape the reforms are as follows.

Learning by Doing

Governments have accepted that the reforms would be evolutionary in nature with successes and market failures informing each next stage. They have been able to adopt this approach partly because there were no existing models of successful reform for them to strictly follow, and partly due to their consistent commitment to a clear set of market based principles on which all reforms are anchored. The commitment of successive governments to the same clear set of market based principles has equipped New Zealand authorities to be willing to pursue options which may include risks of market failure, rather than being risk averse to imperfect change.

Commitment to Market Based Competition, Even When Addressing Market Failures

The fundamental purpose of all reform measures has been to facilitate, encourage and improve market based competition. To achieve this governments have pursued holistic reforms to ensure that all elements in the supply chain are operating to facilitate competition to the maximum level achievable.

This is evident in the 1999 reforms which created the structures to facilitate market competition in contestable markets (retail and generation) and regulate the input costs from natural monopoly elements (distribution and transmission) to promote competition in contestable markets. Prior to the 1999 reforms the potential for contestable new entry into generation and retail markets was considered sufficient to promote the desired outcomes. This was supported by the split of Contact Energy from ECNZ in 1996.

But by 1999, the government concluded that a more competitive generation market structure and stronger separation between retail and monopoly lines businesses was warranted. The commitment of the then government to convert generation into a competitive market by disaggregating the dominant generator into four generators and restructuring them into SOEs with a strong commercial focus and retail component was a critical step in the journey towards a highly competitive retail market. To achieve this the remainder of ECNZ was further broken into three companies in 1999.

The 2010 reforms were specifically designed to address perceived market failure in the retail sector, namely that there was insufficient competitive pressure to ensure that the prices for electricity did not exceed the costs of supplying and producing it, and retail competition in

regional areas was below expectations. The response to this issue was based on three main actions.³⁴

One action was to encourage increased market participation in both the generation and retail sector through measures to decrease the financial risk of participation (more liquid and accessible hedge markets); improving the spread of generation assets across New Zealand to remove barriers for new retail market entrants not vertically integrated with a generator (virtual and actual asset swaps between generators); and permitting distributors to compete in the retail sector.

A second action was to make market participants more accountable for managing security of supply and less reliant on government sponsored energy conservation schemes in dry years (compulsory compensation for customers if supply becomes unreliable).

A third action was to address low customer engagement and empowerment in the retail sector by funding public awareness campaigns about the benefits of switching between retailers, and requiring retailers to fund and collaborate with the independent complaints Commissioner so that the public had trust in dispute resolution mechanisms.

No Price Signals to Distort Market Based Responses

Unlike many jurisdictions, the reforms in New Zealand have never included price controls, concessions, rebates, subsidies or exemptions for consumers, market participants or technology. This is because these measures tend to distort markets by sending non-market based price signals that alters behavior. For example:³⁵

- There are no feed-in tariffs to encourage alternative generation sources, such as solar power.
- There are no subsidies to motivate renewable energy outcomes.

This is partly because New Zealand's reliance on hydro power reduces the need for it to shape its energy policy with considerations about climate change and emissions reductions. However, consistent with its commitment to market based principles, New Zealand also phased in an emissions trading scheme (ETS) from 2008 to 2015 to reduce carbon emissions in its economy.

- There is no pricing control to manage generation resource scarcity.

Despite the acute concerns about security of supply, particularly in years of low rainfall and snowmelt, the only and consistent response of successive governments has been to improve the incentives for market participants to take responsibility for pricing supply risks through market based hedge contracts and investment in additional supply capacity.

³⁴ Office of the Minister for Energy and Resources, Cabinet Paper – Ministerial Review of the Electricity Market: Regulatory Impact Statement, 2009

³⁵ Office of the Minister for Energy and Resources, Cabinet Paper – Ministerial Review of the Electricity Market: Regulatory Impact Statement, 2009 and consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Energy Retailers Association, and Electricity Authority, May 2016

- In response to residential electricity price increases prior to the 2010 reforms, the 2009 Ministerial Review and the then government considered capping retail prices. However this was rejected because it was not consistent with the overarching commitment to market based principles.
- There is minimal concessional pricing for consumers.

Unlike many jurisdictions New Zealand does not use concessions, such as rebates or tariff subsidies, to support the capacity of disadvantaged customer groups to pay for electricity. For example in many jurisdictions aged and disability pensioners and/or low income families receive this kind of support. In New Zealand on the other hand if these customers require assistance with their living costs, including their energy bills, they seek assistance from social welfare programs administered by the Ministry of Social Development.³⁶

The only subsidy embedded in the energy system is the low fixed tariff scheme which requires retailers to offer a fixed tariff of no more than 30 cents a day. This scheme was introduced after the 1999 reforms in response to public perceptions that fixed costs of energy were steadily increasing. While increased competition arising from the 2010 reforms has largely addressed this issue, it is politically difficult for governments to remove the tariff without public opposition and it remains in place as a consumer protection measure.³⁷

Regulatory Intervention is Only Used to Improve Market Efficiency, Where Competition Cannot

The reforms have also been underpinned by the clear principle that reinforcing market efficiency (technical, dynamic and allocative) should be the primary purpose of regulation and that intervention is only necessary when the competitive market cannot deliver this outcome. Some key examples of this approach are discussed below.³⁸

To reduce barriers to entry and encourage innovation in the retail market the Electricity Authority regulates market behavior through an Electricity Code, rather than a prescriptive licensing regime. Market participants have an obligation to report Code breaches by themselves or others. This approach provides scope for innovative products and entry by non-traditional retailers.

The bias in the Electricity Code and the approach of the Authority is towards facilitating competition and outcomes rather than imposing new rules. To achieve this the Authority prefers to develop guidelines to shape market behavior instead of making changes to the Code and market rules. In its experience this encourages consultation, positive behaviour by market participants and reduces the cost of regulation by avoiding the needs for regulatory impact

³⁶ Consultations with the Electricity Authority, New Zealand Energy Retailers Association and New Zealand Electricity and Gas Complaints Commissioner, May 2016

³⁷ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, Electricity Authority, New Zealand Electricity and Gas Complaints Commissioner, New Zealand Institute of Economic Research, May 2016

³⁸ Consultations with the Electricity Authority, May 2016

assessments that are required to accompany Code and rule changes. Guidelines include pricing principles for distributors and models for contracting between retailers and distributors.

The Authority does not necessarily consider the existence of 29 distribution networks to be inefficient because over half are controlled by local communities which they serve and as a result deliver affordable tariff structures demanded by those communities. In addition to this value, the networks work together to share resources and contractors to keep costs associated with network management at low levels and this supports the prices they charge their local communities for network access.

The Commerce Commission uses default price quality paths that include maximum average prices to regulate pricing by natural monopoly elements – distribution and transmission, instead of direct price and pricing methodology controls.³⁹

5.2 CUSTOMER PROTECTIONS

Under the electricity rules consumers have no right to be supplied with electricity. However there is an obligation on distributors under section 105 of the Electricity Industry Act 2010 for supply to be maintained to places supplied in 1993. Supply can be provided through power lines or by standalone generation systems.

Accordingly, consumer protection mechanisms are designed to equip and encourage customers to pay their energy bills. This compliments the market based principles underpinning reforms to the electricity sector and the preference of regulatory authorities to facilitate market outcomes rather than set rules.

A key body in the consumer protection framework is the New Zealand Electricity and Gas Complaints Commissioner. The Commissioner is focused on independent dispute resolution between electricity consumers and providers of electricity. Primary issues handled by the Commissioner include billing, service and disconnection complaints. The Commissioner is not a consumer advocate, but rather takes a neutral position in an effort to resolve disputes satisfactorily and fairly for consumers and energy companies. It deals with complaints with a value of \$50,000 and below and most of the issues it deals with concern residential customers.⁴⁰

Prior to the 2010 reforms it was voluntary for market participants to collaborate with the dispute resolution scheme and this restricted the impact the Commissioner could have as well as the extent of consumer protection. As part of the 2010 reforms the government made it a legislative requirement that market participants fund the Commissioner and compulsorily participate in the dispute resolution scheme. This enhanced the consumer protection framework to match the expected increase in competition. A key consequence of the government's legislative support for the Commissioner was that the Commissioner could legitimately be seen by the market as an independent umpire in disputes, instead of a suspected consumer advocate only.⁴¹

In 2013 the government strengthened the role of the Commissioner by enabling it to name retailers that have less than adequate consumer protection and complaints handling credentials. This is supported by the requirement for market participants to report annually on their

³⁹ New Zealand Commerce Commission

⁴⁰ Consultations with the New Zealand Electricity and Gas Complaints Commissioner, May 2016

⁴¹ Ibid

complaints handling and also by the compliance measurement undertaken by the Commissioner. The Commissioner is also involved in regular dialogue with the Electricity Authority, Commerce Commission and Energy Ministry and has the power to raise systemic issues with those authorities and the Minister.⁴²

5.3 STAKEHOLDER SUPPORT FOR REFORMS

The preparation of this case study included consultation with a wide range of market participants and stakeholders. There appears to be widespread support for the reforms amongst stakeholders. There is particular support for:⁴³

- The evolutionary nature of the reforms to suit changes in market dynamics and address market failures as they arose.
- The fact that throughout the process of reform a clear set of market based principles consistently underpinned change.
- The pursuit of complimentary changes in the wholesale and retail markets. Stakeholders consider this to be vital because of the impact wholesale market dynamics can have on retail competition.
- The increasing commitment, particularly in the latter part of the reforms, to preserving a separation between policy making by executive government and the independent regulation of the market. This is recognised by stakeholders as critical to increase investment and business certainty.
- The minimal use of licensing and other interventionist regulation so that the market is not subject to unnecessary red tape.

However support for the reforms was also a matter evolution. According to the Electricity Authority the response of market participants to the 2010 changes to promote retail market competition can be categorised in three main phases:⁴⁴

- Denial – market participants did not believe the changes would happen.
- Reluctance – market participants adopted defensive strategies to maintain their customer bases and preserve market share.
- Embracing – market participants adopted strategies to actively obtain each other's customers through fierce competition on price, product choice and quality.

It should also be noted that more recently not all stakeholders have been entirely convinced that the reforms are sufficiently driving consumer prices downward. Accordingly in 2014 the Labour Party and Green Party proposed a major market intervention - the insertion of a single buyer into the wholesale level of the New Zealand electricity market, as a means of forcing a reduction in electricity prices to final consumers.

⁴² Ibid

⁴³ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Energy Retailers Association, Electricity Authority, New Zealand Electricity and Gas Complaints Commissioner, New Zealand Institute of Economic Research, and former New Zealand Electricity Ombudsman May 2016

⁴⁴ Consultations with the Electricity Authority, May 2016

Opponents of this proposal are concerned that it is informed by a perspective of price alone, which is regarded as ill-conceived given the impacts on retail sector reform from upstream movements.⁴⁵

5.4 COMMUNICATION ABOUT REFORMS

Stakeholders also commonly believe that one key problem with the 1993 and 1999 reforms was the public communication by governments that change would result in falls in residential electricity prices. In reality residential prices had been increasing steadily since 1987 and the 1999 and 2010 reforms accelerated the removal of traditional cross-subsidisation of residential prices by commercial prices. As a result residential prices increased and commercial prices fell.

This threatened public support for reforms and created community distrust of market participants.⁴⁶ Stakeholders consider that with hindsight it would have been preferable for communications about reforms to focus on the benefits of competition, such as consumer choice, rather than the opportunity for residential price reductions.

In order to set the appropriate public expectations about the benefits of reform, some stakeholders also consider that clear benchmarks should be set at the beginning of reform processes to enable the overall value of change to be consistently and continually evaluated and communicated.⁴⁷

5.5 MARKET PERFORMANCE AND COMPETITION

Market performance and competition can be assessed using a combination of data and information about:

- Performance – wholesale and retail pricing.
- Competition – market structures, share and concentration.
- Conduct – consumer empowerment and engagement.

These issues are discussed in following section.

Pricing

One of the key reasons for the 1999 and 2010 reforms was a desire by governments and business to achieve more cost reflective pricing for commercial customers.⁴⁸ The current data appears to illustrate that the 2010 reforms in particular have delivered this objective.

The figure below shows the relative compound growth rates in network (distribution) prices and the other energy pricing components (wholesale and retail) from 2004 – 2014. The data

⁴⁵ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Energy Retailers Association, Electricity Authority,

⁴⁶ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, New Zealand Energy Retailers Association, Electricity Authority, New Zealand Electricity and Gas Complaints Commissioner, New Zealand Institute of Economic Research, and former New Zealand Electricity Ombudsman May 2016

⁴⁷ Ibid, particularly the New Zealand Institute of Economic Research, May 2016

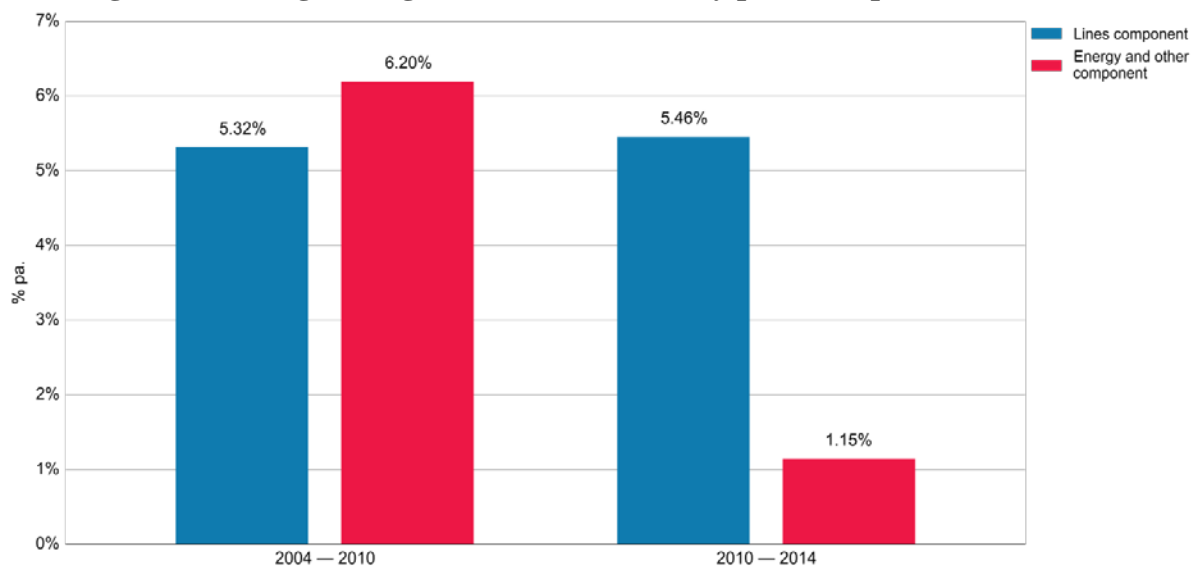
⁴⁸ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, May 2016

underpinning this chart is drawn from a 2014 review of residential prices and pricing information gathered by the Ministry for Business, Innovation and Employment (MBIE).

It shows that for full natural monopoly elements (distribution) prices have increased. Although the 2010 reforms were designed to enable distributors to compete in the retail and generation markets, their participation is reported to be limited.⁴⁹ The pricing in the chart for distribution component appears to support this conclusion (lines component).

However the chart also shows that competition in the wholesale and retail sectors is constraining the competitive part of the electricity prices (energy and other component).

Figure 5: Average change in nominal electricity price components 2004-2014



Source: Electricity Authority, 2016

Other factors which also have a bearing on wholesale and retail prices include:

- A significant increase in the market price of natural gas, which effectively doubled the marginal cost of electricity generation, between 2004 and 2009; and
- Stagnation in demand growth from about 2008, which resulted in significant surplus of generation capacity until around 2015 (because new generation capacity was commissioned on the basis of previously assumed demand growth trend)⁵⁰.

Wholesale Pricing

It is considered by some market participants that the primary influence on wholesale prices has been the significant investment in generation and transmission. Under investment previously in transmission had limited the scope for increased retail competition in some areas.

In the case of both generation and transmission the lead time for development is such that stress within the system can extend for a considerable period until resolved. For example, a geothermal power station development can take up to 10 years to develop from concept to operation. This generally consists of about 9 years of commercial negotiations for land access

⁴⁹ Consultations with the New Zealand Energy Retailers Association, May 2016

⁵⁰ Ministry of Business, Innovation and Employment, Government of New Zealand

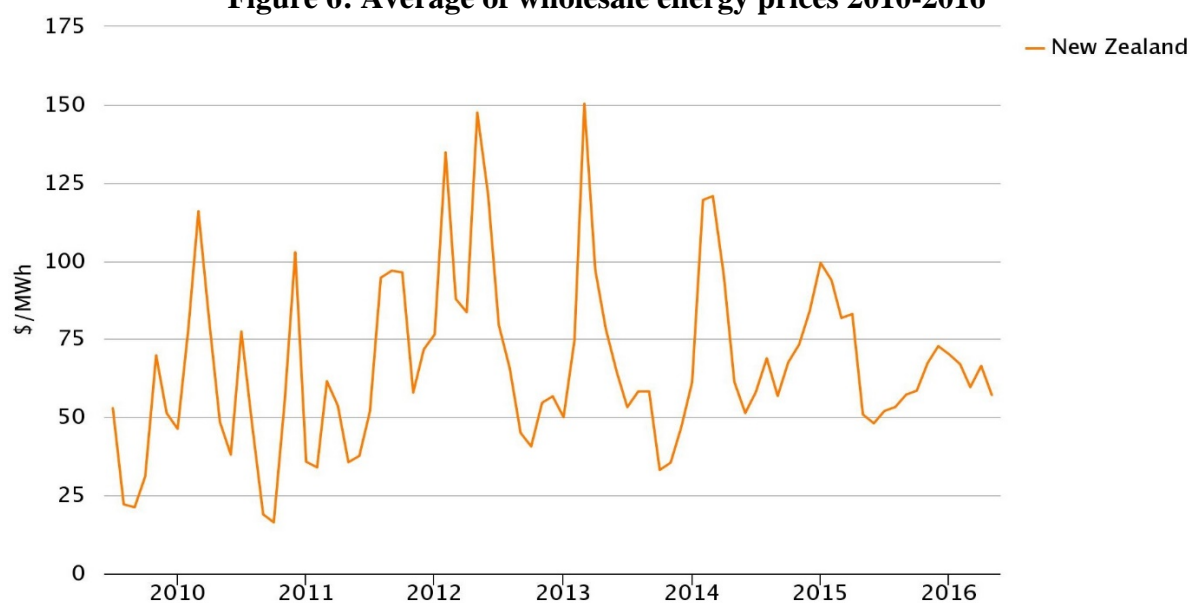
and environmental consents and 1 year for construction. Similar timeframes are involved in transmission.⁵¹

It is also believed that an effect of increasing competition for generation via virtual and actual asset swaps and a more liquid energy hedge market has led to a wider variety of generation types being investigated and built. For example geothermal is increasingly significant, more gas and wind generation has been built, and most large generators hold a variety of development options. This is significant achievement, as prior to the market being introduced in 1999, the ECNZ (government controlled generator) held only one development option.⁵²

The figure below shows that wholesale prices since the 2010 reforms have been subject to peaks and troughs resulting from market demand and some external factors. For example 2012 was a dry year which contributed to price spikes.

The reforms to make hedge markets more liquid and enable transmission hedges as facilitated market responsive pricing and the capacity of generators and retailers to manage risks associated with transmission and supply constraints. For example, even though 2012 was a dry year it did not create concern in the market or public as had occurred in previous years.⁵³

Figure 6: Average of wholesale energy prices 2010-2016



Source: Electricity Authority, 2016

Retail Pricing

Prices for residential customers generally increased throughout the reform period, in contrast to prices for commercial and industrial customers.⁵⁴ This trend continued after the 2010 reforms, but appears to have levelled off and stabilised since mid-2014. Monitoring of the

⁵¹ Consultations with the New Zealand Energy Retailers Association, May 2016

⁵² Ibid

⁵³ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, May 2016

⁵⁴ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, May 2016. Pricing information can be found at <http://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-data-modelling/publications/energy-in-new-zealand>

Consumer Price Index (CPI) by Statistics New Zealand for the year ending June 2015 showed a 0.0 per cent annual rate of change in electricity prices paid by households.⁵⁵

In a competitive market the prices for electricity would be expected to be set at or near the cost of producing and supplying electricity. To monitor the impact of competition the New Zealand authorities use three kinds of indicators as each has limitations, and alone would not suffice.

These three indicators are:⁵⁶

- The electricity component of the CPI assessed by Statistics New Zealand, the Government's office of statistics.
- A quarterly survey of domestic electricity prices (QSDEP) conducted by the Ministry of Business, Innovation and Employment (MBIE). This survey examines the contribution of the contestable part of energy (retail and generation) and the monopoly part of the sector (distribution and transmission) to the overall price of household electricity.
- An energy cost index prepared by the Electricity Authority. This index is calculated on inputs from Australian Stock Exchange (ASX) electricity futures data, demand data, annual reports from the major energy retailers, and regulated transmission and distribution charges. It is designed to represent the price at which a new entrant retailer without a generation portfolio could enter the market and sell to residential customers.

Recent data from these sources shows that:

- Between 2011 and 2016 retailer costs have increased by about 20.5 per cent, while prices for households have increased at lower rates which vary depending on the data source. The CPI shows that residential prices have increased by 17.2 per cent while the QSDEP shows that these prices have increased by 15.5 per cent.⁵⁷
- When the data from the QSDEP is separated between the competitive part (generation and retail) and monopoly part (distribution and transmission) the competitive part's contribution to the overall cost of electricity hasn't changed in real terms since March 2011.⁵⁸

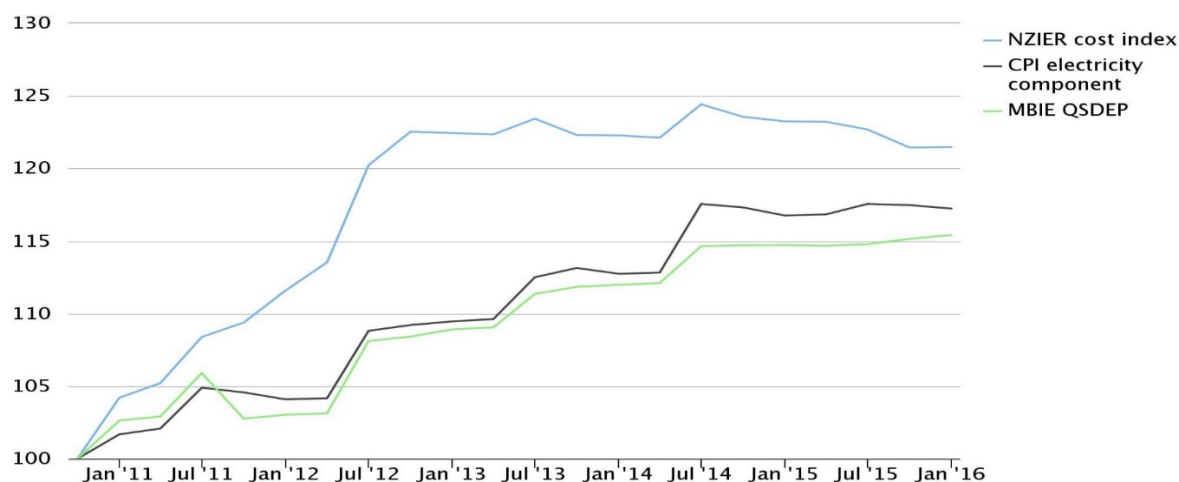
The figure below shows the comparative increases in retailer costs and residential prices since 2010. It demonstrates that retailer costs have been growing faster than residential prices and that residential prices have stabilised since 2011. These are two key indicators that the reforms to improve competition in the retail market introduced in 2010 may be placing downward pressure on retail prices.

⁵⁵ Electricity Authority, Electricity Market Performance 2015

⁵⁶ Ibid

⁵⁷ Consultations with the Electricity Authority, May 2016 Electricity Market Performance 2015

⁵⁸ Ibid

Figure 7: Retailer costs and residential pricing 2010-2016

Source: Electricity Authority, 2016

1. All series are indexed to 2010 Q3 = 100.
2. The NZIER cost index or synthetic price has been estimated for the Authority by NZIER. It is designed to represent the price at which a new entrant retailer without a generation portfolio could enter the market and sell to residential customers.
3. The MBIE QSDEP is the Quarterly Survey of Domestic Electricity Prices prepared by MBIE.
4. The CPI electricity component is the contribution of electricity to changes in the quarterly Consumer Price Index published by Statistics New Zealand.

The increase in residential prices between the introduction of the reforms and about mid 2014 was partly attributable to the unwinding of historic cross-subsidisation of household prices by business and commercial customers. This outcome is consistent with one of the key reasons for the reforms being more cost reflective pricing for business.⁵⁹

Some market participants consider that constant average increases in distribution and transmission costs (the monopoly part of the sector) have masked much of the retail competition and also limits any benefits of price competition being passed to consumers.⁶⁰

There is also view that price competition in the retail sector is practically constrained because retail margins, particularly for new entrants, are being constantly compressed. It is suggested that new entrants put limited pressure on the prices offered by incumbent retailers, especially the large five vertically integrated generator retailers (gentailers).⁶¹

This is because gentailers are better able to deal with pressure on retail margins as their effective gross margins (inclusive of generation) are larger than those of a stand-alone retailer. This means that gentailers have unparalleled financial capacity to withstand sustained competition.⁶²

⁵⁹ Consultations with the Electricity Authority, New Zealand Energy Retailers Association and New Zealand Institute of Economic Research, May 2016

⁶⁰ Consultations with the New Zealand Energy Retailers Association, May 2016

⁶¹ Ibid

⁶² Ibid

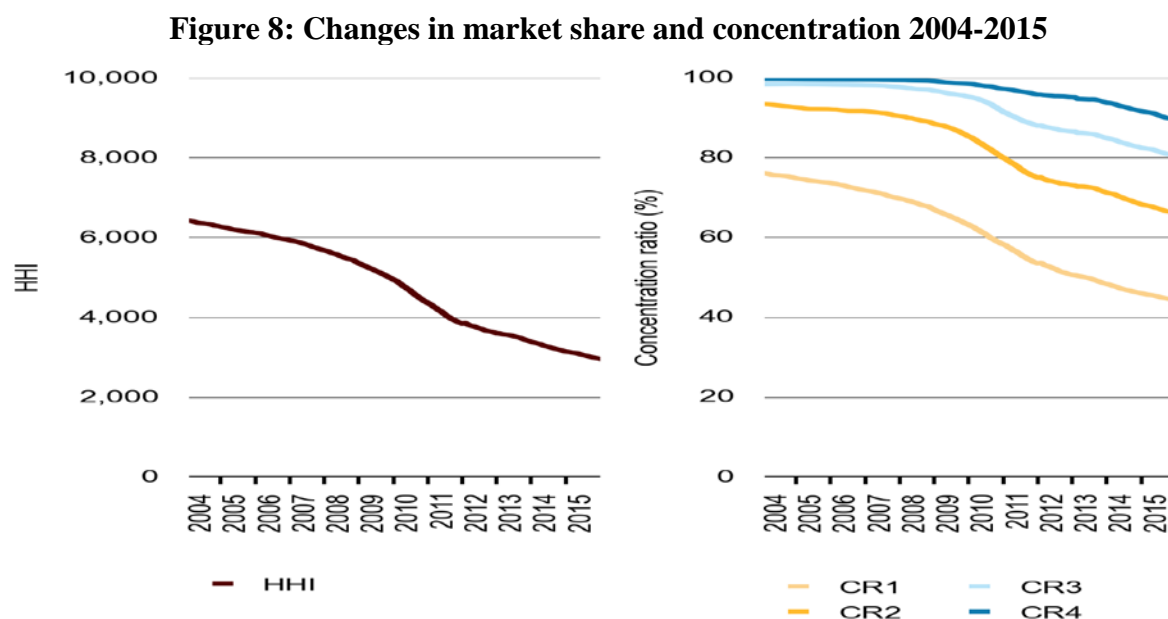
Retail Competition

Market share and concentration are indicators of the degree of competition in the retail sector. This is because competition can be greater when market share is diversified amongst more than one or a few participants. To assess market share and concentration, the Electricity Authority (EA) uses two measures. These are:⁶³

- The Herfindahl-Hirschman Index (HHI). HHI is the sum of squares of the percentage market shares in a particular market—this calculation gives more weight to players with large market shares.
- The concentration ratio (CRX) to assess trends in market structure. CRX is the sum of the market shares for X players (for example, CR4 is the sum of market shares for 4 players). As New Zealand is split into regional markets, the EA calculates national figures using customer weighted averages of the regional HHIs and CRXs.

In the retail market there are five large retailers (gentailers), and a range of small and medium-sized retailers (not integrated with a generator). The five largest retailers have about 80 per cent market share. Small and medium retailers have over 170,000 customer connections. As the number and market share of the small and medium size retailers increases, both HH and CRX decline.⁶⁴

The chart below shows the movements in the HHI and CRXs from 2004 to 2015. The CRXs are calculated for an increasing number of retailers during this period. In the chart the CR4 shows the fall in market share of the four largest retailers since 2009 as a result of the 2010 reforms. The CR1 shows how the largest retailer in each region has experienced a decline in market share over the period.⁶⁵



Source: Electricity Authority, 2016

⁶³ Electricity Authority, Electricity Market Performance 2015

⁶⁴ Ibid

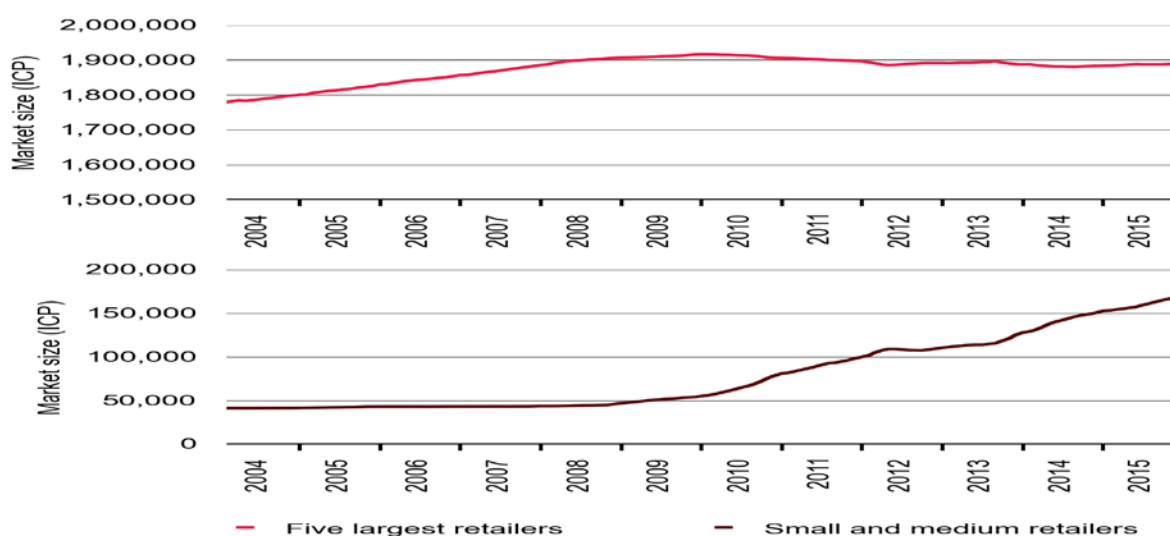
⁶⁵ Ibid

While the five large incumbent retailers have experienced declines in market share, some consider that their market share loss is as much attributable to customer switching between them as much the impact of new entrants⁶⁶.

When measured by the number and market size of retailers, competition in the retail market has increased following the reforms in 2010. Currently there are 31 retailers compared to 27 in 2014 and less than 10 in 1999. At present there are a further 13 other companies investigating or testing market entry. Since the 2010 reforms there has been an expansion of retail brands into regional areas which has been facilitated by access to a more liquid hedge market and the other risk management measures.⁶⁷

The chart below shows the relative changes in market size of the five large incumbent retailers and small and medium retailers. It shows that any decline in market size of large retailers is less acute and stable since 2010, compared to the exponential increase in market size of small and medium retailers since the 2010 reforms. This suggests that customer movements between the large retailers have as much potential impact on their market share as the impact of new entrants.

Figure 9: Changes in market size for large and small/medium retailers 2004-2015



Source: Electricity Authority, 2016

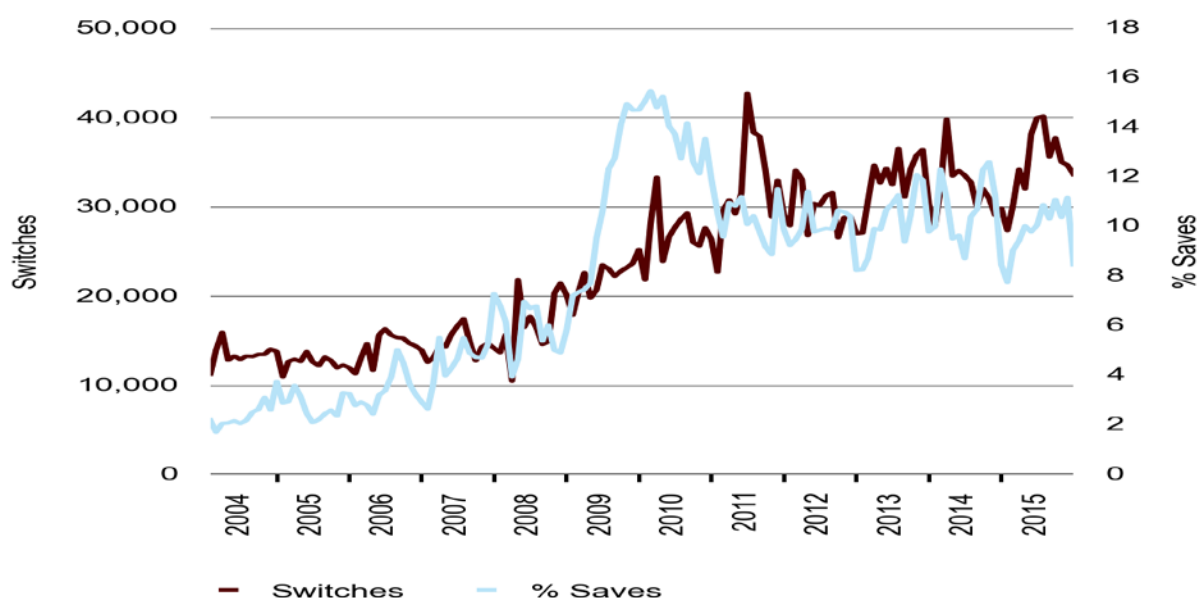
Customer Empowerment and Engagement

Customer switching between retailers is an indicator of the competitive conduct occurring in the retail market. The 2010 reforms included \$15M fund for the promotion of customer switching. The use of the fund to support public education campaigns about switching and its benefits (what’s my number campaign) did result in an increase in switching rates.⁶⁸ The chart below shows the switching and save rates leading up to and following the 2010 reforms. A switch is where a customer selects another retailer, and a save is where a customer changes their mind about the switch and returns to their original retailer.

⁶⁶ Consultations with the New Zealand Energy Retailers Association, May 2016

⁶⁷ Consultations with the Electricity Authority, May 2016

⁶⁸ Consultations with the New Zealand Energy Retailers Association, May 2016

Figure 10: Residential customer switching and save rates 2004-2015

Source: Electricity Authority, May 2016

In 2015 the Electricity Authority implemented the save protection scheme to reduce barriers for retailers to acquire new customers. The rationale for the scheme is that it is unfair for a retailer to use the offer of a competitor to prevent competition. Retailers can opt into the scheme. For those who participate it means that they are able to win a customer and complete the switching process before the customer's previous retailer can attempt to win them back. Similarly if a participating retailer loses a customer, it cannot attempt to win that customer back until the switch is completed. The impact of this scheme on switching levels has not been assessed to date.⁶⁹

Currently New Zealand has the fastest switching rates in the world. This is a result of a number of factors including consumer demand for switching, public awareness campaigns promoting switching, retailer systems that support efficient switching in response to customer expectations, and an effective independent customer complaints management system.⁷⁰

However this has evolved over time. At the beginning of the retail market reforms in 1999 retailers had poor customer database systems which did not support customer switching. This was a barrier to market competition as it created distrust amongst customers. This had to be addressed by retailers first as part of their defensive strategies and then as a component of their customer acquisition strategies as they more fully embraced a competitive mindset.⁷¹

Another lesson from the evolution of customer switching is that at the beginning of the reform process there was a need for a retailer default scheme to maintain customer participation and engagement. This scheme is considered to have been especially important because community expectations that competition would lower residential prices were not met, and retailer systems

⁶⁹ Electricity Authority, Electricity Market Performance 2015 and consultations with the Electricity Authority, May 2016

⁷⁰ Consultations with the Electricity Authority, New Zealand Energy Retailers Association and New Zealand Electricity and Gas Complaints Commissioner, May 2016

⁷¹ Ibid

did not support customer switching in line with consumer demand. Accordingly, in the absence of a default scheme customer engagement and interest was adversely affected, which partly motivated the public awareness campaigns in 2011.⁷²

6.6 BUSINESS CONFIDENCE AND INVESTMENT CERTAINTY

Key economic benefits of reform include its impact on innovation, and business and investment activity to support market growth.

Innovation – Smart Metering

The review recommended that any standards developed for smart meters provide for open access and customer switching functionality.

The New Zealand government did not mandate a smart meter roll out, leaving it to the market to apply consistent with its commitment to market based principles.⁷³ The most recent figures show smart meters now represent about 70 per cent of all meters.⁷⁴

In 2015, the Electricity Authority examined whether the varying prices charged by metering service providers to retailers were an inefficient barrier to entry to the retail market. It found that variations in metering prices were not a barrier to entry and that pricing variations occur because retailers purchase different services from metering providers.⁷⁵

The deployment of smart meters is creating one issue of business uncertainty for retailers. This relates to their concerns that distributors want free access to smart meters to manage network issues. Retailers wish to be paid to provide access to smart meters which they deploy because smart meter access enables distributors to use meter data to deploy new technology via distributor assets. Retailers are concerned that current regulatory arrangements administered by the Commerce Commission govern distributor assets, but not new services they provide via their assets.⁷⁶

Innovation – New Products

The market based approach to reforms and regulation has stimulated innovative approaches by retailers in relation to customers who have difficulty paying their energy costs. For example, Globug (a Mighty River Power retail brand) announced in early 2015 that it would discount Globug's pre-pay rates by 15 per cent to Community Services Card holders. This contributed to its rapid growth from 18,000 to nearly 32,000 customers.⁷⁷

The regulatory approach to promote trust in the market through campaigns for switching has enabled other retailers to offer products built on trust. For example, a new company called Saveawatt is entering the market with a product that enables consumers to delegate authority

⁷² Ibid

⁷³ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, May 2016

⁷⁴ Electricity Authority, Electricity Market Performance 2015

⁷⁵ Ibid

⁷⁶ Consultations with the New Zealand Energy Retailers Association, May 2016

⁷⁷ Electricity Authority, Electricity Market Performance 2015

to Saveawatt which will then make sure the consumer is on the best tariff at all times, switching them as required.⁷⁸

The deployment of smart meters has enabled another company called Fick to offer residential customers tariffs based on wholesale prices, which can reduce the costs for households.⁷⁹ However, these customers are not protected under Flick's contracts from high volatility that could arise from prolonged grid constraints, plant failures or dry years which result in sustained high prices. In such circumstances consumers would either face these prices or switch to a new retailer (assuming one was available).

Ongoing failure by a retailer to pay for electricity or distribution services can lead to increasing financial losses by generators and distributors and could lead to customers becoming stranded without a retailer. The Authority has made arrangements to facilitate the orderly resolution of a default situation when an electricity retailer becomes insolvent or otherwise exits the market and is unable to supply its customers.

These innovations offer residential and business customers opportunities to reduce their electricity costs thereby increasing their disposable incomes. This can support consumption in other parts of the New Zealand economy and improve the allocative efficiency of household and business resources.

Investment and Trading Activity

The reforms have restructured the former government owned generators into companies with 51% government shareholding or fully private companies. All these entities are vertically integrated generators and retailers (gentailers). The five largest gentailers are listed on the share markets in NZ and in Australia. Companies such as Mighty River Power and Meridian Energy raised more than \$2 billion through their listing.⁸⁰

The four largest gentailers have market-making agreements with the ASX to promote trading in NZ electricity spot price futures contracts. The companies lodge bids and offers each day on the ASX Futures Exchange for prices to transact future supply. The actual forward price is determined by market responses to these bids. Parties make investment decisions about energy supply, infrastructure and services based on settled futures market prices. In 2015, 18,468 GWh of futures contracts were traded, which was a 36 per cent increase on 2014's trading volume.⁸¹

The 2010 reforms aimed at enabling greater access to hedge markets to manage supply risks have enhanced the certainty that investors need to participate in the energy market. One indicator of this is recent analysis by financial houses studying the ASX which recommend the stock of the gentailers for their strong yield performance and ongoing value, particularly on the basis of their investments in renewable energy and development options for increased supply.⁸²

⁷⁸ Ibid

⁷⁹ Observations by Aegis consultations while visiting the NZ market

⁸⁰ Australian Financial Review, 11-12 June 2016

⁸¹ Electricity Authority, Electricity Market Performance 2015

⁸² Australian Financial Review, 11-12 June 2016

5.7 ECONOMIC IMPACTS

There is no available assessment of the economic or social value of the series of reforms undertaken to improve the performance and competition in the retail market. None have been undertaken by the New Zealand Government, the Electricity Authority or the retail sector.⁸³

At present the MBIE recognises that promoting competition is a work in progress, but is generally comfortable with the direction of reforms. There is a strong reliance on the Electricity Authority and Commerce Commission to collect data and analyse market performance and regulate behaviour where required. While this is not considered a substitute for an economic and social evaluation, the evolutionary nature of the reforms is considered to warrant the prioritisation of ongoing market scrutiny above point in time economic assessments.⁸⁴

GDP from utilities (electricity, gas, water, and waste services) rose by about 30% between 2000 and 2016, but it's difficult to attribute this to reforms per se.

Figure 10: GDP from utilities 1990-2016



Source: Statistics New Zealand

The New Zealand GDP grew by about 49% between 2000 and 2016 to NZ\$ 240 billion. Of this the contribution of utilities (electricity, gas, water and waste services) to total GDP declined from 2.87% in 2000 to 1.4% in 2016.⁸⁵ This may be due to factors including technological and energy efficiency improvements reducing demand.

During this period the average GDP growth of all goods producing industries (utilities, manufacturing and construction) was about 24%. The growth of utilities (30%) was above average but below construction.⁸⁶ The reforms in the electricity sector may have had an impact on the growth of utilities. A series of natural disasters, particularly in the latter part of this

⁸³ Consultations with the Ministry of Business, Innovation and Employment, Government of New Zealand, Electricity Authority, New Zealand Energy Retailers Association and New Zealand Institute of Economic Research, and Commerce Commission May 2016

⁸⁴ Ibid

⁸⁵ Ibid

⁸⁶ Ibid

period are likely to have contributed to the comparatively high growth in the construction sector reflecting recovery and rebuilding operations.

Between 1999 and 2014 labour productivity increased and capital productivity reached a peak of 5.3% in 2006. Data sources make it difficult to attribute changes to reforms per se. However reforms in the electricity sector may have had a contributory impact on the improvement in labour productivity over this period.

Table 6: Productivity growth in utilities sector 1999-2014

Year	Capital (%)	Labour (%)
1999	2.5	-2.5
2006	5.3	1.8
2010	3.4	0.6
2014	2.5	0.8

Source: Ministry of Business, Innovation and Employment, Government of New Zealand, Electricity Authority, New Zealand Energy Retailers Association and New Zealand Institute of Economic Research, and Commerce Commission May 2016

APEC Economic Policy Report Case Study

**Chinese Taipei:
Telecommunications Testing
and Certification Services**

EXECUTIVE SUMMARY

“Structural reform and services” is a major focus of the 2016 APEC Economic Policy Report (AEPR).¹ Structural reform in APEC relates to ‘institutional frameworks, regulations and government policy (designed) so that barriers to market-based incentives, competition, regional economic integration and improved economic performance are minimized’.

This case study examines the APEC Telecommunications Mutual Recognition Agreement (APEC TEL MRA) on structural reform in Testing and Certification Services (referred to throughout as Conformity Assessment Bodies, or CABs) in Chinese Taipei. The case study has a secondary focus on the impact of these reforms on telecommunications manufacturing in Chinese Taipei. It is one of 10 similar case studies on structural reform in services and in global value chains commissioned by APEC in 2016.

The case study was compiled through a combination of secondary research and primary interviews with 18 participants from regulators, CABs and telecommunications manufacturers in Chinese Taipei.

Technical Standards

The case study is placed against the background of a national and international regulatory framework for testing and certifying manufactured telecommunications equipment. This regulatory framework is built on international technical standards that require conformity assessment for telecommunications equipment including electromagnetic compatibility (EMC) and electrical safety in order to be able to operate as part of a telecommunications network anywhere in the world.

Regulators in importing economies may accept the testing reports and equipment certification conducted by CABs in exporting economies as part of the testing and certification process. Some, however, will only accept testing and certification completed in the importing economy. This non-tariff measure adds to the costs of manufacturers, and slows access by consumers to new products.

The APEC TEL MRA, finalised in 1999, aimed to overcome this barrier by enabling economies to agree bilaterally to recognise each other’s testing and certification reports. Under these bilateral agreements, CABs in each economy must comply with ISO/IEC 17025, a voluntary international standard “General requirements for the competence of testing and calibration laboratories”. Chinese Taipei signed bilateral agreements with Australia, Singapore, Hong Kong, China; and the United States in 1999 and with Canada in 2007.

Regulatory Reforms

In Chinese Taipei, a number of structural reforms in the telecommunications sector preceded the TEL MRA, in order to reduce or remove supply-side barriers. This included privatisation of the main telecommunications service provider, opening the market to other fixed line service providers, and creating a market for 2G and then 3G mobile services

¹ Announced at the second Structural Reform Ministerial Meeting held in Cebu, the Philippines in September 2015

Associated institutional reforms included establishment of the Bureau of Standards Metrology and Inspection (BSMI), the National Communications Commission (NCC) and the Taiwan Accreditation Foundation (TAF). BSMI and NCC are both regulators as required under the TEL MRA and TAF is the accreditor required under the TEL MRA.

Impacts

Since the signing of the TEL MRA bilateral agreements, the CAB industry has grown steadily and now numbers over 40 companies. These are a mix of SMEs, subsidiaries of larger companies based in Chinese Taipei, and subsidiaries of companies headquartered in Europe and the United States. CABs in Chinese Taipei now have 48 agreements with four partner economies (Australia; Singapore; Hong Kong, China; and the United States). These agreements accredit them for different types of technical testing of telecommunications equipment. CABs from Chinese Taipei are now the third largest national group of CABs recognised by the United States' Federal Communications Commission and also rank third on the list of CABs recognised by the Australian Communications and Media Authority (ACMA).

While the impact on the telecommunications manufacturing industry is difficult to determine, interviewees reported that testing times are halved when a Chinese Taipei-based CAB can complete the testing required on a new product. They also reported lower costs due to being able to complete testing domestically. There is also some indication that domestic testing has supported retention of research and development (R&D) in Chinese Taipei. Although trade and value add data are not sufficiently detailed to test this idea, the value of R&D and other business services to gross exports of computer, electronic and optical equipment from Chinese Taipei rose 8-fold from 1995 to 2008, plateaued in 2009 (possibly due to the global financial crisis) and then rose again another 1.5-fold from 2009 to 2011.

The impact on TAF has been significant as it must respond to changes in standards globally rather than just domestically.

Implementation Issues

Issues that emerged in the implementation of the APEC TEL MRA in Chinese Taipei included:

- reluctance of some economies to negotiate bilateral TEL MRAs due to the relatively small size of the Chinese Taipei's consumer markets at the time the APEC TEL MRA was introduced (hence making it of minor interest to larger exporters);
- the impact of fragmentation of global value chains on the approach taken by TAF to accrediting CABs;
- overlaps in the approach taken by NCC and BSMI, leading to difficulties in negotiating with some economies;
- a common world-wide, and ongoing, issue of post-market surveillance of products sold on the Internet;
- ongoing differences in technical standards in APEC and non-APEC economies; and
- ongoing non-tariff barriers affecting exports to and relationships with some APEC economies.

Conclusions and Lessons for Other Economies

The APEC TEL MRA was preceded by general telecommunications services reforms which opened up the national telecommunications service provider of the time to competition and made it easier for telecommunications manufacturers to import components. The APEC TEL MRA which followed these reforms then provided the framework through which Chinese Taipei's CAB industry could build capability and ensure that this occurred in line with international standards.

While the regulatory system is transparent and responsive, the division of responsibilities between NCC and BSMI has prevented Chinese Taipei from taking full advantage of the APEC TEL MRA. The government has begun amending the law in order to overcome the problem.

The reforms enacted and the broader market-focused approach of Chinese Taipei have allowed manufacturers in Chinese Taipei to complete their product testing domestically, thus enabling research and development to remain local and lowering testing costs and speeding the path to market. The Government's broad stated intention at the time was to grow the telecommunications manufacturing sector to drive down the cost of consumer access to telecommunications services and equipment. The NCC, however, had no manufacturing or service (CAB) industry impact measures in place as these had limited relevance to its remit. The data available to measure the impact on CABs in Chinese Taipei has been a side-effect of transparent policies operating in other economies, for example regulators in the United States and Australia.

The main lessons for other economies considering such changes are as follows:

- regulators need to consider how emerging technical changes (in this case the convergence of IT and telecommunications technologies) will affect the scope of what they regulate;
- regulators and accreditors need to understand the industrial structures of the companies they are regulating or accrediting, including their geographic reach and the implications of accrediting laboratories vs whole companies;
- it is important for the accrediting agency playing a pro-active role in supporting development of industry capacity as standards change. Linked to this issue is the desirability of developing key indicators that will enable regulators to assess the impact on both manufacturers and CABs from the commencement of these reforms;
- post-market surveillance should be considered by the regulator if regulatory or technical change (i.e. online purchasing) increases the risk of faulty products entering the domestic market; and
- regulators should ensure that manufacturing and CABs are involved in relevant APEC working groups and other formal or informal information-sharing events so that industry policy objectives can be addressed.

1. INTRODUCTION

This is a case study of the impact of the APEC Telecommunications Mutual Recognition Agreement (APEC TEL MRA)² on Testing and Certification Services (referred to throughout as Conformity Assessment Bodies, or CABs) in Chinese Taipei.³ An MRA is an arrangement where participating economies state their willingness to recognise the results of conformity assessment testing conducted by authorised organisations in specific other economies.

The case study also comments on the impact of structural reform in CABs on the telecommunications manufacturing industry in Chinese Taipei. Chinese Taipei is a suitable case study because:

- it has implemented the APEC Telecommunication Mutual Recognition Agreement (APEC TEL MRA) progressively since the latter came into force in 1999 and its CABs have been recognised by several MRA partners (Hong Kong, China; Canada; Singapore; Australia; and the United States);
- the case study can explore the impact on CABs as service firms including their contribution to global value chains;
- the findings of the case study may be able to be generalised to other MRAs; and
- there is potential to also explore impact on the telecommunications sector as a major user of testing and certification services.

1.1 OBJECTIVES

Structural reform in APEC, as defined by APEC Leaders, relates to ‘institutional frameworks, regulations and government policy (designed) so that barriers to market-based incentives, competition, regional economic integration and improved economic performance are minimized’.⁴ The aim is to avoid ‘excessive regulation, poor economic legal infrastructure and governance arrangements (in both public and private sectors), unclear property rights and the lack of effective laws to foster competition’. APEC has identified six key components of the structural reform agenda; our comments on the relevance of these to this case study are included below:⁵

1. removing barriers to the entry of domestic new entrants, and allowing existing firms to exit the marketplace in an orderly fashion if the market dictates that they cannot survive;
2. removing barriers to foreign competition, be it from cross-border trade or from foreign direct investment, and not just for particular trading partners;
3. ensuring that the minimum regulation exists to guide economic outcomes in those circumstances where markets alone may not deliver the most efficient outcomes;
4. ensuring that the right institutions are in place to review and remove the unnecessary impediments to the functioning of markets;

² Published in May 1988, APEC Publication APEC#202-TC-01.1

³ Conformity assessment bodies (CABs) is a term used widely in the telecommunications industry to refer to those organisations which test telecommunications product for compliance with international safety and operational standards. Internationally, CABs form part of the wider testing and certification industry, which encompasses inspections of manufactured goods and factories, and certification of processes and people. Under the APEC TEL MRA, Conformity Assessment Body is the formal term used to describe that performs conformity assessment to an importing Party's Technical Regulations.

⁴ APEC (2011): Impacts and Benefits of Structural Reform in Transport, Energy and Telecommunications Sectors in APEC Economies, APEC Policy Support Unit.

⁵ Ibid., Box 1.2

5. ensuring that the right institutions are in place to design, implement, enforce and review the functioning of more appropriate regulation; and
6. developing transparency of institutional processes, including public sector management, so as to better serve the public good.

These case studies on structural reform in services sectors in APEC economies have been commissioned to provide in-depth expert analysis of successful services reforms and structural change in global value chains in the region. They will complement Individual Economy Reports (IERs), to be submitted by each economy as part of the APEC Economic Policy Report (AEPR) process. Drawing on findings from the case studies and IERs, APEC will study lessons learnt and recommend good regulatory practices to undertake structural reform in services. The aim is to be able to comment on prioritization and sequencing of reform measures, balancing of competing policy objectives, adjustment issues and areas where targeted technical assistance/capacity building would be useful for economies undertaking similar reforms in future.

This project complements a parallel APEC project titled “Case Studies on the Role of Services Trade in Global Value Chains (GVCs)” which aims to analyse case studies of market-opening services reforms in the APEC region and the effect they have had on GVCs.

1.2 METHOD

This case study gathered data through a mix of critical literature analysis and semi-structured interviews.

The interviews confirmed and commented on material from secondary sources and enabled us to explore and gather data on issues omitted from existing public studies, particularly economic impact measures. Interviews were semi-structured, to allow participants to bring in new information and enable the interviewer to expand on issues that emerged during the interview. Interviews also sought technical details on the nature of regulatory reform in Chinese Taipei and how the TEL MRA linked to structural changes in service sectors. A summary of the topics covered in the interviews is at Annex 1.

Potential interviewees were identified from government and industry websites, APEC reports (e.g. APEC Telecommunications Working Group members) and the academic literature and were initially approached by a written letter signed by the Policy Support Unit (PSU). Field work was conducted in May in Chinese Taipei.

The organisations that were eventually interviewed are listed in Table 1. The list includes the two relevant government regulators and the primary standards accreditation body in Chinese Taipei, three companies long-established as CABs and two manufacturers who use CAB services to support their export-oriented businesses. In all, 18 people were interviewed in these organisations. Representatives of regulators in Singapore, Hong Kong (China), and Canada, all of which have signed bilateral MRA agreements with Chinese Taipei, declined our request for interviews.

Table 1: Organisations interviewed during field work

Organisation	Relevance	Reason for inclusion
National Communications Commission	Government regulator	The key regulatory agency for telecommunications and broadcasting
Bureau of Standards, Metrology and Inspection	Government regulator	National standards for certification and testing of electrical safety
Taiwan Accreditation Foundation (TAF)	Not-for-profit	Government-designated not-for-profit which accredits product certification bodies to ISO/IEC 17065 and laboratories to ISO/IEC 17025 and sponsors research into the impact of the APEC TEL MRA.
A Test Lab Techno Corp. (ATL)	Accredited Testing Laboratory (CAB) under the APEC TEL MRA Recognised Certification Body	Holds multiple accreditations under international standards and with a range of overseas standards organisations. Under APEC TEL MRA, the lab holds four accreditations with three economies, all achieved in 2010.
Bureau Veritas Consumer Products (Hong Kong, China) Limited	Accredited Testing Laboratory (CAB) under the APEC TEL MRA Recognised Certification Body	Holds nine accreditations across two accredited laboratories at HsinChu and Lin Kou under the APEC TEL MRA. Under APEC TEL MRA is accredited with four economies.
Communications Global Certification Inc. (CGC)	Accredited Testing Laboratory (CAB). Recognised Calibration Laboratory	Multiple accreditations under international standards.
ACER Inc.	Manufacturer	Manufacturer and exporter of telecommunications equipment (e.g. mobile phones) and computers with telecommunications capability
ASUS	Manufacturer	Manufacturer and exporter of telecommunications equipment (e.g. mobile phones) and computers with telecommunications capability

Source: Websites for the different organisations and the National Communications Commission (Chinese Taipei)⁶

Limitations of the method

The method has three main potential limitations: availability of statistics to provide objective verification of impacts, impacts of the passage of time, and the ability to directly distinguish changes brought about by the APEC TEL MRA from the effects of broader changes in the economy and the telecommunications sector.

⁶ National Communications Commission (2016): List of Telecommunication Equipment and Test Labs & Certification Bodies, Available from: http://www.ncc.gov.tw/english/gradation.aspx?site_content_sn=81&is_history=0 (Accessed May 2016)

First, we had expected to be able to identify some impacts of the APEC TEL MRA from official telecommunications equipment export statistics collected by Chinese Taipei's statistic agency and international organisations such as United Nations Conference on Trade and Development (UNCTAD). While good statistical collections are available, there is no single agreed definition of telecommunications equipment in statistical collections^{7,8,9} and the telecommunications manufacturing figures are grouped with data from computing and optical equipment manufacturers. Further, the relatively long (five yearly) time between national collections by the national statistical agency¹⁰ means that the data sets are not frequent enough to be able to draw conclusions on cause and effect over the time period considered for this case study. Further comment about the availability and use of sources of national manufacturing statistics is in Annex 2. As the project progressed it became evident that data specifically about CABs from importing economies proved to be more reliable and was used in preference to manufacturing statistics.

Second, case studies are built on a combination of secondary sources and primary research. Of necessity, primary research is conducted through interviews with those involved at the time, and it is recognized that individual perceptions may lead to different interpretations of events by different people. We therefore used written reports as the main data source and asked interviewees to confirm or elaborate on these data, wherever possible. However, only a few interviewees had the sufficient length of time in the industry to fully track developments of the APEC TEL MRA since its inception, and comment on the industry changes that resulted.

Third, it was recognized that the impact of the APEC TEL MRA on trade data was likely to be minor when compared to other events such as the Asian Financial Crisis (1997) on pre-MRA data and the Global Financial Crisis (2008) on post-MRA data. Given the limited use made of trade data in the final case study, these issues proved inconsequential.

1.3 EXCLUSIONS

APEC members have negotiated and signed two other telecommunications-related MRAs, which have been excluded from this case study. The reasons for this are outlined below.

In 2002, APEC members commenced development of an MRA in Conformity Assessment of Electrical and Electronic Equipment (MRA CAEEE) as part of the 10th APEC leaders' Declaration.¹¹ Only 15 APEC economies have signed this arrangement. Of these, only Australia, New Zealand and Singapore have agreed on mutual recognition of test reports and mutual recognition of certification.¹² The focussed nature of the APEC TEL MRA and the

⁷ OECD (1991): Telecommunications Equipment: Changing Markets and Trade Structures, No. 24 OECD Publishing, Paris, p.29.

⁸ Gartner (2016): Telecommunications Equipment, Available from <http://www.gartner.com/it-glossary/telecommunications-equipment> (Accessed June 2016)

⁹ The New York Times (2016): Communications Equipment, Available from: <http://markets.on.nytimes.com/research/markets/usmarkets/industry.asp?industry=57121> (Accessed June 2016)

¹⁰ See National Statistics, Republic of China (Taiwan), www.eng.stat.gov.tw (Accessed June 2016)

¹¹ APEC (2015): APEC Electrical and Electronic MRA, APEC Committee on Trade and Investment. Available from: http://www.apec.org/Groups/Committee-on-Trade-and-Investment/Sub-Committee-on-Standards-and-Conformance/apec_eemra.aspx (Accessed June 2016)

¹² New Zealand Ministry of Business, Innovation and Employment (2015): APEC Mutual Recognition Arrangement for Electrical and Electronic Equipment, <http://www.mbie.govt.nz/info-services/business/trade-tariffs/trade-environment/trade-agreements-and-partnerships/apec-mutual-recognition-arrangement-for-electric-and-electronic-equipment> (Accessed June 2016, last updated December 2015)

broader buy-in from APEC economies made the TEL MRA a more suitable focus for a case study than the CAEEE.

In 2010, APEC also endorsed the MRA for Equivalence of Technical Requirements for Telecommunications (ETR MRA) which aims to build upon APEC TEL MRA through further reducing costs associated with the conformity assessment process by promoting the recognition of equivalent regulatory requirements.¹³ Although APEC members have endorsed the ETR MRA, no arrangements have been made to give action to the agreement, and thus it is excluded from our analysis.

¹³ APEC (2010): Mutual Recognition Arrangements for Equivalence of Technical Requirements, APEC Telecommunications and Information Working Group.

2. OVERVIEW OF TELECOMMUNICATIONS STANDARDS

Telecommunications equipment is highly complex and given the global nature of the industry, products built in one economy must be inter-operable with those built elsewhere. Over the years a complex set of international standards has been developed, based on technical requirements. This section provides an outline of these standards, which testing service organisations (CABs) are required to meet in order to form part of global value chains in this industry.

2.1 STANDARDS

International professional technical organisations have led the way in designing global technical standards. The key standards organisations relevant to this case study are shown in **Box 2.**

Box 1: Major telecommunications standards technical organizations

3rd Generation Partnership Project (3GPP) – a standards body that works within the scope of the International Telecommunications Union (ITU) to develop wireless technologies that build upon the base provided by the Global System for Mobile communication (GSM).

Global Certification Forum (GCF) – founded in 1999 as a partnership between mobile network operators, mobile device manufacturers and the testing industry, to create an independent certification program to help ensure interoperability between mobile devices and networks.

ITU – an organisation, founded in 1865 and now under the umbrella of the United Nations, which coordinates global telecommunication operations and services.

PTCRB – established in 1997 by North American mobile phone operators as their certification forum.

Both GCF and PTCRB have developed standards that comply with the overarching framework created by 3GPP.

In telecommunications, standards for testing set by governments are based on technical standards set by the international bodies outlined in **Error! Reference source not found.** Different economies may then adopt international standards unchanged, amend them for domestic application, or develop their own standards. In theory, the existence of these standards means that a manufacturer can build a piece of telecommunications equipment (e.g. a mobile phone) have it tested once and, once approved, sell it world-wide, because the standards which have to be met in one economy are the same, or very similar to, those in another (practical differences, such as different power supplies, aside).

According to the World Trade Organisation (WTO), over 80 economies have domestic product regulations for telecommunications product safety and interoperability and while most accept international standards, some national standards have significant deviations which act as non-tariff barriers to global sales.¹⁴

Technical standards have been developed to ensure that telecommunications equipment is safe for humans to use, can be used without interference from other equipment, and can operate as

¹⁴ Ibid, slide 6

part of a telecommunications network. Examples of relevant standards for mobile devices (the main focus of the testing organisations featured in this case study) are in **Error! Reference source not found.**. These standards are covered in more detail at Annex .

Box 2. Sample telecommunications standards

Bluetooth – the standard for short-range wireless interconnection of mobile phones, computers and other electronic devices.

Global Positioning System (GPS) and other satellite receiver testing – method of reproducing the environment of a GPS or other satellite receiver by modelling vehicle and satellite motion, signal characteristics, atmospheric and other effects.

GSM – the most widely used of the three digital wireless telephony technologies.

Long-term evolution (LTE) – the 4G telecommunications standard.

Multimedia Messaging Service (MMS) – a standard way to send messages, photos and video to and from mobile phones over a cellular network.

Over the Air (OTA) – a method of measurement for radiated radio frequency power and receiver performance

Specific Absorption Rate (SAR) – measures electronic energy absorbed by a body such as the human body.

Wide-band Code-division Multiple Access 3G Technology (W-CDMA) – another digital wireless telephony technology, used by the 3G network co-developed by the 3rd Generation Partnership Project (3GPP) members.. The *CDMA* technology allows numerous signals to occupy a single transmission channel.

2.2 CONFORMANCE TESTING

An important step in the manufacture of telecommunications products, including mobile phones, is conformance testing (**Error! Reference source not found.**). Though a relatively small part of the total cost of production for a product, conformance testing is a step that must be passed successfully if the product is to be granted approval to be sold. Thus, conformance testing can be seen as a go/no go ‘gate’ through which a product must pass before any income can be made from the research and development (R&D), design and manufacture of a telecommunications product.

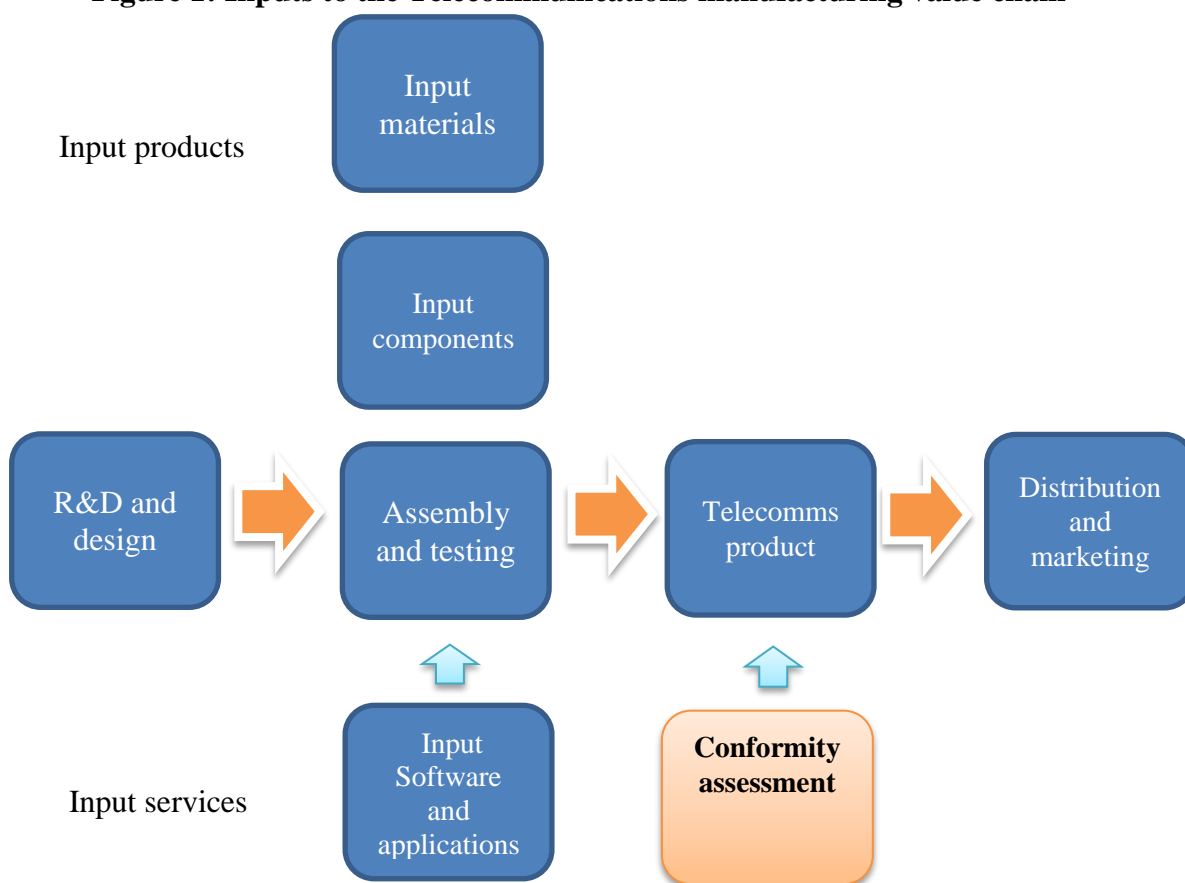
Box 3. Defining conformance testing

Conformance testing is a series of technical tests which ensures that a product, or part of a product (e.g. a component such as an antenna or SIM card) meets a defined set of standards. These standards are commonly defined by large, independent technical organisations. Testing brings a scientific approach and demands tight control over external influences and to assure repeatability and accuracy of results.

When a new component is introduced (e.g. introduction of Bluetooth in around 2001) then the component and its interactions with the existing product must be tested again. Similarly, if software which controls operation of a product is changed, then it must be re-tested.

The role of “conformance testing” (or “conformity assessment”) is shown in Figure 1. Conformance testing is the last step through which products must go before they can be approved for sale. Conformance testing is essential for information and telecommunications products as they are designed for the global market, they have a large number of components drawn from global supply chains, they are constantly changing in response to both technical developments and consumer demands, and they can be sold in different product configurations that are relevant to particular market groups (industry or consumer).¹⁵

Figure 1: Inputs to the Telecommunications manufacturing value chain



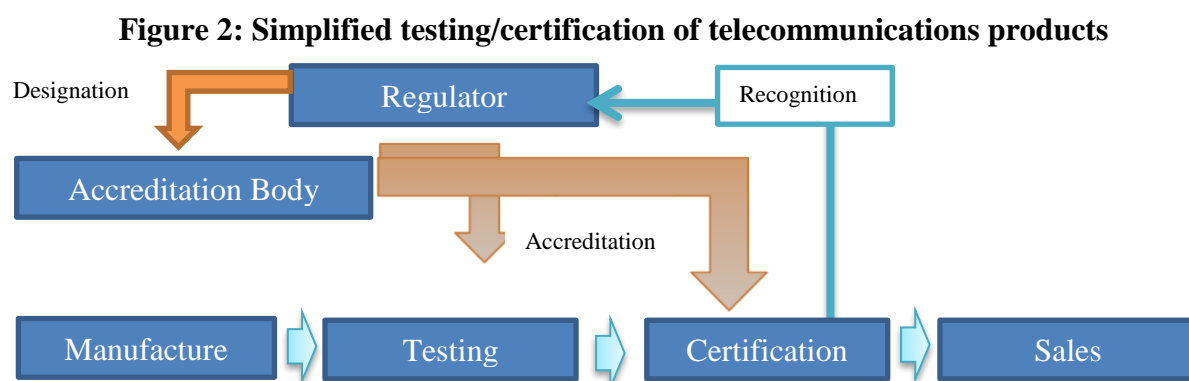
¹⁵ Rosenberg, J (2015): Conformity Assessment – the Impact of Trade in ICT, Presentation by the Information Technology Industry Council to the WTO Committee of Participants on the Expansion of Trade in Information Technology Products, Workshop on Non-Tariff Barriers Affecting Trade in ICT Products, 7 May 2015

Because of the importance of testing to product (and hence consumer) safety, governments require conformance tests to be conducted by organisations which have high technical knowledge. These organisations are called by the generic term CABs.

CABs put products through a series of technical tests to ensure that they meet all the required standards. Such tests can take many hours. For example, a mobile phone may need 1000 hours of testing to ensure that it meets all the required technical standards for power use, ability to operate under a range of environmental conditions and ability to link with other parts of the telecommunications network. It must also ensure that it is safe for humans (regarding radiation emissions, operating temperature etc.). According to interviewees, testing is expensive, typically several hundred thousand US dollars¹⁶ for each new product.

2.3 CERTIFICATION

If the product passes all the required technical tests, the final step in the system is certification. This is an administrative process through which a certifier, which may be the manufacturer, submits a dossier to government or an approved third party Certification Body to confirm that all the required tests have been passed satisfactorily. It is only after the approved third party certifies the product conforms with the required standards that it can be sold to consumers (Figure 2).



Source: derived from Sheng (2015) How Regulators in the Asia Pacific leverage the MRA and Accreditation to reduce NTBs on ICT products. Presentation to WTO

2.4 THE CONFORMITY ASSESSMENT INDUSTRY

The telecommunications manufacturing value chain is highly fragmented, due to outsourcing by key manufacturers. However, the manufacturing industry is concentrated geographically, due to the dominance of a small number of firms in the overall market (particularly for mobile phones, which is the sub-sector where Chinese Taipei has grown significantly).¹⁷

There have been major changes over the last 15 years. In 2000, the geographic hub of mobile phone manufacture was Germany, the UK and Finland; since then it has moved to China, South Korea, Hong Kong China, Chinese Taipei, Hungary and Mexico.¹⁸ At the same time the

¹⁶ Information about the actual costs was sparse and some respondents maintained that the costs were significantly lower

¹⁷ Lee, J and Gereffi G (2013): The co-evolution of concentration in mobile phone global value chains and its impact of social upgrading in developing economies, part of series “Capturing the Gains – Economic and Social Upgrading in Global Production Networks”, March 2013, Working Paper 25, www.capturingthegains.org

¹⁸ Ibid page 5 and Fig. 3, using UN Comtrade Data. Chinese Taipei is not named in this data set but is included as the sole entry in “Other Asia nec” (not elsewhere classified)

industry has become more concentrated with the five largest exporting economies comprising 73% of exports in 2010 compared to only 52% in 2001.

In each location where manufacturing has grown, the associated contract manufacturing services have also become geographically consolidated. In many cases these companies followed their manufacturers when the latter set up new factories in lower cost locations. An example from broader telecommunications manufacturing is Foxconn, a contract manufacturing firm in Chinese Taipei which is now the world's third largest contract electronics manufacturer and supplies contract manufacturing services to manufacturers based in Brazil, Mexico, throughout Asia (including nine factories in China and seven in Malaysia) and Europe (four economies). Foxconn accounts for 44% of the global electronic manufacturing services market in 2010 and its income is tens of billions of dollars.

CABs are companies which have a high degree of engineering skill and are authorized to test and certify products for conformity with domestic or international technical standards. Barriers to entry are high, as each test that a CAB is authorized to conduct needs to establish a separate dedicated laboratory. According to interviewees, setting up these laboratories is very expensive – for example to set up a radio-frequency (RF) performance tester requires an investment of around US\$1.5M to purchase equipment, train staff and develop testing protocols over a period of more than a year, with new equipment imported from the USA, UK, Japan and Germany.

While the CABs can test telecommunications equipment for compliance with international and/or domestic technical standards, regulators need to ensure that the CABs themselves are competent to do this testing, and that their reports are reliable. This step is called accreditation and it is the final level of public control in the conformity assessment system. Best practice deems that accreditation of CABs is determined by a public or not-for-profit organisation as it is the final public sign that the CABs have the technical capacity to perform their services.

In practice, CABs are accredited by auditing their compliance with an international quality standard. In this case, the relevant standard is ISO/IEC 17025, “General requirements for the competence of testing and calibration laboratories”.¹⁹ While voluntary, the ISO standards have great sway over the industry globally. They are generally accepted as a minimum standard that a CAB needs to meet to be able to sell to a large manufacturer, which in turn is trying to export product internationally. ISO/IEC 17025 covers the level of qualifications of staff, the appropriateness of testing equipment, the overarching quality assurance system, sampling and inspection procedures, traceability of measurements to international standards, recording and reporting procedures and systems to safeguard integrity and probity.

Standards auditors check and certify CABs for compliance with this standard by a certifying organisation (e.g. a standards auditor). A testing or calibration laboratory that has been accredited to comply with ISO/IEC 17025 meets both the technical competence requirements and management system requirements that are necessary for it to deliver technically valid tests and calibrations, using equipment that has the required level of accuracy and can distinguish compliance from non-compliance.²⁰

¹⁹ ISO (2010) ISO/IEC 17025:2005 – General requirements for the compliance of testing and certification laboratories. Available from: http://www.iso.org/iso/catalogue_detail.htm?csnumber=39883 (Accessed June 2016)

²⁰ Lin, I-J (2013): How to Educate Testing and Medical Laboratories Together with Accredited Calibration Laboratories, NCSL Annual conference 2013

Once CABs are accredited as compliant with ISO/IEC 17025, regulators then accept the validity of their testing reports, particularly if the CAB is based in an exporting economy, rather than in the regulator's own jurisdiction. Requiring compliance with a recognised ISO standard reduces the risk to the regulator of accepting a testing or certification document from an unknown CAB.

2.5 PRACTICAL IMPLICATIONS FOR EXPORTERS

The conformance testing and certification process may be efficient domestically, but if regulators in an importing economy will not accept the CAB's testing reports, then there can be delays and exporting companies can incur additional costs as products must be tested and certified in the importing economy. The barriers can include redundant or unnecessary testing procedures, additional administrative burdens, delays in importing product with stock being held at frontiers while awaiting testing and clearance, and other costs which may make export uneconomic.²¹ For example, interviewees reported transport costs were significant because their products contain batteries, and as such cannot be posted. Hence, all products sent overseas for testing are sent by courier, or in one case must be hand delivered. These restrictions also extend the testing cycle.

Under such conditions, domestic CABs may test the product for the domestic market, but CABs in the importing market must also test and certify the product before the regulator in the importing economy will approve the product for sale. If there are problems with any of the tests, the manufacturer must send an engineer overseas to address the issues. One interviewee maintained that they had never known of a product that passed all the tests at its first assessment, despite the best efforts of engineers and designers, so the probability of further engineering being required on a new product is high.

In the absence of MRAs, re-testing and approval delays can add significant costs to the underlying costs of new telecommunications products. The Information Technology Industry Council estimates that fixed costs for a single economy can be over US\$10 million to meet conformity assessment requirements, and market delays and other losses can be in the range of US\$100,000 to US\$10 million. This, of course, reduces the availability of new product in some markets and also increases the price of the goods once landed.²² The OECD estimates that differing standards and technical requirements across markets, which lead to the need for multiple testing and certification procedures, account for 2% to 10% of the costs of production.²³ World Bank modelling has proposed that a 1% increase in on-time compliance costs raises production costs by 0.6%.²⁴ Other papers (not in telecommunications) show direct links between a firm's decision to export and the existence of quality standards and testing procedures by the importing economy.²⁵

The high costs of certifying products in both exporting and importing economies, and the amount of time this added to product approvals, was one of the key reasons APEC pursued development of the TEL MRA.

²¹ Rosenberg (2015) op cit slide 7

²² Ibid

²³ OECD (1997): Product Standards, Conformity Assessment and Regulatory Reform – in Sectoral Studies Chapter 6 vol 1, OECD, Paris

²⁴ Maskus, K, Otsuki, T and Wilson, J (2004): The Costs of Complying with Foreign Product Standards for Firms in Developing Countries – an Econometric Study, 19 May 2004

²⁵ Wilson, J (2005): Standards and Trade – Empirical Evidence and Case Studies, Development Economics Research Group, the World Bank, ERS Conference 3 November 2005

3. THE APEC TEL MRA

3.1 OVERVIEW OF MRAS

The APEC TEL MRA was the first multilateral agreement of its type in the world. Its intent is to reduce the costs of conformance testing where there were existing barriers to tests being accepted between economies. The aim was to streamline the flow of products between the parties to the MRA, promote market access, speed access to markets, help spread best practices and to reduce overall regulatory burdens.^{26,27}

The APEC TEL MRAs was expected to bring a range of benefits to manufacturers, regulators, consumers, and CABs²⁸ (Table 2).

Table 2: Expected Benefits of the APEC TEL MRA

Stakeholder	Expected benefit of conformity regulations
Manufacturers	<ol style="list-style-type: none"> 1. Testing and certification can be done once for multiple markets, reducing certification and compliance costs 2. Enhanced access to exports and faster access to international markets, particularly valuable for sectors with short product life cycles. 3. It can reduce the time to market for manufacturers of telecommunications equipment.
Regulators	<ol style="list-style-type: none"> 1. Fewer regulatory resources required. 2. Savings in regulatory costs can be reallocated to other priority areas. 3. Engagement with other regulators can enhance knowledge of global trends and build capacity in regulatory systems. 4. Opportunity for further harmonisation
CABs	<ol style="list-style-type: none"> 1. CABs can provide higher quality and higher value services
Consumers	<ol style="list-style-type: none"> 1. An increased range of available technology 2. Faster access to new telecommunication equipment at a lower cost 3. Faster development of telecommunications and internet infrastructure.

Source: APEC (2016): APEC-TEL MRA, APEC Telecommunications and Information Working Group

The expected benefits are supported by studies which have shown that where an exporting economy complies with international standards there is an increase in exports, and at the same time when importing economies adopt international standards it increases imports. In other words, international standards have an overall positive effect on the extent of world trade.²⁹

²⁶ APEC (1998): Mutual Recognition Arrangement for Conformity Assessment of Telecommunications Equipment, APEC Telecommunications and Information Working Group.

²⁷ McCrum, W and Kwan, A (2013): Guidelines for the Development, Implementation and Management of a Mutual Recognition Agreement/Arrangement on Conformity Assessment of Telecommunications Equipment, International Telecommunications Union

²⁸ We follow APEC's definition that Conformity Assessment Body is "a body, which may include a third party or a supplier's testing laboratory, or a certification body, that performs conformity assessment to an importing Party's Technical Regulations".

²⁹ Swann, GP (2010): International Standards and Trade – a Review of the Empirical Literature, OECD Trade Policy Working Paper No. 97, OECD Paris

Other studies have modelled the impact of MRAs specifically, and propose that they produce trade diversion for non-participants, particularly those in developing economies.³⁰

APEC formed the MRA Taskforce in 1996 under the APEC Telecommunications Working Group, with representatives from regulators in all 21 APEC member economies, led by Canada. In May 1998 the Taskforce completed the APEC TEL MRA basic framework, guiding principles and content. In June 1998, the APEC telecommunications ministers issued the “Ministerial Declaration on the APEC MRA for Conformity Assessment of Telecommunications Equipment” expressing support for these measures aimed at liberalizing telecommunications, and also making clear that APEC members would voluntarily implement the MRA schedule.

In the meantime, several economies had already signed bilateral MRAs. For example, Canada signed an MRA in telecommunications with South Korea in 1997 and with the European Union (not part of APEC) in 1998.³¹ The Korean agreement was then superseded by a bilateral arrangement under the APEC TEL MRA in 2002. By 2016, all 21 APEC member economies have signed the APEC TEL MRA.³² The United States (United States) has also signed non APEC TEL MRA agreements with Japan and Mexico.

3.2 IMPLEMENTATION OF THE APEC TEL MRA

The APEC TEL MRA is now in place as a framework MRA under which APEC member economies can recognise each other’s conformity testing of telecommunications equipment with the aim of facilitating trade. The APEC TEL MRA is implemented through a series of reciprocal bilateral agreements negotiated between APEC member economies. Member economies which sign bilateral MRAs must establish legally binding regulations and systems in their own economies to put the agreements into practice.

Equipment covered

The MRA covers the electromagnetic compatibility (EMC), electrical safety and telecommunications aspects of “all equipment subject to telecommunications regulation including wireline and wireless, terrestrial and satellite equipment.”³³ This may include radio equipment, telecommunications equipment, and telephone terminal equipment, which may also be governed by electrical safety regulations.³⁴

Such equipment can be broadly classified into:³⁵

- terminal attachment and radio equipment (equipment which connects to the telecommunications network) including telephones, modems, fax machines (wired or radio-based) and satellite equipment whether or not it is attached to a telecommunications network;

³⁰ Pacheco, A (2006): Mutual Recognition Agreements and Trade Diversion – Consequences for Developing Nations, HEI Working Paper 20/2006, Graduate Institute of International Studies, Geneva

³¹ About MRAs – Canadian government website http://www.ic.gc.ca/eic/site/mra-arm.nsf/eng/h_nj00048.html (Accessed June 2016)

³² APEC (1998): op. cit.

³³ *ibid.*

³⁴ APEC (2016): APEC-TEL MRA, APEC Telecommunications and Information Working Group, Available from: http://www.apec.org/groups/som-steering-committee-on-economic-and-technical-cooperation/Working-groups/telecommunications-and-Information/apec_tel-mra.aspx (Accessed June 2016)

³⁵ McCrum and Kwan (2013) section 3.2

- EMC equipment; and
- electrical safety equipment.

Provisions

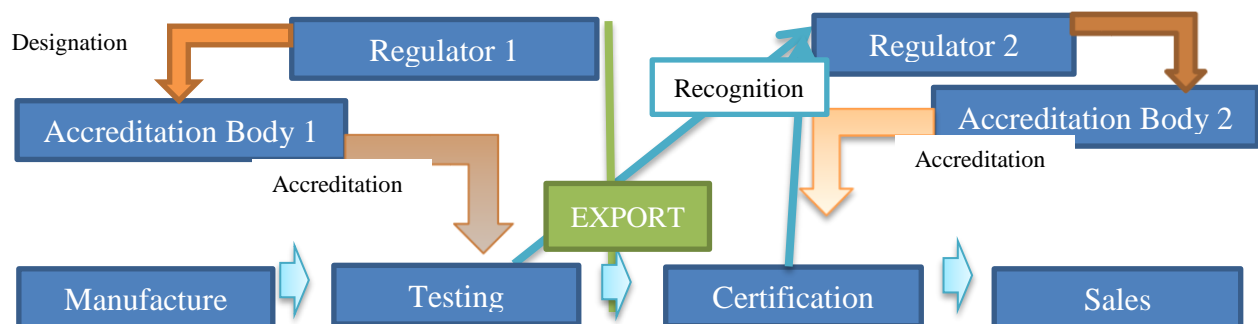
The main provisions of the agreement apply to the designation and monitoring of CABs and procedures to mutually recognise CABs. The MRA sets out model administrative arrangements and transition procedures as well as overlying requirements for demonstrating competence of both testing and certification bodies. The MRA also maintains the rights of regulators to establish surveillance, recalls and other measures if equipment that has been certified is found to not meet the required regulations. Such actions are expected to comply with ISO/IEC 17065,³⁶ which places limits on testing regimes.

Phases

Members can agree bilaterally to recognise two levels of certification, known as Phase I and Phase 2.

In Phase 1, member economies recognise conformance testing performed in the exporting economy and will accept test reports from CABs in that economy (Figure 3).

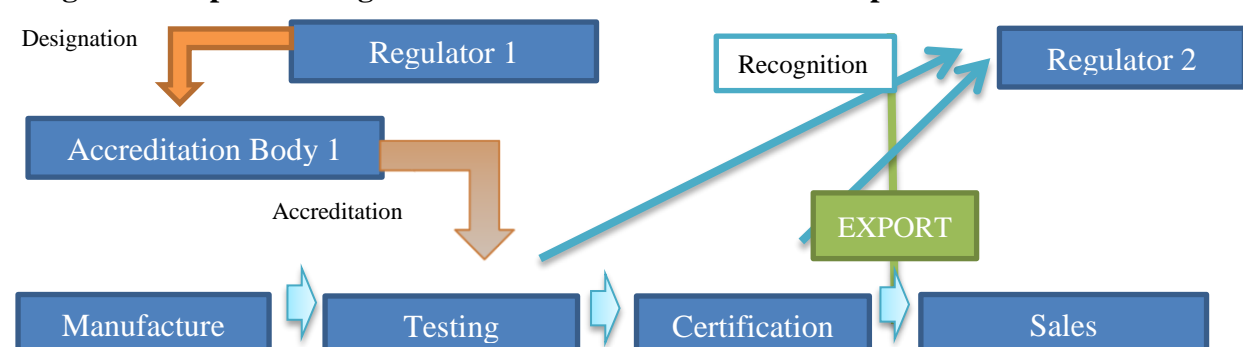
Figure 3: Steps in testing/certification of telecommunications products under Phase 1



Source: derived from Sheng (2015) op cit

In Phase 2, member economies recognise and accept equipment certification and recognise the bodies that provide that certification (Figure 4).

Figure 4: Steps in testing/certification of telecommunications products under Phase 2



³⁶ International Standards Organisation (1996): General Requirements for Bodies Operating Product Certification Systems, modified by ISO/IEC 17065:2012

Source: derived from Sheng (2015) op cit

While the use of the terms Phase 1 and Phase 2 implies that economies enter agreements sequentially, this is not required. Economies can agree to a Phase 2 arrangement without having a Phase 1 agreement first (e.g. Chinese Taipei and Canada).

As of September 2005, 19 of the 21 APEC economies (i.e. all except for Chile and Russia) had already stated they were participating in the MRA Phase 1. With regard to implementing Phase 2, “mutual recognition of certification bodies”, only five economies have made clear their willingness to participate: Canada, Hong Kong, China; Singapore, the United States and Chinese Taipei.

Administrative Framework for Implementation

The APEC TEL MRA sets out a number of organisations which are needed to successfully implement the MRA in member economies:³⁷

- Regulatory authority: an entity with legal authority for regulating telecommunications;
- Joint committee: a committee of the parties established to manage initiation and implementation of the MRA;
- Designating authority: a government authority or body appointed by government to designate a CAB to perform conformity testing or certification under the MRA;
- Accreditation body: a body which is responsible for assessing competencies of testing and certification bodies; and
- CAB: a third party or a supplier’s testing laboratory designated or a certification body that can perform conformity assessment.

Different economies can adopt different schemes under the terms of the APEC TEL MRA. The next Chapter discusses how this has been achieved in Chinese Taipei and what conditions applied in Chinese Taipei prior to the MRA’s introduction.

³⁷ McCrum and Kwang (2013) op cit

4. THE CHINESE TAIPEI TEL MRA

This chapter discusses the development and implementation of the APEC TEL MRA in Chinese Taipei, including the drivers for the reform, the implementation steps, the current situation and the lessons learned. The following chapter further investigates the impact on Chinese Taipei since the APEC TEL MRA was implemented.

4.1 PRE-IMPLEMENTATION

Chinese Taipei was closely involved in the development of the structure of the APEC TEL MRA and the associated implementation guidelines. The APEC TEL MRA development occurred when Chinese Taipei was seeking economic growth through a combination of deregulation and industry support programs.

The stated purpose for Chinese Taipei's participation in the APEC TEL MRA was to "achieve the goal of reaching parity with international norms, reduce the cost and time schedules for Chinese Taipei manufacturers in overseas sales of their products, expand Chinese Taipei's overseas trade network for telecommunications equipment and grow the capacity of domestic testing labs and certification bodies."³⁸ While these are largely demand-side issues, the removal of supply-side barriers was an important first step in increasing the capacity for manufacture of telecommunications products in Chinese Taipei.

Supply-side barriers

Supply-side barriers are those which relate to the establishment and management of a market by government and associated regulatory agencies. Chinese Taipei's significant structural reform in telecommunications aimed to remove such barriers, commencing in the mid-1990s and peaking in the period 1995-1999 (Table 3). The aim of this reform was to enable growth in the provision of telecommunications services as part of overall economic restructuring.

Table 3: Key Structural Reforms in Telecommunications, Chinese Taipei, 1996-2009

	1987-1994	1995-1999	2000-2004	2005-2009
Basic telephony	Deregulation of CPE markets reduce restrictions on international access	Telecommunications Act, Organizational Statute of the DGT, Statute establishing Chung-Wa Telecom Co., Ltd	Fixed line market liberalized and privatisation of Chung-Wa Telecom Acceded to WTO	
Mobile phone market	Paging service liberalised	2G market licensed	3G market liberalised	Wireless broadband access licensed
Manufacturing	Lift restrictions on import of components	Manufacturers from US and elsewhere allowed to set up in Chinese Taipei		

³⁸ Ibid, page 21

Institutional structures		DGT established	TAF formed	DGT replaced by NCC
APEC TEL MRA		First Phase 1 agreements		First phase 2 agreement

Source: Derived from Table 19.1 in Lee (op cit), Chen, (2000) and author's analysis

During this time the government's Directorate General of Telecommunications (DGT) lost its monopoly power as a result of the 1996 Telecommunications Act, and related legislation. This Act allowed private telecommunications service providers to enter the Chinese Taipei market, and made the DGT the primary regulator, while at the same time banning it from service provision.³⁹

During the mid-to-late 1990s Chungwha Telecom, the service provider established under the 1996 Telecommunications Act, was active but local demand outpaced supply. The government announced approval for eight new entrants to the mobile supply market.⁴⁰ Other reforms included enabling foreign ownership of telecommunications services firms.⁴¹

In the same decade, labour force changes reduced the economy's previous competitiveness in low-margin industries, while liberalisation in finance and foreign exchange⁴² led to high-tech R&D into semi-conductors and telecommunications – particularly through the Industrial Technology Research Institute (ITRI) and the HsinChu Science Park – and built capacity in design of telecommunications products.⁴³ Other barriers including limits to import of digital switches, were lifted in 1997. By 1998 the manufacturing industry was importing 44% of its component parts from the United States.⁴⁴ Interviewees confirmed the importance of the United States as a source of printed circuit boards during this period for local telecommunications manufacturers. By the finalisation of the TEL MRA, Chinese Taipei's telecommunications manufacturing industry comprised 300 companies, employed 25,000 people and accounted for 1% to 2% of total world production. Main export markets for finished products were the United States, the European Union, China and South-east Asia.⁴⁵

Demand-side barriers

Once supply-side barriers are reduced or removed, regulators can attend to demand-side barriers, which are normally considered from the perspective of the consumer e.g. price, choice, and ease of moving to new providers. In this case the demand side of the equation is mediated by regulations put into place by importing economies, namely recognition of testing and certification reports from CABs in Chinese Taipei (Table 4).

³⁹ Lee, R C (2011): Telecommunications in Chinese Taipei *in* Impacts and Benefits of Structural Reform in the Transport, Energy and Telecommunications Sectors, APEC, 2011

⁴⁰ Kawakami (2007): The Rise of Taiwanese Family-owned Business Groups, *in* Jilberto, A and Hogenboom, B et al – Big Business and Economic Development – Conglomerates and Economic Groups in Developing Countries and Transition Economies Under Globalisation, Routledge

⁴¹ Carr, R et al (1998): Telecommunications Equipment – United States Performance in Selected Major Markets. Staff Research Study, Office of Industries, United States International Trade Commission, Publication 3150, December 1998

⁴² Fu et al (2014), Industrial policy, Structural Change, and Pattern of Industrial Productivity Growth in Taiwan, 3rd World KLEMS Conference, Tokyo, Japan

⁴³ Ibid

⁴⁴ Ibid Chapter 9

⁴⁵ Ibid Table 9-3 and Table 9-4

Table 4: Pre-MRA arrangements for testing product exported from Chinese Taipei

Economy	Acceptance of Chinese Taipei's CAB reports (pre-MRA)
Australia	Required an Australian-based CAB to review the testing report from Chinese Taipei-based CAB
Canada	No, testing must be conducted in Canada for Terminal Telecommunication Equipment
Hong Kong, China	Yes, would accept Chinese Taipei's CAB reports
Japan	Required a Japan-based CAB to review the testing report from Chinese Taipei-based CAB
Mexico	No, testing must be conducted in Mexico
China	No, testing must be conducted in China
Singapore	Yes, would accept Chinese Taipei's CAB reports
South Korea	No, testing must be conducted in South Korea
United States	Required a United States-based CAB to review the testing report from Chinese Taipei-based CAB

Source: Case study interviews

At the time of signing the APEC TEL MRA, the testing industry, according to interviewees, was largely limited to testing of goods being imported into Chinese Taipei. The APEC TEL MRA provided a way for these demand-side regulatory issues to be addressed.

4.2 IMPLEMENTATION FRAMEWORK

Chinese Taipei has established a domestic regulatory framework that meets the requirements of the APEC TEL MRA. This includes two regulatory agencies and an accreditor.

Regulators and designating authorities

Chinese Taipei has two organisations which regulate different aspects of telecommunications products and testing and certification processes – the NCC and the BSMI. The overlap is a direct result of the convergence of telecommunications and IT products over the years.⁴⁶

The NCC was established in 2006 and took over the functions of the DGT and the Department of Broadcasting Affairs (part of the Government Information Office). The NCC is now responsible for regulating telecommunications and broadcasting services and its combined remit reflects the convergence of broadcasting and telecommunications technologies in recent years. According to the government:⁴⁷

“The NCC is the first legitimate regulatory agency in Chinese Taipei independent from an executive branch. The NCC analyzes the development of digital convergence to formulate a direction for communications regulatory reform in accordance with the basic supervisory principles of the Fundamental Communications Act as well as national policies and objectives. NCC aims to regulate the communications sector from an objective, neutral, and professional standpoint, to ensure effective competition in the market, to safeguard public interest, to promote the development of communications services, and thereby enhance the nation's competitiveness.”

⁴⁶ Sheng, R (2015): op cit. page 6

⁴⁷ About the NCC – Introduction, website at http://www.ncc.gov.tw/english/content.aspx?site_content_sn=284 (Accessed May 2016)

The main regulatory instrument is the Telecommunications Act. The NCC's 2006 Strategic Plan, sets itself the task of revising the relevant articles of this Act to support coordination, revising and augmenting regulations on certification assessment of safe IT products to enhance their international competitiveness and eliminating the upper limit for price adjustment for non-dominant market players in order to enliven the market.⁴⁸

The NCC has a broad scope of work to undertake. Of relevance to this case study, the NCC: develops telecommunications policies and regulations; processes applications for licences; oversees communications operations; sets engineering and technical specifications and conducting type-approvals; sets info-communications security standards and regulations; and engages in international matters relating to communications operation.⁴⁹ Those directly relevant to the telecommunications industry include regulation of radio frequency devices, telecommunications terminal equipment, low power radio wave telecommunications devices, radio waves emitted by industrial and scientific equipment, and telecommunications terminal equipment.⁵⁰

The BSMI is an agency of the Ministry for Economic Development. BSMI is responsible for: the development of national standards; the verification of weights and measuring instruments; the inspection of commodities; and the provision of other certification or testing services. For the APEC TEL MRA, BSMI's main focus is the promotion of measure-instrument inter-comparison among metrological laboratories, particularly for electrical safety testing.⁵¹ BSMI also helps domestic laboratories to maintain or acquire testing laboratory qualifications recognized by foreign governments in addition to being recognized as a qualified product.⁵² For telecommunications equipment, the NCC regulates components such as operating frequencies and bandwidth and the BSMI regulates operation against electrical safety and testing standards. This has caused some difficulties in dealings with some overseas economies, as will be discussed on page 334.

Joint committee

There is no formal joint committee. According to interviewees, as the economy is relatively small and the local informal networks are strong, there was no need for a formal structure to manage the relationship between the regulators.

Accreditation

TAF is the only accreditation body recognized by Chinese Taipei regulatory authorities to accredit domestic third parties for conformity assessment against national, regional and international standards. TAF was formed by the Ministry of Economic Affairs in 2003 to take over the two previous accreditation bodies (one of which was BSMI).⁵³ TAF is not-for-profit

⁴⁸ National Communications Commission (2006): Administrative Plan,

⁴⁹ Duties, Missions and Authorities of NCC, at http://www.ncc.gov.tw/english/content.aspx?site_content_sn=12 (Accessed May 2016)

⁵⁰ Chen, Major (2009): Chinese-Taipei Regulatory Requirements for Telecommunications and Information Technology Equipment, American TCB Taipei Office

⁵¹ BSMI 2007 Plans and Policies, at <http://www.bsmi.gov.tw/wSite/ct?xItem=4074&ctNode=817> (Accessed May 2016)

⁵² BSMI (2014): Annual Report 2013

⁵³ The former Chinese National Laboratory Accreditation (CNLA) scheme (formed in 1990 to provide the accreditation services for laboratories) and the Chinese Quality Management & Environmental Management Accreditation Board/Chinese National Accreditation Board (CNAB) formed in 2001 to accredit management systems, product, auditor certification bodies and auditor training organizations. CNAB, the MOEA founded the

and is self-funded but its scope of activity is still supervised by government to ensure its activities compliant with the purpose of the establishment. TAF is a signatory to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) and the International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MRA), which enhance the acceptance of conformity assessment results across economic borders.

TAF's primary role is to accredit testing, medical and calibration laboratories to the required ISO standard. As noted earlier, for telecommunications conformance this is ISO/IEC 17025. TAF's staff must therefore be technically qualified engineers and be competent in what is required under international standards and testing regimes. TAF must ensure that the CABs it accredits maintain physical standards of measurement very accurately, comply with relevant international standards, are able to calibrate their instruments accurately, and are technically competent.⁵⁴

As at July 2013, TAF had accredited 1251 testing laboratories, 251 medical laboratories and 198 calibration laboratories (including 98 electrical calibration laboratories) in Chinese Taipei.⁵⁵ Of these, TAF has accredited 17 testing and certification laboratories as CABs under ISO/IEC 17025.

Companies (manufacturers, CABs and others) can apply to TAF for accreditation at any time. They may request for accreditation of a specific test (e.g. if a CAB wishes to commence OTA testing where it has previously not had that capacity) or they may ask TAF to accredit that they can undertake testing in accordance with standards applicable in another economy (e.g. in compliance with Australian New Zealand standards). Interviewees reported that each time a CAB needs to get accredited for a new capability, this takes only two to three months from the time that TAF is approached.

When needed, TAF will also re-accredit organisations when standards change. Fortunately, in telecommunications these change slowly – years rather than months. TAF is alerted to impending change by either the manufacturers or the CABs, and can then use its technical expertise to work out the differences between the existing and proposed standards. TAF can then run training courses on the new standard, as necessary. This gives CABs time to change their own testing regimes to meet TAF's technical requirements and to become re-accredited prior to a new standard coming into effect. TAF needs to put considerable resources into developing its assessment capability when the technical change is significant.

TAF also plays an important role in communicating between industry and BSMI/NCC, in that they help NCC and BSMI understand technical issues in their considerations of regulatory change. It has significant connection to other accreditation bodies, regional bodies and accreditation-related organisations and is a member of the Asia Pacific Laboratory Accreditation Cooperation, Pacific Accreditation Cooperation, International Laboratory Accreditation Cooperation and the Multilateral Recognition Arrangement.⁵⁶ TAF has participated in the APEC TEL MRA Taskforce since its inception through its membership of the APEC Telecommunications Working Group. In this role TAF has enabled manufacturers and CABs to attend APEC meetings as part of Chinese Taipei's industry delegations.

TAF Preparatory Office on 31 July 2002 to take care of preparatory work, including fund raising and register documents preparation.

⁵⁴ McCrum and Kwan (2013) op cit. section 1.4

⁵⁵ Lin, I-J (2013): op cit.

⁵⁶ Ibid page 3

4.3 APEC TEL MRA BILATERAL AGREEMENTS

TEL MRAs signed as bilateral agreements between Chinese Taipei and other economies allow CABs in Chinese Taipei to test and/or certify particular pieces of telecommunications equipment for export, and for companies in Chinese Taipei to import equipment which has been tested and/or certified in partner economies. Table 5 summarises the APEC TEL MRA agreements most relevant to this case study.

Table 5: Summary of Relevant APEC TEL MRA Arrangements

	Australia	Canada	Chinese Taipei	Hong Kong, China	Japan	Malaysia	Singapore	Republic of Korea	USA	Viet Nam
Australia	N/A	Phase 1	Phase 1	Phase 1			Phase 1		Phase 1	Phase 1
Canada	Phase 1	N/A	Phase 1 & Phase 2	Phase 1 & Phase 2			Phase 1 & Phase 2	Phase 1	Phase 1 & Phase 2	Phase 1
Chinese Taipei	Phase 1	Phase 1 & Phase 2	N/A	Phase 1			Phase 1		Phase 1	
Hong Kong, China		Phase 1 & Phase 2	Phase 1	N/A			Phase 1		Phase 1 & Phase 2	
Japan					NA				Phase 1	
Malaysia						N/A	Phase 1			
Singapore	Phase 1	Phase 1 & Phase 2	Phase 1	Phase 1		Phase 1	N/A		Phase 1 & Phase 2	
Republic of Korea	Phase 1	Phase 1		Phase 1				N/A	Phase 1	Phase 1
USA	Phase 1	Phase 1 & Phase 2	Phase 1	Phase 1 & Phase 2	Phase 1		Phase 1 & Phase 2	Phase 1	N/A	Phase 1
Viet Nam	Phase 1	Phase 1						Phase 1	Phase 1	N/A

Source: based on Sheng, R (2015), op cit

Chinese Taipei has signed a Phase 2 agreement with Canada – this means that a CAB located in Chinese Taipei can sign all the necessary documents for a product to be sold in Canada, once it has been tested successfully (that is, Phase 2 includes Phase 1). Canada is the only economy with which Chinese Taipei has successfully signed a Phase 2 agreement. During this period, the US has signed Phase 2 agreements with Canada; Hong Kong, China; and Singapore.⁵⁷

4.4 CABs

Following signing of the MRA bilateral agreements, it took some years for Chinese Taipei's CABs to develop. We have collated information on 34 CABs in Chinese Taipei. The industry is a mix of small-to-medium enterprises (SMEs) owned locally, subsidiaries of larger companies, and large companies with laboratories that specialise in testing and certification (Table 6 – for more detail see Table).

⁵⁷ National Standards Institute (2016): APEC Mutual Recognition Arrangement for Conformity Assessment of Telecommunications, U.S. Department of Commerce, Available from: <http://gsi.nist.gov/global/index.cfm/L1-4/L2-16/L3-90> (Accessed May 2016)

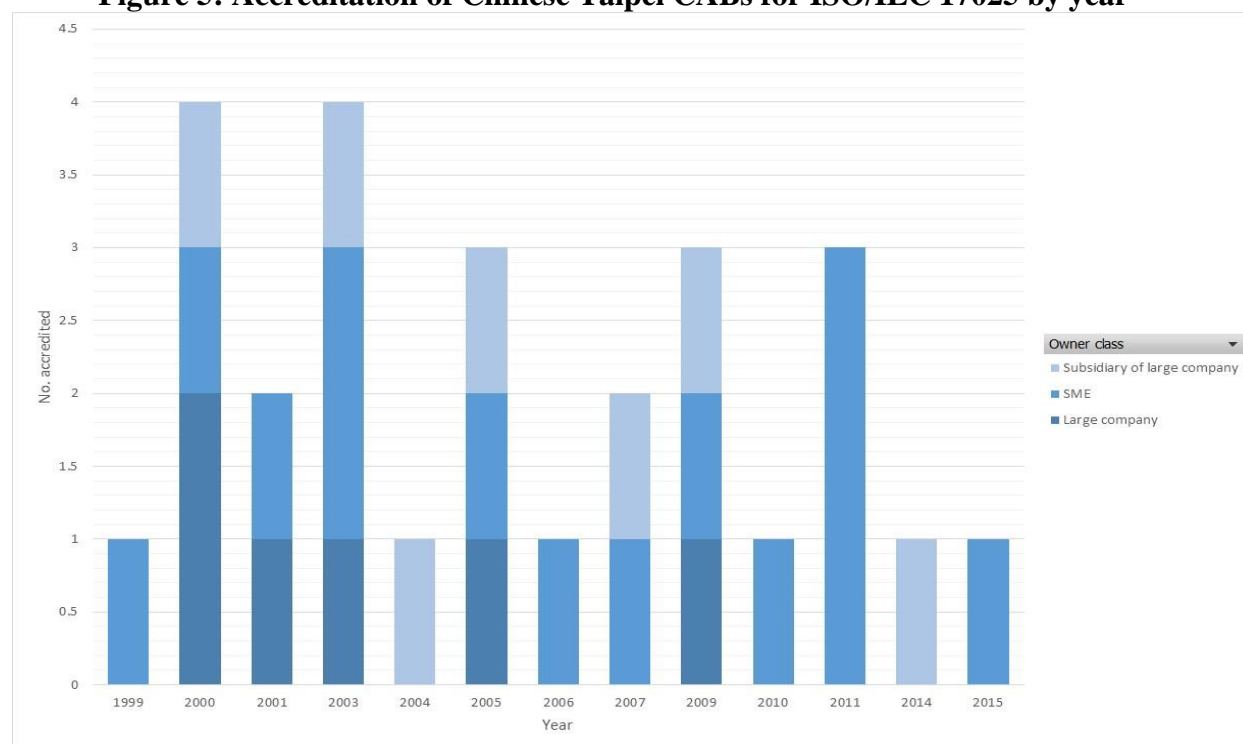
Table 6: Summary of CABs in Chinese Taipei

	Chinese Taipei ownership	Example (owner)	International ownership	Example (owner)
SMEs	16	A Test Lab, Cerpas, Max Light, Quietek, Spectrum Training and Research Lab, Training Research Co.	0	
Subsidiaries of larger companies	7	PTT Laboratory (TECO Imaging Systems), Communications Global Certification (HTC), Foxconn (Hon Hal)	2	Intertek Testing Services Taiwan (Intertek plc – UK) SGS Taiwan (SGS Group)
Large companies	7	Sporton International MITAC, Wendell	2	Bureau Veritas (Bureau Veritas Europe), TUV Rheinland (TUV Rheinland, Germany)

Source: Author’s analysis, n=34

Information is available on the years that 27 of these companies became accredited with ISO17025 (Figure 5). The first accreditation for APEC TEL MRA was signed in 1999 and there has been a steady growth in certifications since. There is no trend evident by type of company.

Figure 5: Accreditation of Chinese Taipei CABs for ISO/IEC 17025 by year



Source: Author’s analysis, n=27

CABs in Chinese Taipei now have 48 Phase 1 agreements with four partner economies (Australia; Singapore; Hong Kong, China; and the United States). These agreements have been signed incrementally since the APEC TEL MRA was signed.⁵⁸ Three CABs are accredited with Hong Kong, five with Singapore, 14 with Australia, 9 with Canada and 15 with the US.

⁵⁸ National Communications Commission, Mutual Recognition Arrangements, Chinese Taipei

Each CAB is accredited for different types of telecommunications equipment. There is a wide variety of accreditations for both types of equipment and economies.

Annex provides detail of accredited CABs; see also Annex 3 for accreditations by type of equipment and economy.

5. IMPLEMENTATION ISSUES

Several implementation issues emerged through discussions with interviewees. These included the small size of the domestic consumer market at the time the TEL MRA was signed, changing industry structure, the regulatory structure in Chinese Taipei (still ongoing), and the need for post-market surveillance. Other ongoing issues include the costs of meeting multiple standards in economies where MRAs are not in place, and other non-tariff barriers.

Reluctance of some economies to negotiate

In general, economies are likely to be willing to put time and effort into negotiating an MRA with an economy which provides a suitably large market for their own manufacturers or which provides a large source of imported goods. Interviewees reported that this put Chinese Taipei at a disadvantage at the start of the MRA as it did not have a significant consumer market. There are still some economies (mainly those which offer large potential markets for Chinese Taipei) with which Chinese Taipei would like to sign an MRA but have not been able to do so for various reasons. In some cases, as has been noted already, the MRA is unnecessary because practices are already effectively harmonised.

Recognition that CABs cross borders

It has become common for companies in Chinese Taipei to set up subsidiaries in other economies. TAF initially did not anticipate that such structural change would also apply to CABs. The original expectation was that a CAB accredited for Chinese Taipei would operate domestically. However, some Chinese Taipei CABs expanded internationally, and others were bought out by international companies, or subsidiaries of larger companies.

TAF's original process accredited the company rather than the original laboratory and hence it was not possible to identify whether an accredited CAB had conducted their suite of tests in Chinese Taipei or elsewhere. Some partner economies queried the validity of some tests that had been conducted by an accredited CAB but in a laboratory that had not been investigated by TAF. As a result, TAF altered its policies and now accreditation for CABs is granted branch by branch (lab by lab), including where located in overseas economies, and the testing report states at which branch the test was carried out. This has increased the work for TAF but it was necessary to maintain the validity of the system.

Overlaps in approached by NCC and BSMI

As already noted, Chinese Taipei has signed a Phase 2 agreement with Canada, but it only has a Phase 1 agreement with the US and no agreement at all with Mexico. Together, however, these three economies make up the North American market, which is treated as a single export market by manufacturers in Chinese Taipei.

At the moment, the CAB tests the product and sends the report to the certification agency in the other economy (e.g. from Chinese Taipei to the United States), as there is no Phase 2 agreement with the United States. Hence, the value of the Phase 2 agreement with Canada is reduced as CABs still have to get US certification for a product that a Chinese Taipei-based CAB can certify for Canada. This still creates delays and additional costs for manufacturers in Chinese Taipei.

Interviewees suggested that these problems would be overcome with a Phase 2 agreement at least with the US. Chinese Taipei-based certifiers could also help manufacturers understand foreign certification rules better.

According to interviewees, the US has been unwilling to negotiate a Phase 2 agreement with Chinese Taipei because of overlaps in roles of BSMI and the NCC. This difficulty is also alluded to in presentations by US trade envoys on MRA issues.⁵⁹ According to the NCC, this problem is recognized by Chinese Taipei and is being addressed by the government.

With regards to Mexico, interviewees saw the absence of a Phase 1 agreement with Mexico as a further gap which interfered with smooth entry of product to the North American market. Manufacturers also sell product in Mexico but testing must be in Mexico itself. The possibility of prioritizing this as a new Phase 1 agreement was discussed in interviews.

Post market surveillance

According to interviewees, post-market surveillance has arisen as an important issue. Post-market surveillance is “an activity conducted to assess the compliance of regulated equipment deployed in the marketplace to applicable technical standards and labelling requirements.”⁶⁰ As noted earlier, the potential need for post-market surveillance is recognized under the APEC TEL MRA. Best practice under ISO/IEC 17065 and can take the form of a sample test plan which tests the marketed product against the specifications for which it has been certified.

Market surveillance emerged as an issue after the APEC TEL MRA Taskforce realized that enhanced market access under the MRA increased the risk of faulty goods and the associated need for product recalls. This issue was taken up in the APEC Telecommunications Working Group and in 2010 Market Surveillance Guidelines for Telecommunications Equipment were issued. These Guidelines recommend targeting specific goods (e.g. as a result of complaints, past history of compliance, emergence of new-to-market technologies, and the level of potential harm due to non-compliance) and then auditing equipment to verify compliance. If the equipment is non-compliant then the regulator must take action (e.g. a recall).

In Chinese Taipei, NCC conducts post-market surveillance in concert with recognized certification bodies such as TAF. However, it should be noted that the issue was raised because of risks identified from regulators and CABs in the region. Some economies have now had to change the way their accrediting organisation is governed to overcome these problems.

Ongoing differences in technical standards

Despite the usefulness of the MRA and the existence of a strong international standards framework, interviewees noted that there are still some problems caused by differing national standards, often due to only minor differences. Sometimes, the tests required for two markets will both be based on the same umbrella technical standard (set by PTCRB etc.), but the CAB has to produce two reports – one for one economy and one for another – on the one product, with minor wording and name changes.

⁵⁹ Chen, Major (2009) *op cit* slide 35

⁶⁰ APEC Telecommunications Working Group (2010): Market Surveillance Guidelines for Telecommunications Equipment

Sometimes there are more fundamental differences. These may be due to real differences, for example EMC testing is often extended because different economies use different power supplies (110 volts vs 240 volts). They can also be due to other economies having their own requirements for domestic testing, for example, interviewees mentioned difficulties with India which not only has different technical standards, but requires exporters to test all equipment within that c before it can be sold there.

Ongoing non-tariff barriers

Despite the MRA within APEC, manufacturers face significant other non-tariff barriers to export to some economies. Interviewees reported that the company must set up manufacturing in some economies or use expensive domestic CABs.

Similarly, some economies require a local representative to submit the Self Declaration of Conformity. Manufacturers in Chinese Taipei must therefore find a company in those economies to submit the test report. This is controlled by requiring the applicant to have a local address and/or credit card from a local bank.

6. IMPACT OF THE APEC TEL MRA ON CHINESE TAIPEI

The APEC TEL MRA has had a significant impact on the testing and services industry in Chinese Taipei with benefits flowing through to manufacturers and consumers. Impacts identified during this case study are summarised in **Table 7** (refer also to the theoretical benefits in Table 2) and are expanded on in the following sections.

Table 7: Demonstrated benefits of the TEL MRA in Chinese Taipei

Stakeholder	Expected benefit of conformity regulations	Comment
Manufacturers	1. Testing and certification can be done once for multiple markets, reducing certification and compliance costs	Yes
	2. Enhanced access to exports and faster access to international markets, particularly valuable for sectors with short product life cycles.	Yes
	3. It can reduce the time to market for manufacturers of telecommunications equipment.	Yes
Regulators	1. Fewer regulatory resources required.	No
	2. Savings in regulatory costs can be reallocated to other priority areas.	N/A
	3. Engagement with other regulators can enhance knowledge of global trends and build capacity in regulatory systems.	Yes
	4. Opportunity for further harmonization	Yes
CABs	1. CABs can provide higher quality and higher value services through offering a broader range of services.	Yes
Consumers	1. Increased range of available technology	Yes
	2. Faster access to new telecommunication equipment at a lower cost	Yes
	3. Faster development of telecommunications and internet infrastructure.	Yes

Source: Author's analysis

As previously discussed it has not been possible to identify measures of impact by reviewing telecommunications export and import statistics. Instead, impact measures on the telecommunications industry have been derived from comments by interviewees. Impact on the testing industry has been measured by review of historical changes in the size of the testing industry and Chinese Taipei's ranking against CABs from other economies in those economies with which Chinese Taipei has APEC TEL MRA agreements.

6.1 TELECOMMUNICATIONS EQUIPMENT MANUFACTURERS

Chinese Taipei's success as an exporter of electronic goods is a reflection of growth and structural reform since the late 1990s.⁶¹ Between 1999 (at the commencement of the MRA), and 2003, telecommunications manufacturing grew from less than USD\$2 billion to over USD\$13.8 billion, with the largest growth in wireless (from USD\$1.25 billion to USD\$9

⁶¹ Ibid

billion, doubling each year).⁶² Another analysis at about the same time reported that ‘electrical and optical equipment’ was the strongest performing industry.⁶³

Since then, the industry has continued to grow. In 2014, Chinese Taipei was the 7th largest exporter of electrical and electronic equipment globally, with the industry having grown 364% in terms of export value since 2001 from USD\$33 billion to USD\$123 billion.⁶⁴

While the growth in the industry cannot be attributed solely to the APEC TEL MRA, there is no doubt that the APEC TEL MRA has affected Chinese Taipei-based manufacturers’ ability to export to preferred economies. There is some evidence from economic modelling – a study commissioned by the NCC and published in 2014 concluded that the APEC TEL MRA had increased Chinese Taipei’s exports of mobile phones and laptop computers to other APEC members.⁶⁵ The study found that compulsory testing requirements in importing economies had a negative effect on trade flows for mobile phones and laptop computers and that the APEC TEL MRA alleviated the negative effects for these products. The same effect is not shown for longer life cycle products such as set-top boxes and routers.

Impacts on speed to market have also been significant. According to interviewees, testing takes up to twice as long for markets where there is no MRA in place, compared to those where reports from Chinese Taipei-based CABs are accepted (Table 8). In some circumstances, interviewees reported that they were able to reduce delays by “pre-testing” in Chinese Taipei.

Table 8: Current impacts of APEC TEL MRA on manufacturers

Economy (Agreement phase)	Acceptance of Chinese Taipei’s CAB reports	Typical testing cycle
Australia (1)	Yes, but require Australian agent to lodge documentation	2-3 weeks
Canada (2)	Accepts both testing and certification from CABs in Chinese Taipei	2-3 weeks
Hong Kong, China (1)	Yes, no change from prior to TEL MRA	2-3 weeks
Japan (nil)	Still requires testing to be checked by a Japan-based lab – CABs in Chinese Taipei have formed alliances with CABs in Japan for this purpose	4 weeks
Mexico (nil)	No, testing must be conducted in Mexico	6 weeks
China (nil)	No, testing must be conducted in China	6-8 weeks
Singapore (1)	Yes, no change from prior to TEL MRA	2-3 weeks
South Korea (nil)	No, testing must be conducted in South Korea	4-6 weeks
United States (1)	Yes, accepts testing reports from CABs in Chinese Taipei	2-3 weeks

Source: Case study interviews

⁶² Boulton, W (2002): Taiwan Telecommunications Industry *in* Iskander, M et al, Asian Telecommunications Update, Chapter 7 pp57-72

⁶³ Fu T et al, op cit. (2002): Taiwan Telecommunications Industry *in* Iskander, M et al, Asian Telecommunications Update

⁶⁴ International Trade Centre (2016): List of exporters for the selected product, Available from: http://www.trademap.org/tradestat/Country_SelProduct_TS.aspx (Accessed June 2016)

⁶⁵ Wang, C-C., and Jang, C-LJ. (2014): The impact of the APEC MRA for Conformity Assessment on Telecommunications Equipment on Trade: Evidence from Taiwan, *Global Journal of Business Research* 8:3, 1-7.

These are all largely fixed costs related to introducing a new product to the market, a finding supported by the Wang and Jang study.⁶⁶

Interviewees reported that the APEC TEL MRA has enhanced manufacturers' links internationally. They are now closely linked in to changing technical standards in major markets.

6.2 R&D

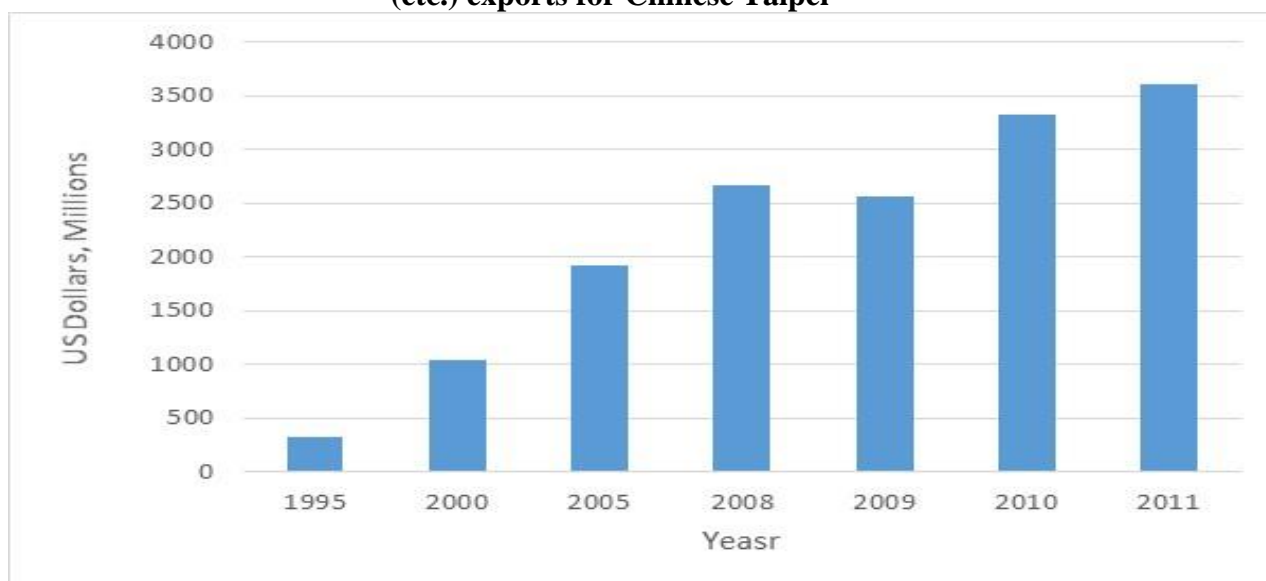
Interviewees for the case study alluded to the importance of testing in Chinese Taipei allowing R&D to stay in the domestic economy. This was particularly important in the case of competition with economies where there was no Phase 1 agreement – R&D is still in Chinese Taipei because the design, testing and pre-testing can be done domestically. This was seen as important because the economy has already reduced competitiveness due to rising costs of labour and manufacturing. Once the product is tested and certified domestically, then it can be manufactured in a lower-cost economy.

TiVA data appear to confirm this assertion – Figure 6 shows the contribution to value add by R&D and other business services to gross exports of computer, electronic and optical equipment from Chinese Taipei in the years 1995, 2000, 2005 and 2008-2011. It shows the value of these inputs rose 8-fold from 1995 to 2008, plateaued in 2009 and then rose again another 1.5-fold from 2009 to 2011. In 2006, approximately 75% of Chinese Taipei's business enterprise R&D was attributable to either electronic parts and components manufacturing, or computer, electronic and optical products manufacturing and 31% manufacturing exports were attributable to information and communications technologies.⁶⁷ Although a deeper analysis of this issue is beyond the scope of this study, further research could examine the links between CABs and manufacturers in relation to the formers' support for R&D either domestically, or as Chinese Taipei companies expand internationally, particularly to China.

⁶⁶ Ibid page 2

⁶⁷ Chen, S-H, Wen, P-C and Liu, M-C (2011): Trends in Public and Private Investments in ICT R&D in Taiwan, JRC Technical Notes, JRC63993-2011, European Commission Joint Research Centre for Prospective Technological Studies Seville, Spain

Figure 6: Contribution of R&D and other business services to value add in computer (etc.) exports for Chinese Taipei



Source: TiVA database origin of value added in gross exports, C73T74 (R&D and other business services) to Computer, Electronic and Optical Equipment Industry, 1995-2011

6.3 REGULATORS AND THE ACCREDITATION AUTHORITY

While the effort in developing the MRA and implementing it in Chinese Taipei was significant, the initiative formed part of a larger effort to deregulate telecommunications services and to develop the manufacturing industry. Interviewees reported that the main issue for regulators was restructuring the domestic legal framework to adopt conformity assessment procedures and to support regional harmonization.

The main impact on TAF has been to lift its capability to accredit CABs against international standards. The regulators rely on TAF to evaluate the CABs, so as to ensure that all imported and exported telecommunications equipment complies with legal and regulatory requirements (i.e. standards and specifications). TAF is now well-connected to similar international organisations and has a generally higher capacity to evaluate CABs against international standards. This has placed a greater burden on its resources but much of the additional cost is passed on to manufacturers as TAF operates on a cost-recovery basis.

While the extra workload is significant, some interviewees also noted that the development of the TEL MRA had saved APEC from developing its own standards organisation (e.g. to match the approach taken in Europe which has a Europe-wide CE mark). It is difficult to know which of these approaches would have required less effort but in any case once an industry is linked in globally, any accreditors and regulators will need to increase their effort in maintaining awareness and knowledge of global technical changes.

6.4 CABS – THE TESTING AND SERVICES INDUSTRY

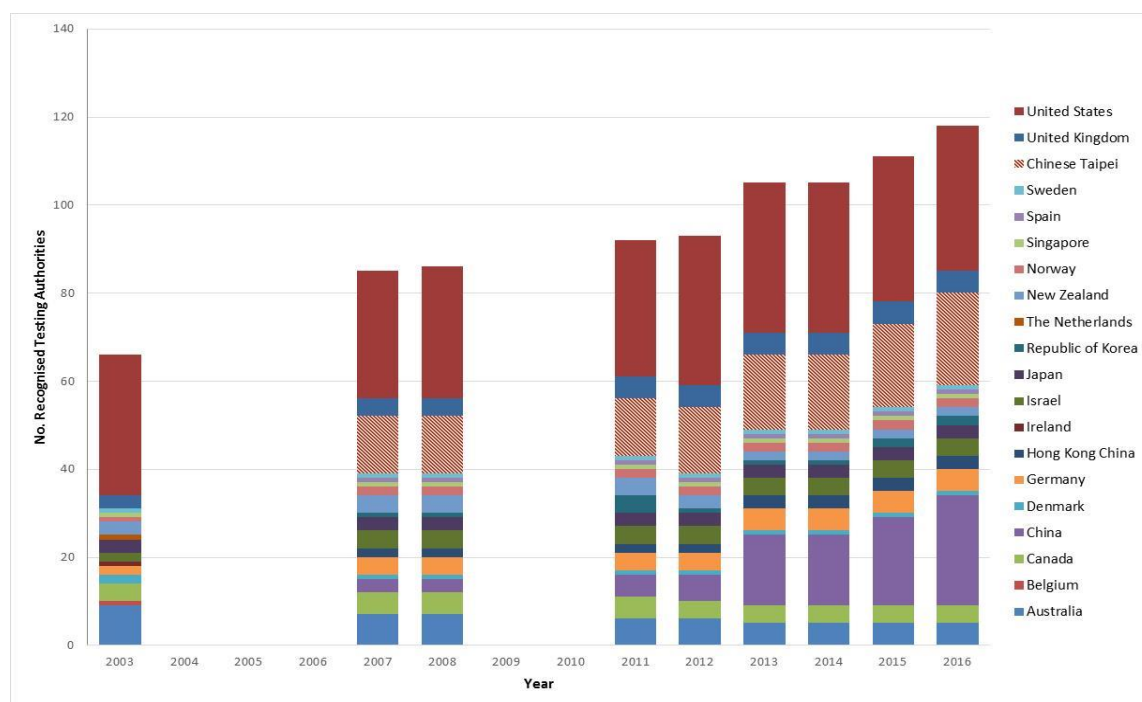
According to interviewees, there has been significant growth in Chinese Taipei-based CABs since the late 1990s. As a result of the APEC TEL MRA the CABs have increased in number and competence. They have become more closely integrated into global value chains, partly

due to industry restructuring, and play a significant role world-wide, for example PTCRB-accredited Chinese Taipei-based labs for testing EMC make up 13% of those globally.⁶⁸ The best objective support for this assertion comes from the regulators in the economies with which MRAs have been signed. Current data is available for the United States and historical data has been obtained for Australia.

In the US, Chinese Taipei is now ranked third on the Federal Communications Commission list of recognised test firms (behind China and Japan) and is second on the list of recognised accredited test firms (behind the US).⁶⁹

Similarly, the National Accreditation and Testing Laboratory (an Australian organisation similar to the TAF) recognised 111 testing authorities in 2015, led by the US (33) and China (23), with Chinese Taipei third (21).⁷⁰ Chinese Taipei's recognition grew substantially from zero in 2003 to 13 in 2007 and 2008 to 21 in 2016 (Figure 7). Recognition of testing authorities in other economies has been static or declining, with the exception of those from China which also had no testing authorities recognised in 2003 but now has 25 recognised.

Figure 7: Historical trends in recognising overseas testing authorities by Australia



Source: Author's analysis of National Association of Testing Authorities Australia – Recognised Testing Authorities lists for 2003, 2007, 2008, and 2011-2016, updated annually in June or July

6.5 CONSUMERS

The overall technical and regulatory framework operating in telecommunications helps ensure that products manufactured in one economy will be able to be operated in other economies. Although consumers were not interviewed for the study, both manufacturers and CABs were of the opinion that consumers (worldwide) benefit through gaining access to new and improved

⁶⁸ Chen, H (2015): What NTBs and MRA Mean to ICT Industry, presentation to WTO Workshop, 7 May 2015

⁶⁹ Author's analysis of FCC data.

⁷⁰ National Accreditation and Testing Laboratory (2016): Recognised Testing Authorities, Available from: http://www.nata.com.au/nata/images/pdf_files/rtalist.pdf (Accessed June 2016)

equipment more quickly, and with greater surety of its safety and operability. The testing and certification process for telecommunications equipment is likely to be quite opaque to consumers but demand will rise whenever consumers see new products launched internationally. A smooth and efficient testing and certification process enables manufacturers and their resellers to meet this demand as quickly as possible.

6.6 NEXT STEPS IN REFORM

A number of interviewees commented on issues that still faced Chinese Taipei and that may be receptive to regulatory reform. It should be stressed that these are suggestions rather than official government policy, and cover three topics – cybersecurity, ongoing market surveillance issues, and deregulation for low risk products.

First, is the potential extension of the APEC TEL MRA to cybersecurity.⁷¹ APEC has issued a cybersecurity strategy,⁷² which highlights the need for legal and regulatory frameworks that underpin trade, investment and growth in consumer confidence, including domestic cybersecurity laws, domestic security incident response teams and combatting of cybercrime. The APEC Telecommunications and Information Working group, which developed the APEC TEL MRA, has since held a workshop on the issue to share basic concepts and seek member economies' input and suggestions around a fundamental cybersecurity framework.⁷³ An extension of the APEC TEL MRA to cybersecurity could lay the overarching framework for economies to address this issue, in much the same way as it has provided the framework for recognition of testing regimes.

Second is an issue common to all regulators – the import of potentially non-compliant products by private citizens following online (internet) purchases. There are some pressures in Chinese Taipei to ease compliance requirements generally as a result, but heightened risks of post-market issues are recognised by the NCC.\

This matter is linked to the issue of post-market surveillance. Interviewees noted that Canada has a two-step process where there is double-checking of products before approval. According to interviewees, post-market issues are of less concern there than in Chinese Taipei, where there is only one check.

Both these matters are being considered by the NCC, which wants to understand how other economies manage imported products that are not compliant, especially since the Internet market is growing so rapidly. Chinese Taipei is keen to discuss this with other economies under the APEC Telecommunications Working Group or APEC TEL MRA meetings. While the issue has been raised before, there have been no solid solutions, partly because MRA meetings are mainly for information sharing.

Third is ongoing reduction of regulatory burden in lower risk areas. While APEC economies have generally required all devices that intentionally generate and emit radio frequencies to comply with the conformity assessment procedure, Chinese Taipei has recently started reviewing the relevant technical regulation on low-power radio frequency devices and may

⁷¹ Sheng, R (ND): op cit

⁷² APEC (2005): Strategy to Ensure a Trusted, Secure and Sustainable Online Environment, Inter-sessionally endorsed by Senior Officials in November 2005

⁷³ <http://www.apec.org/groups/som-steering-committee-on-economic-and-technical-cooperation/working-groups/telecommunications-and-information.aspx>

exclude them from the list of regulated devices. NCC and BSMI will work together on this, in consultation with industry.

There are some precedents in other economies, where such devices may be exempt from licensing requirements as long as they are operating within approved technical standards. In other economies such devices may be managed under a class licence. For example, the Australian class licence which, for no fee, automatically authorises all users of such devices to share the same part of the radio spectrum provided that the devices comply with all radio-communications standards.⁷⁴

⁷⁴ Radio Communications (Low Interference Potential Devices) Class Licence 2015
<http://www.acma.gov.au/theACMA/lipd-class-licence-spectrum-acma> (Accessed May 2016)

7. CONCLUSIONS AND LESSONS FOR OTHER ECONOMIES

The APEC TEL MRA was preceded by general telecommunications services reforms which opened up the (then) national telecommunications service provider to competition and made it easier for telecommunications manufacturers to import components. These reforms also increased manufacturing competition by allowing new manufacturers to establish in the market, and allowed the development of the mobile telephony market by allowing new service companies to establish domestically.⁷⁵ The APEC TEL MRA which followed these reforms then provided the framework through which Chinese Taipei's CAB industry could build capability and ensure that this occurred in line with international standards.

Chinese Taipei has set up a transparent regulatory system to manage these reforms. TAF was formed from the merger of two pre-existing organisations in order to provide a focus for capacity-building and standards recognition using a governance framework (as a not-for-profit) that enables to operate independently while still remaining under government supervision. It plays a central role in helping CABs meet international standards and keeping them aware of international technical changes.

The NCC and BSMI regulate telecommunications and electrical safety respectively and are required to hold public hearings before making any major changes to the regulatory regime; hence the process is transparent. However, the division of authority between the operations of the two organisations has prevented Chinese Taipei from taking full advantage of the APEC TEL MRA. The government has started to address this issue.

The reforms enacted, and the broader market-focused approach of Chinese Taipei, have allowed domestic manufacturers to test their product locally, thus enabling R&D to remain local and lowering testing costs and speeding the path to market. The Government's broad stated intention at the time was to grow the telecommunications manufacturing sector to drive down the cost of consumer access to telecommunications services and equipment. The NCC, however, didn't put any manufacturing or service (CAB) industry impact measures into place as these had limited relevance to its remit. The data available to measure the impact on CABs in Chinese Taipei has been a side-effect of transparent policies operating in other economies e.g. regulators in the United States and Australia.

As noted in earlier discussion, interviewees felt that the main gap in the steps taken was the lack of focus on a post-market surveillance system, and realization that fragmentation of global value chains meant that the accreditation system needed to work at a laboratory rather than company level.

Finally, while Chinese Taipei has reaped benefits from Phase 1 agreements with several economies, it appears there are gaps in coverage that are continuing to cause impediments in exports to some significant markets. Though the underlying purpose of these regulations is to support industry development, further consideration of desired industry outcomes and actions needed to support these fall outside the scope of the authorities of both regulators in Chinese Taipei. The APEC TEL Working Group is a useful forum to provide local industry with the potential to influence new Phase 1 and Phase 2 agreements that will support industry policy objectives.

⁷⁵ Lee, R-C *op cit*

Lessons and Recommendations

The main lessons from this case study for other economies considering such changes, highlight the importance of the roles of regulators and accreditors and their awareness of economic development objectives of regulatory reform.

First, regulators need to consider how emerging technical changes (in this case the convergence of IT and telecommunications technologies) will affect the scope of what they regulate. Regulatory frameworks must keep pace with technical change so that they do not themselves create barriers to the government's other objectives (e.g. trade objectives, while maintaining safety objectives). Regulators could address this by establishing dialogue with economic development agencies in response to technical convergence. In addition, regulatory impact statements could expressly consider the impact of technical convergence over time, either at the time of decision or at planned review intervals.

Second, regulators and accreditors need to understand the industrial structures of the companies they are regulating or accrediting. In Chinese Taipei, TAF was initially unaware of the implications of certifying a company as oppose to a laboratory. TAF was also unaware of potential impact of the size of the company and its resulting reach across borders. While both issues were rapidly addressed, additional consultation with manufacturers or CABs at the time the accreditation system was established, may have flagged this issue and enabled it to be addressed from the start. Participation in fora that enable accreditors to learn from other economies where similar issues have been addressed would also help in the planning stages.

Third, the Chinese Taipei case study has shown the importance of the accrediting agency playing a pro-active role in supporting development of industry capacity as standards change. The domestic CAB industry is heavily skewed towards SMEs which, while technically competent, have limited resources available to track changes and trends which are initiated in other economies and by international technical organisations. TAF has played an important role in developing and maintaining international technical networks that give it forward notice of technical changes and enable it to develop training and awareness courses for its SMEs so that they are compliant when the change occurs.

Linked to this issue is the desirability of developing key indicators that will enable regulators to assess the impact on both manufacturers and CABs from the commencement of these reforms. This is particularly important given Chinese Taipei's wish to improve trade. The difficulty of teasing out the impact of testing and certification reforms from large economic trends has already been noted and the lack of detail in trade data has made it difficult to obtain detailed information. Post-event modelling and this case study have identified positive impacts, but a more formal set of impact measures would have enabled the government to identify these trends much earlier and would have either confirmed the wisdom of the regulatory change or enabled the government to correct any mis-application.

Fourth, post-market surveillance should be considered by the regulator if regulatory or technical change (i.e. online purchasing) increases the risk of faulty products entering the domestic market. This may be necessary because of safety but it is also important for consumer confidence in the integrity of the testing and certification system. Regulators need to weigh up the both risks and benefits as well as establishment and implementation costs.

Fifth, regulators should ensure that manufacturing and CABs are involved in relevant APEC working groups and other formal or informal information-sharing events so that industry policy objectives can be addressed. While this has happened in Chinese Taipei, it became apparent during the case study that the NCC, with no authority over the manufacturing sector, had limited knowledge of changes in focus of manufacturers in relation to their export objectives. The dialogue with manufacturers and CABs needs to be maintained. There is more than one successful model available here – in addition to involvement in APEC working groups, regulators can participate in industry consultation via industry associations, and can also establish formal consultation fora (e.g. annual roundtables).

GLOSSARY OF TERMS

3GPP -	3 rd Generation Partnership Project
ACMA	Australian Communications and Media Authority
AEPR	APEC Economic Policy Report
APEC TEL MRA	APEC Telecommunications Mutual Recognition Agreement
BRA	Basic Rate Access
BSMI	Bureau of Standards, Metrology and Inspection
CABs	Conformity Assessment Bodies
CAEEE -	Conformity Assessment of Electrical and Electronic Equipment
CE	Customer Equipment
CPE	Customer premises equipment
DCS	Digital communication system
DEL	Direct exchange lines
DGT	Directorate General of Telecommunications
DSL	Digital subscriber lines
DVB-T2	Second generation Digital Terrestrial Television Broadcasting System
EMC	Electromagnetic compatibility
ETR MRA	MRA for Equivalence of Technical Requirements for Telecommunications
FTNS	Fixed Telecommunications Network Services
GCF	Global Certification Forum
GPS	Global Positioning System
GSM	Global System for Mobile Communication
GVC	Global Value Chains
ICIO	Inter-Country Input-Output
IDTV	Integrated Digital Television
IER	Individual Economy Reports
ISM	Industrial, scientific and medical
IRD	Integrated Receiver Decoder
ITE	Information Technology Equipment
ITRI	Industrial Technology Research Institute
ITU	International Telecommunications Union
LEC	Local Exchange Carriers
LTE	Long Term evolution
MMS	Multimedia Messaging Service
MRA	Mutual Recognition Agreement
NCC	National Communications Commission
OTA	Over the Air
PRA	Primary Rate Access
PSTN	Public Switched Telephone Network
PTN	Public Telecommunications Network
PSU	Policy Support Unit
R&D	Research & development
RF	Radio-frequency
SAR	Specific Absorption Rate
SME	Small to medium enterprise
TAF	Taiwan Accreditation Foundation
TiVa	Trade in Value Add

TE	Terminal equipment
TTE	Telecommunication terminal equipment
UNCTAD	United Nations Conference on Trade and Development
U-NII	Unlicensed National Information Infrastructure
US	United States
W-CDMA	Wide-band Code-division Multiple Access 3G Technology
WTO	World Trade Organisation

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ANNEXES

ANNEX 1 – GENERAL INTERVIEW GUIDE

Case Study of Chinese Taipei for Services And Structural Reform **Semi-structured interview Questions**

Circulated following the letter of introduction

Scope: Impact of the APEC TEL MRA on testing and certifications and associated telecommunications equipment manufacturing industries in Chinese Taipei

Purpose of interviews:

Understand broader national context of regulation (focus on utility patent changes of 2006)

- a) Confirm our understanding of regulation and industry from our literature reviews
- b) Identify gaps in our understanding, especially industry influences which explain main trends
- c) Identify policies and events that might alter our interpretation of facts and issues
- d) Deepen our understanding of the sequence of reforms and how regulatory and policymakers balanced competing objectives, addressed adjustment issues, and targeted assistance and capacity building to maximise flow on effects for the economy

Interviewees will be from government, universities and the private sector

- a) Regulators in Chinese Taipei
- b) Equipment testing industry
- c) Telecommunications manufacturing industry
- d) Regulators or industry representatives in Singapore and Canada (economies that export to, or import from, Chinese Taipei and have been recognised under the agreement)

Use of interview material:

Detailed notes will be confidential but will be used for the written case study. Interviewee names and contact details will be provided to APEC as part of reporting but be listed in the final report (e.g. the report will use terms such as “representatives of” a particular organisation or government agency). The final report may have a list of organisations consulted during the development of the case study.

Person conducting interviews:

Dr Lyndal Thorburn

Senior Associate

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Interview structure - general

Note – main focus of discussion (time spent) was on item 3

1. Introduction

The research topic, its purpose, process and stage in the project.

2. The current understanding in the case study

Summarise what we know for this case study/industry sector, and seek comment.

3. How these regulations work in the overall national context

As relevant to the (Chinese Taipei-based) interviewee:

- a) Background to the development of the TEL MRA and its introduction into Chinese Taipei
- b) Considerations prior to introduction including industry consultation
- c) Competing issues that arose at the time
- d) Other policies that affected introduction of the MRA by Chinese Taipei especially moves from Phase 1 to Phase 2
- e) For Standards that have been updated since accreditation, does the accreditation still stand?
- f) Details of any capacity building programs for the testing industry or the telecoms manufacturing industry
- g) Adjustment issues experienced by regulators, industry etc
- h) Expected impact of the regulatory change vs actual observed impacts
- i) Objective measures of impact: labour force productivity, growth or changes in structure of testing industry and/or telecoms manufacturing industry

In relation to above was the whole process repeated for Phase 2 vs Phase 1 recognition?

4. Gaps

What other events have resulted in the trends that we see in this case study? Focus on national level – this economy vs. others

Who else should we speak to?

5. Further references

What other sources documents might be available?

Interview questions - detailed

Introduction

Structural change is defined by APEC as institutional frameworks, regulations and government policy (designed) so that barriers to market-based incentives, competition, regional economic integration and improved economic performance are minimized'. APEC has identified six key components of the structural reform agenda:

1. Removing barriers to the entry of domestic new entrants, and allowing existing firms to exit the marketplace in an orderly fashion if the market dictates that they cannot survive.
2. Removing barriers to foreign competition, be it from cross-border trade or from foreign direct investment, and not just for particular trading partners.
3. Ensuring that the minimum regulation exists to guide economic outcomes in those circumstances where markets alone may not deliver the most efficient outcomes.
4. Ensuring that the right institutions are in place to review and remove the unnecessary impediments to the functioning of markets.
5. Ensuring that the right institutions are in place to design, implement, enforce and review the functioning of more appropriate regulation.
6. Developing transparency of institutional processes, including public sector management, so as to better serve the public good.

History – NCC/TAF

What made Chinese Taipei participate in the APEC TEL MRA – what benefits were expected and how were these to be measured? Why was this a priority?

When Chinese Taipei participated in the Taskforce, did TAF exist?

Coordination – pre-implementation – NCC/TAF/BSMI

Was the original coordination agency DGT?

What was set up within CT to coordinate development of the MRA? (aware that NCC only formed in 2006)?

How was it decided that NCC and BSMI would be the regulatory authorities jointly and why two not one?

What industry consultation was done at the time?

How were the first economies for Phase 1 decided and why is Canada the only one that has signed Phase 2? (noting that Chinese Taipei had signed Phase 1 by 1999 and by 2005 there were still 2 APEC economies that had not signed anything).

Was the process different for Phase 2 vs Phase 1? What additional issues were faced?

The agreement covers any equipment regulated by telecoms authority – how does NCC (BMSI?) define what equipment it regulates? (legislation) (Telecommunications Act?)

How are the industry standards-setting responsibilities of NCC matched with the telecomms regulatory responsibilities of NCC?

How do all these regulations work in the national context?

Coordination – now – NCC/TAF/BSMI

How does the joint committee operate?

What are the major policy decisions and how is industry consultation on these managed?

What effects on industry are there and how are these evaluated? (quantitative vs qualitative?)

How does NCC/BSMI liaise with telecommunications industry policy people?

Is there a policy review cycle?

More than ten years has elapsed since the Phase 1 agreement 1999 – have there been policy changes in response to industry or other input?

What has been the benefit to the regulator (resourcing, international engagement, harmonization)?

BSMI's role in measuring-instrument comparisons?

Agreements with other economies – what is the process? There were a lot in 2000, do the agreements pre-date the accreditation process or did they come first?

If you were doing this again, what would you do differently?

What have been the main lessons learned?

Accreditation - TAF

(Aware that TAF formation post-dates 1999 commencement of accreditation)

What is the process to recognise a CAB (steps) – the CABs are recognised according to the standard in the other economy? E.g for Hong Kong, China the CABs meet HKTA standards

What happens when the standard changes?

How does TAF measure the benefits of accreditation?

What other issues were faced?

What have been the main lessons learned?

If you were to design this process again, what would change?

CABs

How does TAF decide who to accredit for what – do CABs apply, does TAF decide what is needed and advertise? what is the role of the industry association?

Was there a capacity building program and how was this funded?

Why do different CABs only get accredited for one or two things?

Benefits to TAF as an accreditor -

Industry impacts (TAF/ITRI/CABs)

What was the state of the testing and certification in industry in Chinese Taipei at the time the MRA was proposed?

What has happened since?

Adjustment issues?

How is the impact measured? There don't seem to be many major trends emerging out of national statistics; (labour force, exports, imports, manufacturing)

How has the manufacturing industry been changed since the MRAs?

How has the testing industry been changed since the MRAs?

Phase 1 to Phase 2

In relation to above was the whole process repeated for Phase 2 vs Phase 1 recognition?

Gaps

What other events have resulted in the trends that we see in this case study? (TC vs elsewhere)

Who else should we speak to?

What other sources documents might be available?

ANNEX 2 – AVAILABILITY OF STATISTICAL DATA

Chinese Taipei has good economy level statistics which can be mapped against the International Standard Industries Classification⁷⁶ and other classification systems where the level of detail is sufficient. Chinese Taipei's national census, held every five years, publishes data at 4 digit level and below, including (relevant data in bold):

- Manufacture of Electronic Parts & Components (includes manufacture of **semi-conductors**; manufacture of **electronic passive devices**; manufacture of **bare printed circuit boards**; manufacture of **optoelectronic materials** and components; manufacture of **other electronic parts & components**)
- Manufacture of Computers, Electronic & Optical Products (includes manufacture of computers & peripheral equipment; manufacture of **communication equipment**; manufacture of **audio and video equipment**; manufacture of magnetic and optical media; manufacture of measuring, navigating, control equipment, watches and clocks, manufacture of irradiation & electromedical equipment; manufacture of optical instruments & equipment;
- Manufacture of Electrical Equipment (including: manufacture of power generation, transmission and distribution machinery; manufacture of batteries; **manufacture of wiring and wiring devices**; manufacture of lighting equipment; manufacture of domestic appliances; manufacture of other electrical equipment

Censuses before and after the signing of TEL MRA agreements were reviewed, but it was expected that the impact of TEL MRA agreements may be small in the overall national picture. This is due to the sequential nature of signing of MRA agreements with other economies, the likely minor impact of the signing of the MRA with both Singapore and Hong Kong, China, and the broader impact of major events such as the Asian Financial Crisis (1997) and the Global Financial Crisis (2008).

The International Trade Centre has a website which compiles trade statistics under a number of categories, the most relevant being Product Group, Section 85: *Electrical machinery and equipment and parts thereof* which includes Electrical apparatus for line telephony or line telegraphy (8517), Transmission apparatus for radio-telephony, radio-telegraphy, radio-broadcasting or television (8525) Reception apparatus for radio-telephony, radio-telegraphy or radio-broadcasting, (8527) and Electrical apparatus for switching or protecting electrical circuits, or for making connections to or in electrical circuits (8434). These will be reviewed seeking trends information relevant to Chinese Taipei.

The OECD also hosts the OECD-WTO Trade in Value Add (TiVA) data set⁷⁷ which also provides a central source of information on trade data. It aims to provide better tracking of global production networks and supply chains than is possible with conventional trade statistics and contains a range of indicators measuring the value added content of international trade flows and final demand. The indicators are derived from the 2015 version of OECD's Inter-Country Input-Output (ICIO) Database. Sample relevant search terms are:⁷⁸

⁷⁶ United Nations (2008): International Standard Industrial Classification of All Economic Activities (ISIC) Series M Rev 4 No. 4

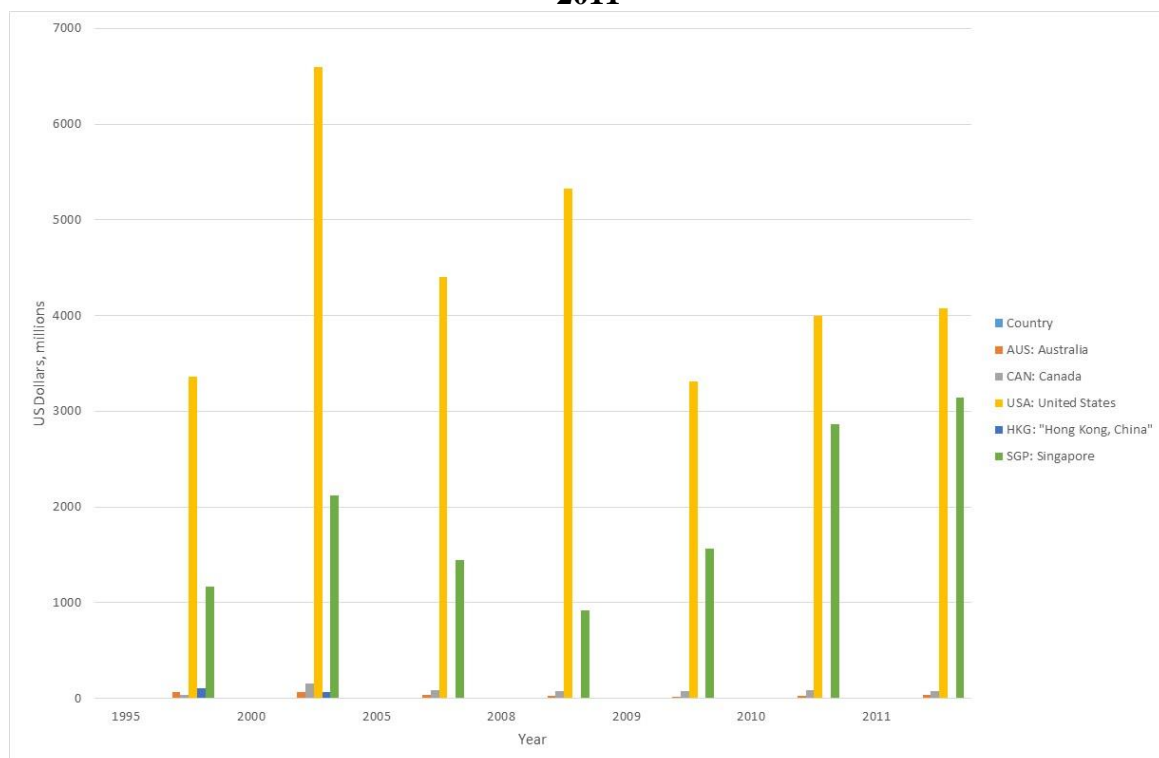
⁷⁷ OECD (2016): OECD.Stat, Available from: www.stats.oecd.org (Accessed May 2016)

⁷⁸ OECD (2015): TiVA 2015 Definitions, Version 2, Available from: http://www.oecd.org/sti/ind/tiva/TIVA_2015_Indicators_Definitions.pdf (Accessed May 2016)

- Gross exports by industry and partner economy e.g. to determine if there was a change in exports between Chinese Taipei and an MRA TEL partner economy before and after signing;
- Foreign value added share of gross exports, which is a measure of the import content of exports, a backward linkage measure which provides insights into which economies provide components or parts for products exported by Chinese Taipei. An initial review of these data has shown that, as expected, there is limited contribution by the TEL MRA economies to telecommunications products manufactured in Chinese Taipei and then exported; and
- Domestic services value add in gross exports which, while potentially attractive as a source of information in the role of services to manufacturing, appears to have little data.

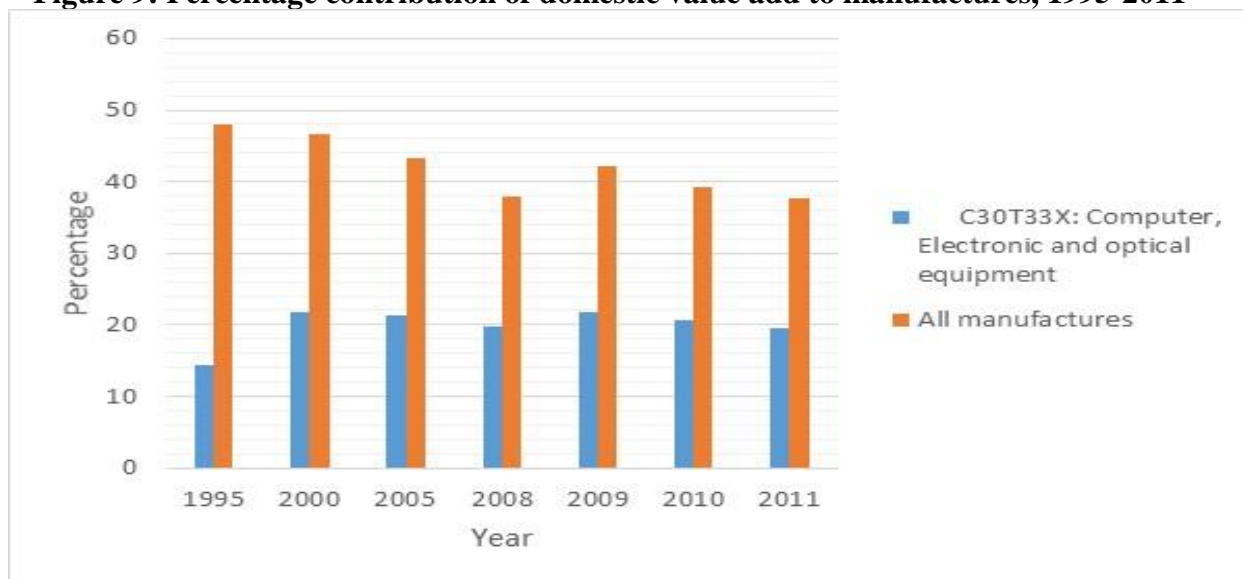
The limitation of the TiVA data set is that it does not use the same classification as the International Trade Centre and the most relevant class is Computer, Electrical and Optical Equipment (C30T33). Data from 1995 through to 2015 was examined to identify trends in exports and value-add in this sector, with the APEC TEL MRA trading partners. No particular trends were observed e.g. the graph of gross exports of computer, electrical and optical equipment to the five economies with which Chinese Taipei has a TEL MRA agreement show initial positive trends for the United States but a fall which is likely to be due to the Asian Financial Crisis in the period 2008-2009 (Figure 8)Figure 1. During this period, however, the percentage of domestic value add to the computer electrical and optical equipment manufacturing rose, while at the same time overall the percentage of domestic value add for all manufactures was falling (Figure 9).

Figure 8: Gross exports of computer and related products from Chinese Taipei 1995-2011



Source: TiVA database. Note the five yearly intervals between the first three columns and then from 2008 the data are annual

Figure 9: Percentage contribution of domestic value add to manufactures, 1995-2011



Source: TiVA database. Note the five yearly intervals between the first three columns and then from 2008 the data are annual

Finally, the UNCTAD makes available national level trade (both import and export) data by year, partner economy and commodity. There are 4-5 commodity classifications at the 3-digit level that are relevant to telecommunications. An analysis was completed of the United States-Chinese Taipei trade from 1995-2000 to see if the reported importance of printed circuit board exports from the US to Chinese Taipei could be identified (see page 325 for discussion on supply side barriers), but the data are too aggregated to pick up this particular trend with any confidence).

ANNEX 3 – TYPES AND SCOPE OF TESTING

This Annex summarises the different types of testing for which Chinese Taipei CABs can be accredited, and the scope of testing for which they are certified. The number of CAB agreements outline in this section is based on the information available from the National Communications Commission, Chinese Taipei.

Customer Premises Equipment (Australia only)

Customer premises equipment (CPE) is telephone or other telecommunication hardware that is installed or located on the customer's physical premises e.g. telephone handsets, cable TV set-top boxes, VoIP base stations, or Digital Subscriber Line routers.⁷⁹

Table 10: Australian Telecommunications standards

Standard	Definition
TS001 – 1997	Safety Requirements for Customer Equipment
TS002 – 1997	Analogue Interworking and Non-Interference Requirements
TS003 – 1997	Customer Switching Systems Connected to Public Switched Telephone Network (PSTN)
TS004 – 1997	Voice Frequency Performance Requirements for Customer Equipment
TS005 – 1997	Mobile Station for AMPS Analogue Cellular Mobile Telecommunications System
TS014 – 1997	General Requirements for Customer Equipment Connected to an ISDN Primary Rate Interface
TS018 – 1997	GSM Customer Equipment
TS019 – 1997	Customer Equipment for use with CT2 CA1 Cordless Telecommunications Systems
TS031 – 1997	Requirements for ISDN Basic Access Interface
TS038 – 1997	Requirements for ISDN Primary Rate Access Interface

Source: Australian Communications and Media Authority see <http://www.acma.gov.au/>

EMC (Australia and US)

EMC is focused on ensuring the correct operation of different telecommunication equipment within a standard electromagnetic system. This is specifically related to avoiding damage to equipment through unintentional generation and reception of electromagnetic energy.

⁷⁹ TechTarget (2010): Customer Premises Equipment, Available from: <http://searchnetworking.techtarget.com/definition/customer-premises-equipment> (Accessed May 2016)

Table 11: Australian EMC standards

Standard	Definition
AS/NZS 1044 – 1995	Limits and methods of measurement of radio disturbance characteristics of electrical motor-operated and thermal appliances for household and similar purposes, electric tools and similar electric apparatus
AS/NZS 1053	Limits and methods of measurement of radio interference characteristics of sound and television broadcast receivers and associated equipment
AS/NZS 2064 ½ - 1997	Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radiofrequency equipment
AS/NZS 3548 – 1995	Limits and methods of measurement of radio disturbance characteristics of information technology equipment
AS/NZS 4251 – 1999	Electromagnetic compatibility (EMC) Generic emissions standard Series
AS/NZS 4051 – 1998	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
AS/NZS 4052 – 1992	Guidance on the use of the substitution method for measurements of radiation from microwave ovens for frequencies above 1 GHz
AS/ACIF S002	Applies to customer equipment that is designed or intended for connection with an analogue public switched telephone network two-wire service
AS/ACIF S043-1	Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network (Part 1 – General)
AS/ACIF S043-2	Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network (Part 2 – Broadband)

Source: SAI Global, ACMA and the Australian Communications Industry Forum

Table 12: United States EMC standards

Standard	Definition
47 CFR Part 18	Regulates industrial, scientific and medical (ISM) equipment that emits electromagnetic frequencies within the radio frequency spectrum
47 CFR Part 15	Regulates intentional, unintentional or incidental radiator operations without individual license Notes: also contains technical specifications, administrative requirements and conditions relating to part 15 devices

Source: Cornell University Law resources and the Electronic Code of Federal Regulations

Fixed Network Equipment (Hong Kong, China only)

Fixed network equipment broadly refers to a system that is connected by wires rather than a radio system. Fixed network equipment refers to the equipment that support this network. This can also include the PSTN, digital subscriber lines (DSL), and coaxial cable and fibre. Within a premises, other equipment can be included under this definition which assist in

extending the network to other devices. This includes by wires (such as an Ethernet) or wireless networks (such as Wi-Fi).⁸⁰

Table 13: Hong Kong, China Fixed Network Equipment standards

Standard	Definition
HKTA Specification 2014	Network connection specification for connection of CPE to the Public Telecommunications Network (PTN) in Hong Kong, China using ISDN Basic Rate Access (BRA) based on ITU-T recommendations
HKTA Specification 2015	Network connection specification for connection of CPE to the to the PTN in Hong Kong, China using ISDN Primary Rate Access (PRA) at 1544kbits/s based on ITU-T recommendations
HKTA Specification 2017	Network connection specification for connection of CPE to the PTN in Hong Kong, China over digital trunk at 1544kbits/s using DTMF signalling
HKTA Specification 2021 (formerly HKCA 2021)	Network connection specification for connection of CPE to the PTN in Hong Kong, China by ISDB BRA interface using metallic loops on the network
HKTA Specification 2023 (formerly HkCA 2023)	Network connection for the connection of CPE with voiceband operation to the private circuits provided by the Fixed Telecommunications Network Services (FTNS) operators in Hong Kong, China

Source: OFCA Hong Kong, China

Information Technology Equipment (Singapore only)

Information Technology Equipment (ITE) includes devices that collect, transfer, store or process data. Such devices generate a multiplicity of periodic pulsed, or binary, electrical waveforms. ITE equipment is generally low voltage in nature (600V or below). Examples of ITE equipment include computers, telecommunications equipment, monitors, keyboards, printers, servers, and computer drives.⁸¹

Table 14: Singapore ITE standards

Standard	Definition
IEC/ISO CISPR 22	The standard cover limits and methods of measurement of radiated and conducted emissions from ITE.

Source: International Electrotechnical Commission

Low power R.F. equipment (Australia, Singapore, US)

Low-power, non-licensed RF transmitters are used virtually everywhere. Cordless phones, baby monitors, garage door openers, wireless home security systems, keyless automobile entry systems and hundreds of other types of common electronic equipment rely on such transmitters

⁸⁰ OECD (2012): Fixed and Mobile Networks: Substitution, Complementarity and Convergence, Working Party On Communication Infrastructures And Services Policy, Directorate for Science, Technology and Industry Committee for Information, Computer And Communications Policy DSTI/ICCP/CISP(2011)11/FINAL, 8 October 2012, page 9

⁸¹ Compatible Electronics (2016): Information Technicality Equipment – ITE Equipment. Available from: http://www.celectronics.com/training/learning/product_family_standard/Information-Technology-Equipment-ITE.html (Accessed May 2016)

to function. At any time of day, most people are within a few meters of consumer products that use low-power, non-licensed transmitters.

Table 15: Australian Low Power RF Equipment standards

Standard	Definition
AS/NZS 4268	Limits and methods of measurement for radio equipment and systems for short range devices
AS/NZS 4771	Standard for technical characteristics and test conditions for data transmission equipment operating in the 900MHz, 2.4 GHz and 5.8 GH bands and using spread spectrum modulation techniques

Source: SAI Global

Table 16: Singapore Low Power RF Equipment standards

Standard	Definition
IDA TS SRD	This specification defines the minimum technical requirements for short-range device transmitters and receivers to operate in the authorized frequency bands or frequencies, and transmit within the corresponding output levels.

Source: Infocomm Development Authority of Singapore see <https://www.ida.gov.sg/>

Table 17: United States Low Power RF Equipment standards

Standard	Definition
47 CFR Subpart 15B	This subpart regulates unintentional radiator operations without an individual license
47 CFR Subpart 15C	This subpart regulates intentional radiator operations without an individual license
47 CFR Subpart 15E	This subpart sets out the regulations for unlicensed National Information Infrastructure (U-NII) devices operating in the 5.15-5.35 GHz, 5.47-5.725 GHz and 5.725-5.825 GHz bands.
47 CFR Part 18	Regulates ISM equipment that emits electromagnetic frequencies within the radio frequency spectrum to prevent harmful interference with authorised radio communication services

Source: SAI Global and Cornell University law resources

***Mobile/base station for GSM communication/digital communication system (DCS)
(Australia, Hong Kong, China)***

The GSM is an open, digital cellular technology used for transmitting voice and data services. GSM is a circuit-switched system that divides each 200kHz channel into eight 25kHz time slots. The data transfer speeds supported by GSM enables the transmission of basic data services, such as SMS. GSM has international roaming capabilities which allow users to access the same services abroad and in their home economies.⁸²

Table 18: Australian GSM/DCS standards

Standard	Definition
TS018 – 1997	GSM Customer Equipment

Source: Australian Communications and Media Authority see <http://www.acma.gov.au/>

⁸² University of Colorado Boulder (2016): GSM Tutorial. Available from: <http://ecee.colorado.edu/~ecen4242/gsm/index.htm> (Accessed May 2016)

Table 19: Hong Kong, China GSM/DCS standards

Standard	Definition
HKTA Standard 1033	Performance specification for mobile stations and portable equipment for use in the global system for mobile communications (GSM) 900 and 1800 MHz bands

Source: Office of the Communications Authority (Hong Kong, China) see <http://www.ofca.gov.hk/>

Radio Communications Device (Australia only)

A radio communications device is a transmitter designed for the purpose of radio communication. This includes anything designed to, or intended for, the use of communication through transmission and reception of radio signal. Relevant standards specify the essential operational and marking requirements and required radiofrequency characteristics for operation within certain radiofrequency spectrum arrangements.

Table 20: Australian Radio Communications Device standards

Standard	Definition
AS 4295 – 1995	Analogue speech (angle modulated) equipment operating in land mobile and fixed services bands in the frequency range 29.7 MHz to 1 GHz
AS/NZS 4255 – 1995	Radiocommunications equipment used in the handphone and citizen band radio services operating at frequencies not exceeding 30 MHz
AS/NZS 4281 – 1995	Radiocommunications requirements for cordless telephones operating in the 1.7MHz and between 30 and 41MHz frequency band
AS/NZS 4365 – 1996	Radiocommunications equipment used in the UHF citizen band and personal radio service
AS/NZS 4415 – 1996	Radiotelephone transmitters and receivers for the maritime mobile service operation VHF bands – technical characteristics and methods of measure

Source: Australian Communications and Media Authority see <http://www.acma.gov.au/>

Radio Equipment (Hong Kong, China and Singapore)

Radio equipment is any equipment or interconnected system or subsystem of equipment that is used to communicate over a distance by modulating and radiating electromagnetic waves in space without an artificial guide. This includes both transmitting and receiving.

Table 21: Hong Kong, China Radio Equipment standards

Standard	Definition
HKTA Standard 1002	Performance specifications for short range devices operating in the 433MHz band
HKTA Standard 1004	Performance specifications for VHF transmitters and receivers for use in the public paging service
HKTA Standard 1005	Performance specification for angle modulated VHF maritime band radio equipment for voluntary fitting in small craft
HKTA Standard 1006	Performance specification for cordless telephone operating in the 1.7MHz and 47MHz bands
HKTA Standard 1007	Performance specification for the limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment
HKTA Standard 1008	Performance specification for low power radio microphones, including associated receiving equipment
HKTA Standard 1009	Type acceptance criteria for base station equipment of 2.3GHz E-UTRA TDD network
HKTA Standard 1015	Performance specification for cordless telephone operating in the 864.1 to 868.1 MHz band
HKTA Standard 1016	Performance requirements for radio equipment for use as repeater, base and mobile stations in 800 MHz trunk systems
HKTA Standard 1020	Performance requirements for Base Station System and repeater equipment for use in the public mobile communications service employing GSM (900 MHz band) or Personal Communications Services (1800 MHz band).
HKTA Standard 1022	Performance requirements for CB radio transceivers operation in the frequency band 26.96 – 27.41 MHz for voice communications.
HKTA Standard 1026	Performance specification for cordless telephones operation in the 46 MHz and 49 MHz Bands

Source: Office of the Communications Authority (Hong Kong, China) see <http://www.ofca.gov.hk/>

Table 22: Singapore Radio Equipment standards

Standard	Definition
IDA TS SRD	This specification defines the minimum technical requirements for short range device transmitters and receivers to operate in the authorized frequency bands or frequencies, and transmit within the corresponding output levels.

Source: Infocomm Development Authority of Singapore see <https://www.ida.gov.sg/>

Sound and television broadcast receivers and associated equipment (Singapore)

Sound and television broadcast receivers and associated equipment includes any device designed to receive television pictures that are simultaneously broadcast with sound on the television channels.⁸³

⁸³ Legal Information Institute (2016): TV broadcast receivers, Cornell University Law School, Available from: <https://www.law.cornell.edu/cfr/text/47/15.117> (Accessed June 2016)

Table 23: Singapore Sound and Television Broadcast Receivers standards

Standard	Definition
IDA/MDA TS DVB-T2 IRD	Defines requirements for the Integrated Receiver Decoder (IRD) functionality that may be incorporated as a standalone module such as receiver box, an Integrated Digital Television (IDTV) or any other similar device intended for use with the second generation Digital Terrestrial Television Broadcasting System (DVB-T2).

Source: Infocomm Development Authority of Singapore see <https://www.ida.gov.sg/>

Telecommunication Terminal Equipment (Australia, Canada, US)

Telecommunication terminal equipment (TTE) functions at either end of a communications link within a public telecommunication network. It provides sending and receiving functions for subscribers.

Table 24: Australian TTE standards

Standard	Definition
AS/ACIF S002	Specifies the technical requirements for Customer Equipment (CE) and in the case of compound CE the parts of the compound CE that are designed or intended for connection to an analogue PSTN two-wire service
AS/ACIF S003	Applies to CE that is designed with multiple parts (local or network) that provides or is intended to provide access (gateway functions) to a Telecommunications Network, and capable of switching, storage, processing, conversion, integration, line isolation/coupling or multiplexing of analogue or digital voice or voice equivalent communication
AS/ACIF S041	Specifies the technical requirements for CE or the parts of the CE that are designed or intended for connection to a DSL service that shares the metallic local loop with an analogue PSTN two-wire service.
AS/ACIF S043-1	Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network (Part 1 – General)
AS/ACIF S043-2	Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network (Part 2 – Broadband)
AS/ACIF S041	Requirements for DSL Customer Equipment of connection to the Public Switched Telephone Network

Source: Australian Communications Authority and Standards Australia see <http://www.commsalliance.com.au/>

Table 25: Canada TTE standards

Standard	Definition
CS-03 Part I	Minimal technical requirement of terminal equipment (TE) and related access arrangements intended for direct connection to analog wireline facilities owned by Canadian Local Exchange Carriers (LEC)
CS-03 Part II	Specifies digital network interfaces that include: wide band channel which provide full 1.544 Mbps (DS-1) bandwidth facility channelized into 24 substrate channels of 64kbps interfaces, DS-1 channelised into 64kbps using signaling bits which may be decoded by the network,

	DS-1 channelised into 24 substrate channels of 64kbps having analog content which may be decoded by the network
CS-03 Part V	This part provides technical requirements for handset telephones to be hearing aid compatible.
CS-03 Part VI	This part sets the minimum network protection requirements for (ISDN TE intended for connection to common carrier provided facilities for both BRA and PRA
CS-03 Part VIII	Sets the minimum requirement for network protection for symmetrical and asymmetrical digital subscriber lines for ADSL, ADSL2, ADSL2+, READSL, HDSL2, SDSL, SHDSL, VDSL and VDSL2

Source: Innovation, Science and Economic Development Canada see <http://www.ic.gc.ca/>

Table 26: United States TTE standards

Standard	Definition
47 CFR Part 68	Regulates terminal connection of telecommunications equipment and customer premises wiring with the public switched telephone network, and some private line services and the connection of private branch exchanges to telecommunications interfaces
TIA-968-A	Specifies technical criteria for terminal equipment approach in accordance with 47 CFR 68 for direct connection to the public switched telephone network, including private line services provided over wireline facilities owned by providers or wireline telecommunications

Source: American National Standards Institute see <https://www.ansi.org/> and Cornell University Law School see <https://www.law.cornell.edu/cfr/text/47/68.100>

Terminal Attachment (Canada, Hong Kong, China; US)

Terminal Attachment refers to the technical requirement for the way that terminal equipment is attached to the facilities of telecommunications services providers.

The Canada Terminal Attachment standards are the same as those outlined in Table 25.

Table 27: Hong Kong, China TTE standards

Standard	Definition
HKTA Specification 2011	Network connection specification for connection of (CPE to direct exchange lines (DEL) of the PSTN in Hong Kong, China

Source: Office of the Communications Authority (Hong Kong, China) see <http://www.ofca.gov.hk/>

Table 28: United States Terminal Attachment standards

Standard	Definition
47 CFR Part 68	Regulates terminal connection of telecommunications equipment and customer premises wiring with the public switched telephone network, and some private line services and the connection of private branch exchanges to telecommunications interfaces
TIA-968-A	Specifies technical criteria for terminal equipment approach in accordance with 47 CFR 68 for direct connection to the public switched telephone network, including private line services provided over wireline facilities owned by providers or wireline telecommunications

Source: American National Standards Institute see <https://www.ansi.org/> and Cornell University Law School see <https://www.law.cornell.edu/cfr/text/47/68.100>

ANNEX 4 – CHINESE TAIPEI CABS

Table 29 summarises the key members of the CAB industry in Chinese Taipei for which there was publically available information.

Table 29: Summary of CABS

Name of company	First ISO/IEC 17025 accredited	Owner	Accredited for	APEC TEL MRA Partners
A Test Lab Techno Corp.	2010	SME est. 2001	TTE, Low power RF equipment	Australia, Canada, United States
Aerospace Industrial Development Corporation EME Lab.	2005	Government-owned under Ministry of Economic Affairs from 1969	Low-powered RF equipment	United States
AnCert Certification Co., Ltd	2007	Est. 2009	EMC	United States, Canada, Australia, New Zealand
Audix Technology Corporation	2007	Audix Group, under Technique Services est. 1980	TTE	United States
Bay Area Compliance Laboratories Corp. (Chinese Taipei)		Subsidiary of BACL (United Stated) Est 1996	Low-powered RF equipment, EMC	United States, Canada, Singapore
BTL Inc.	1987 (FCC) 1997 (BSMI)	Est 1986 as Neutron Engineering, merged with BTL in 2005	Low-powered RF equipment, TTE	United States
Bureau Veritas Consumer Products Services (Hong Kong, China) and Taoyuan Branch	2003	Global conglomerate with subsidiaries in ~40 economies	Mobile/base station for GSM/DCS, Low power R.F. equipment, EMC, xDSL Terminal Equipment, Terminal Attachment	Australia, Canada, Hong Kong China, Singapore, United States
Central Research Technology Co.	2001	Est. 1997	Low-powered RF equipment	United States
Cerpass Technology Corporation	2005	Est. 2003, Chinese Taipei based company with labs in China	TTE	United States
Compliance Certification Services Inc.	2003		Low-powered RF equipment	United States
Communications Global Certification Services Inc.	2004	Chinese Taipei company, bought by HTC in 2007	TTE	United States
Electronics Testing Center, Chinese Taipei	2000	Est. 1982 as joint venture between ITRI and Electronic Manufacturers	CPE, EMC, Terminal Attachment, TTE, EMC	Australia, Canada, United States

		Association; 6 domestic locations		
Foxconn EMC Measurement Center	2005	Parent company Hon Hal Precision Industry Co., Ltd est. 1974	EMC	United States
Global Certification Corp.				United States
Global EMC Standard Tech. Corp	2011	Chinese Taipei company est. 1995	EMC, RF	United States
Hong An Technology EMC Laboratory		Hong An Technology Co. Ltd est. 1996	Low-powered RF equipment	United States
International Certification Corp.		Est. 2012	TTE, Low-powered RF equipment	United States
International Standards Laboratory	2003		TTE, low-powered RF equipment, base station RF equipment	United States
Interocean EMC Technology Corp.	1999	Chinese Taipei company. Est. 1999	Low-powered RF equipment	United States
Intertek Testing Services Taiwan Ltd.	2000	One of hundreds of subsidiaries owned by Intertek plc (UK)	EMC, Terminal Attachment TTE	Australia, Canada, Hong Kong China, United States
Inventec Corporation Taoyuan EMC Laboratory	2003	Inventec Corporation (stock exchange listed) est. 1975	EMC	Singapore
Max Light Technology Co., Ltd.	2011	SME est. 1996	Terminal attachment	Canada, United States
MITAC EMC LAB.		Owned by MITAC International Corporation, manufacturer est. 1982		
PTT Laboratory, TECO Imaging Systems	2009	Part of TECO Group (est. 1956), contract manufacturer. Parent in Chinese Taipei, operations in 30 economies	TTE	Canada, United States
QuieTek Corporation	2011	SME, est. 1998, four domestic locations	Low-powered RF	Australia, United States
SGS Taiwan Ltd.	2014	Owned by SGS group since 1952; 2,500 in Chinese Taipei, 85,000 worldwide	Low-powered RF, IT equipment	Singapore
Spectrum Research & Testing Lab., Inc.	2007	SME	Low-powered RF equipment	Australia, Canada, United States

SPORTON International Inc.	2009	Stock-exchange listed parent, business unit founded 2006	Low-powered RF equipment, TTE	United States
Telecommunications Equipment Testing Center, Telecom Laboratories/ Chung-wha Telecom Co., Ltd.	2000	Chung-wha Telecom	CPE, Radio communication devices, EMC, Terminal attachment equipment, radio equipment, fixed network equipment	Australia, Canada, Hong Koing China, United States
Telecom Technology Center	2015	SME, est. 2004	Sound and TV receivers and broadcasting equipment	Singapore, United States
Training Research Co. Ltd	2000	SME est. 1994	EMC, TTE	Australia, United States
TUV Rheinland Taiwan Ltd		Global corporation est. 1872	Low-powered RF Equipment, TTE	United States
Wendell Co., Ltd	2001	Chinese Taipei company with subsidiaries in Australia, China, Korea, Japan. Also contract manufacturer	EMC	United States
Worldwide Testing Services (Taiwan) Co., Ltd.	2006	SME est. 1995	Low-powered radio equipment	Singapore, United States

Source: NCC list of List of Domestic Recognized Telecommunication Equipment Testing Labs, supplemented by list from FCC



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

**APEC Economic
Policy Report 2016
Annex B**

2016 AEPR Individual Economy Report (IER) Questionnaire: Structural Reform and Services

The IERs provide an opportunity for economies to share experiences and lessons learned from implementing services sector structural reforms. The IERs will contribute to developing a broader narrative on structural reform and services in the region and identify good policies and practices APEC economies could adopt when reforming their services sectors.

Please limit responses to a maximum of 4 pages. Responses should focus on 1-2 services sector structural reforms undertaken in your economy in recent years (i.e. undertaken since 2000). To allow for comparability and analysis in the AEPR, economies should only limit responses to the specific sectors and reasons for reform outlined in question 2a.

1. General overview

Overview of services sectors in your economy (e.g. size, nature of sector, GDP, employment etc); to date, what reforms have impacted services sectors in your economy (e.g. whole of government deregulation agenda, national competition policy reform etc.)? What is the overall economic context in which these reforms were implemented?

2. Context of structural reforms undertaken

- a. What specific services sector structural reforms are you addressing in this questionnaire? *To allow for cross-economy analysis, please limit responses to 1-2 sectors from the following list: professional services, distribution, energy, education, telecommunications, tourism, financial or transportation (or sub-sectors thereof).*
- b. Why this reform was necessary (e.g. enhance competition, investment, productivity; respond to technological, economic change etc.)

3. Reform measures

What was the specific measure(s) undertaken? Were public consultations/other forms of public participation and regulatory impact analyses used? How were reforms/measures sequenced?

4. Impact of reform(s)

- a. Quantitative and qualitative (including anecdotal) information to demonstrate the impact the reform(s) had on your economy, including flow-on effects to other sectors/the wider economy, unexpected consequences (both positive and negative)
- b. What effect has this reform(s) had on global value chains? (if relevant/possible; response can be anecdotal if necessary)

5. Challenges and lessons learned

What were the challenges to introducing and implementing the reform(s)? In hindsight, what would you do differently (e.g. in terms of sequencing reforms, coordination between institutions, public consultations)?

6. Next steps

Are there any next steps in implementing this reform(s)? Is your economy planning to implement other services-related structural reform(s) in the near future?

AUSTRALIA

1. General overview

Australian services sector

The Australian economy is largely driven by the services sector, with the diverse set of industries classified as ‘services’ accounting for around 80 per cent of employment and around 60 per cent of GDP. The services sector grew solidly in 2014–15 at 2.3 per cent, in line with all-industry growth. Within this headline figure, however, there was wide disparity across the sector: for example, professional, scientific and technical services experienced a contraction of 4 per cent compared to 2013-14, whereas information media and telecommunications (encompassing a large proportion of the ICT industry, along with media elements such as TV, radio, print and libraries) grew by 9.4 per cent over the same period.

After low or negative growth immediately following the Global Financial Crisis, service exports have made a full recovery, now reaching annual growth not seen since mid-2007 (5.8 per cent growth for 2014-15). Service exports currently make up around 20 per cent of Australia’s total exports, and recent improvements in global conditions coupled with favourable exchange rate conditions are expected to further benefit exporting services industries. Key components of service exports are travel (education, personal and business), business services, transport services, and financial services.

Services sector reform

Prior to 1983, Australia’s economic regime was highly regulated, anti-competitive and redistributive. For most of the 20th century, the economic costs of this approach were masked by the performance of Australia’s broad-acre agricultural and mining industries; the terms of trade favoured primary commodities, and there had been a world-wide increase in demand following World War II. However, the 1970s saw the beginning of a deterioration in the terms of trade which exposed the underlying problem of Australia’s poor productivity performance (even in the post-war years Australia’s annual productivity growth averaged 2.5 per cent, compared to 3.5 per cent for OECD countries as a group). This sparked a deterioration in Australia’s comparative living standards: from 5th in the world in 1950 in terms of GDP per capita, to 9th in 1973 and then 15th in the late-1980s.

The services sector was impacted by a number of significant economic reforms in the 1980s and 1990s, including: the floating of the Australian dollar and the liberalisation of cross-border capital flows; the broadening of the income tax base; the introduction of labour market flexibility, so that enterprises could negotiate directly with their workforces on wages and work practices; the reduction to negligible levels of import tariffs; significant changes to government statutory monopolies in energy, communications, and transport, leading in many cases to privatisation; and the systematic review of restrictions on competition throughout the economy, resulting in an extensive list of reforms, including in agricultural marketing, domestic aviation, retail trading, and price and quantity controls.

As the economic reforms undertaken from 1983 onwards began to take effect, Australia’s GDP per capita ranking has risen steadily, and since the early 1990s

Australia has experienced 23 consecutive years of positive economic growth, including through the Asian and Global Financial Crises—unique among OECD countries over this period. More importantly, per capita incomes have also increased in most years, and all income groups have generally shared in the benefits (even if not equally).

The 1980s and 1990s were transformative years for the Australian economy as a whole, and for the services sector in particular. There have been very few successful (i.e. both lasting and beneficial) national structural reforms undertaken in this sector in recent times. This will no doubt change in the near future, as recommendations from the 2015 Competition Policy Review – which had a strong focus on the services sector, including human services, transport, and retail – are addressed.

2. Context of structural reforms undertaken

- a. *What specific services sector structural reforms are you addressing in this questionnaire?*

In this questionnaire we are addressing structural reforms in the Australian electricity sector. Under Australia's federal system, electricity supply is the responsibility of individual state and territory governments; as a result, this questionnaire presents the experience of the state of Victoria, which was one of the first states to introduce full retail contestability in the electricity sector, in 2002, and the first state to implement full electricity price deregulation, in 2009.

- b. *Why this reform was necessary*

These reforms were seen as measures that would lead to providers offering competitive pricing of electricity and improving the efficiency in service delivery. The reforms would also give customers wider choice and therefore create competitive pressure in the retail electricity market

3. Reform measures

Background

The Council of Australian Governments decided in the early 1990s to commence work on the development of a competitive electricity market. This decision was a response to an Industry Commission report which found that potentially significant increases in growth (equivalent to 1.25 per cent of GDP) could be realised by: restructuring the electricity supply industry; introducing competition into electricity generation and retail; progressively selling publicly owned electricity generation, transmission and distribution assets to the private sector; and enhancing and extending the interconnected systems of south eastern Australia.

The first step in this process was the creation of a National Grid Management Council in 1991, followed by the development of a National Electricity Code in 1994. In 1996 a National Electricity Law was passed, and a National Electricity Code Administrator and National Electricity Market Management Company were created. The National Electricity Market (NEM) commenced in 1998 as Australia's first wholesale electricity market and associated synchronous electricity transmission grid.

Electricity sector in Victoria

The Victorian Government had undertaken a process of restructuring and corporatizing government-owned energy assets and businesses during the early 1990s, and as part of this process five corporatized electricity retail businesses had been established. These electricity retail arms were subsequently privatised in 1995, with each retailer operating as a franchised monopoly retailer – or ‘host’ retailer – in a designated distribution area. The price of electricity – the standing offer – was regulated by the state government.

Retail contestability was introduced via a staged process, based on the size of customers’ annual energy consumption. At the outset, only the largest industrial and commercial energy users could choose between host retailers and new entrant energy suppliers; over time, this was progressively extended to more and more customers, but by December 2001 only approximately 2 per cent of customers were covered. Full retail contestability was introduced into the Victorian electricity sector in January 2002, enabling the remaining 98 per cent of customers (2.1 million subscribers) to choose for the first time their preferred electricity supplier.

Initially, electricity retail prices remained under regulatory control. Although all retailers were able to offer new pricing arrangements – known as market offers – to customers, host retailers were also obliged to offer a standing offer price, which was still set by the state regulator. Customers who did not switch to a market offer remained by default on the standing offer price.

Full price deregulation was implemented in 2009, based on a recommendation by the Australian Energy Market Commission (AEMC) which found that competition in Victoria was fully effective. However, standing offer contracts remained the default arrangement for customers who did not request a market contract, with retailers now able to set their own standing offer prices.

4. Impact of reform(s)

Two years after the introduction of full retail contestability, in 2004, the Victorian Essential Services Commission (ESC) conducted an initial review of its effectiveness. The ESC found that in addition to the three host retailers (reduced from five due to a series of acquisitions), there were seven new entrants into the retail market, all of which were active in contacting customers and making market offers. Nevertheless, active marketing by retailers tended to focus on the larger end of the retail market, leading the ESC to suggest that while competition had been fully effective in constraining prices and delivering other benefits to the larger retail customer segment, it was at that point less than fully effective for smaller retail customers.

In 2007 the AEMC conducted a review of the Victorian electricity retail market and found that: the number of retailers in the Victorian electricity market had risen to 13; barriers to entry into electricity retailing were quite low; and economies of scale were modest and diminishing (reducing the competitive advantage of larger incumbents). In addition, 50 per cent of residential customers and 70 per cent of small businesses had switched to a market contract, and there was no evidence to suggest that any particular customer group had been precluded from participation in the market.

In 2013 the ESC again reviewed the progress of electricity retail competition in Victoria and found that the combined market share of new entrants had increased to close to 30 per cent of all residential and small business market customers. In addition, the degree of customer switching – or churn – in order to obtain better terms and conditions of supply was approximately 17 per cent, which indicated competitive pressure being placed on retailers.

The *State of the Energy Market 2015* report, prepared by the Australian Energy Regulator, found that 88 per cent of Victorian electricity customers had a market contract, and switching rates in Victoria were the highest in Australia. In addition, market contracts in Victoria demonstrated the highest average annual discounts (17-18 percent) from standing offer rates.

Finally, the *2015 Retail Competition Review*, prepared by the AEMC, found that: competition in Victoria was continuing to evolve and should deliver further benefits for customers over time; market concentration was declining, with new entrants having a greater collective market share than any of the three host retailers; customer satisfaction, including assessment of value for money; was increasing; and there was evidence of strong rivalry between the 21 electricity retail brands operating in Victoria.

5. Challenges and lessons learned

While the proliferation of contract, pricing and product structures available in the electricity market is a desirable outcome of competition and deregulation, it does mean that direct price comparisons are difficult; a report prepared for the ESC in 2013 found that it was getting more difficult for consumers to understand what they were being offered. For some customers in particular, their personal circumstances (e.g. socioeconomic status, age, level of education, disability) can restrict their ability to understand and therefore access the benefits of the competitive market.

Comprehensive disaggregated data is not publicly available, but it is likely that the removal of price controls in 2009 disproportionately affected customers who were least able to understand the significance of full deregulation. As mentioned previously, deregulation enabled retailers to independently set the pricing of their standing offers. As these prices increased, with significant increases in some cases, most customers chose to switch to market offers. However, with standing offers remaining the default option, a number of customers – who perhaps do not know how to change, or do not even know that they can change to a market offer – are still paying up to 27 per cent more than necessary for their electricity.

Improving the situation of these consumers largely requires policy-based solutions that address the root causes of issues such as financial hardship or the ability of people to participate in the market economy generally. These solutions require a complex mix of government policy and industry responses, and rest upon effective collaboration between all relevant sectors.

The difficulty in comparing options has been somewhat addressed by a number of websites (including the ESC) offering price comparison functionality. However, the time and effort involved in researching offers and products mean that the majority of domestic and small business customers do not generally initiate market search activity

on their own behalf. Instead, decisions to change retailer or contract tend to be more in response to the direct marketing initiatives of retailers.

This leads in turn to a reliance by retailers on door-to-door sales and telemarketing, sales channels which tend to lend themselves to unscrupulous sales behaviours: the Australian Competition and Consumer Commission was forced to take action against a number of energy retailers, including electricity retailers in Victoria, for engaging in misleading and deceptive conduct, and making false representations, both in door-to-door and telemarketing campaigns. As a result, the three Victorian host retailers decided in 2013 to withdraw from door-to-door marketing (and this in turn likely contributed to a significant reduction in complaints about marketing practices raised with retailers in 2014).

These examples illustrate the importance of a robust and proactive consumer protection framework covering both retail and marketing activities. They also demonstrate the importance of research and analysis into how different classes of consumers are interacting with the market. It is not enough for governments to simply implement reform and then let the market take care of itself.

BRUNEI DARUSSALAM

1. General Overview

Being a nation with a small population, education plays a critical role in preparing students to become successful and responsible citizens who can contribute to the future social and economic progress of the community and the country. As we are in the 21st Century, new challenges are constantly emerging. Thus in 2009, Brunei Ministry of Education has introduced the National Education System for the 21st Century that brought about three main changes to ensure that our education system stays relevant and provides high quality education at all times.

The first major change is the **Education Structure** where the primary and secondary level have been renamed Year 1- Year 6 replacing Primary 1- Primary 6 and Year 7 - Year 11 replacing Form 1- Form 5 . This is to align with international standards and practices. In the previous system, the students were able to leave the general schooling system and proceed to vocational and technical institution after completing Secondary 3. In SPN 21, students would be able to leave the general schooling system and proceed to vocational and technical institution only after completing Year 10 (4 year General Secondary Education Programme) or 11 (5 year Secondary School). This provides students with better academic preparation before they further their studies or join the workforce. In addition, the 2007 Compulsory Education Order ensures that all children in Brunei Darussalam receive at least nine years of formal education between the ages of 6 and 15 years.

In the previous system, all students pursued five years of education, i.e. three years in lower secondary and two years in upper secondary. In SPN 21, students will complete the 4 year Secondary Education Programme or the 5 year Secondary Education Programme before the sit for BC GCE 'O' Level, GCSE, BTEC or other alternative qualification. Initially, all students will follow a common curriculum at Year 7 and Year 8. After Year 8, students will be channelled to the General Secondary Education Programme (4 year/5 year) or Applied Secondary Programme (5 years). This provides more options for the students in their pursuit for quality education.

The second major change is on the **Curriculum and Assessment** where in comparison with the previous Curriculum and Assessment, the SPN 21 Curriculum and Assessment Framework sets out the foundation policy for learning and assessment in schools to bring in line with it the 21st Century demands and needs. This includes critical skills in Mathematics, Science, Language and ICT; Entrepreneurial Skills and Lifelong learning; and Study Skills and Value Education.

The previous "Penilaian Menengah Bawah (PMB)" has been replaced by Student Progress Assessment (SPA). SPA for core subject consists of two component which are School Based Assessment (SBA) and Student Progress Examination (SPE). SPA serves as the basis for selection to channel students to the General Secondary Education Programme (4 year/5 year) or Applied Secondary Programme (5 years). SBA will continuously assessed throughout Year 7 and Year 8 as SPE will take place at the end of Year 8.

Lastly the third major change is the **Technical and Vocational Education and Training (TVET)** where the infrastructure has expanded to include new schools, upgrading its current institution/school building, developing the curricula, and increasing the number of teaching and support staff. In addition, it offers multiple pathways to higher education and create a more

dynamic TVET system within the National Education System. This is to provide a variety of technical and vocational programmes that suits the capabilities of the students who have completed Year 10 or Year 11. The TVET levels has been aligned with the current needs of the industries more effectively to indicate the necessary specific skills and knowledge required by the job market.

2. Context of structural reforms undertake

a. *What specifies services sectors structural reforms are you addressing in this questionnaires*

In this questionnaire we are addressing the SPN 21 as the Brunei Education System where the Ministry of Education is committed to improving education standards and the quality of schools and student outcomes. The actual implementation of SPN 21 commenced in 2009 involving Year 1 and Year 4 pupils. The full-fledged implementation of SPN 21 has been completed by 2015 and Brunei Education System is still undergoing improvements towards the education transformation in meeting the evolving demands of a high quality education system in the twenty-first century.

b. *Why this reform is necessary*

To keep up with the fast changing world, Brunei Darussalam has reviewed and recommended changes to its current education system to one that prepares our students with the relevant knowledge, skills, values and attitudes to meet the changing needs of a forward looking economy, and is responsive to the needs of various stakeholders.

3. Reform Measures

The National Vision known as **Wawasan Brunei 2035** which aims to make Brunei Darussalam, by the year 2035, a nation widely recognised for the accomplishment of its educated and highly skilled people as measured by the highest international standards; a quality of life that is among the top 10 nations in the world; and a dynamic and sustainable economy with income per capita within the top 10 countries in the world.

The eight (8) **Policy Direction in the Education Strategy** of *Wawasan Brunei 2035* which are:

- i. Investing in early childhood education;
- ii. Adopting international best practices in teaching and learning;
- iii. Having first class secondary and tertiary education including vocational schools, that produce experts, professionals and technicians required in commerce and industry;
- iv. Strengthening the competency in info-communication technology (ICT) for students, teachers and educational administrators including integration of ICT in school curriculum;
- v. Devising programs that promote life-long learning and widen access to higher education;
- vi. Promoting research, development and innovation both in government-funded institutions and through public-private and international partnerships;
- vii. Adopting cost-effective methods of educating our people through the use of technology; and
- viii. Improving the management of all our educational institutions.

In addition, the education mission which is to 'provide holistic education to achieve fullest potential for all'; reference to the education systems and curricula of other countries indicate the need to emulate international best practices; improving students' achievement, mainly on the three core subjects namely English Language, Mathematics and Science; increasing the percentage of students' enrolment to Higher Education from 14% to 30%; sustaining and strengthening students' performance in *Bahasa Melayu*; and report from local researchers and special consultants from overseas which have identified room for improvement in the National Education System.

The SPN21 Implementation and Performance review has also been carried out to identify workable and practical solutions for overcoming the challenges met in the implementation of SPN 21 and to formulate action steps to enhance the system further.

4. Impact of Reform

During the review process, the review committee benefited from experiences which gave essential and valuable insights into the workings of an extremely complex education network. Several noteworthy achievements became evident. These achievements have been realised in the past five years. The most encouraging are as follows:

1. Melayu Islam Beraja (MIB) and a value based education is developing at a good rate
2. Compulsory attendance in schools is strong and drop-out rates is low;
3. There is and remains a commitment to caring about the welfare of students;
4. Developments in technical vocational education is promising;
5. Early childhood care education is making good progress;
6. Literacy skill development programs have been introduced and students are showing good progress;
7. Changes have been made to the education structure and multiple pathways have been introduced;
8. The teaching profession has been recognised with the introduction of a teacher service scheme;
9. A school leadership programme is now in place;
10. There are new innovations in the education system such as in the use of ICT and pedagogy;
11. Parental satisfaction is high;
12. Our teachers have a deep passion for education

5. Challenges and lessoned learned

The three major challenges that has been highlighted include the need for the **Curriculum** to be reviewed; the importance in the **Alignment of the Curriculum to the Assessment**; and further support needs to be given to enhance **capacity of Teachers**.

Several recommendations has also been highlighted which are for the development of a **renewed master plan** to enhance the implementation of SPN 21 for the next five years. There needs to be efforts to foster a **data-driven culture** within the Ministry of Education and schools to better data utilisation. Data is key to ensure that objectives are met and plans are on-track and to identify patterns in performance. **Accountability** for performance is a fundamental issue at all levels of the system. It is recommended the Ministry of Education and schools remain focused on, and held accountable for, improved outcomes for students. School leaders will remain responsible for how schools are managed and will also be held accountable for students' achievements through a proposed performance-based management system, which is

based on quality standards and frameworks.

Restructuring of some aspects of the **organisation structure, roles and responsibilities** of Departments, Sections and Units of the Ministry of Education to bring it in line with newly formed SPN21 related functions. It is important that proper support and controls be provided to the schools through the renewed roles of Ministry of Education monitoring officers. As much as possible, these "new" role should build on aiding and accelerating school improvement and achieving SPN 21 aspirations. If the key implementers are clear about required behaviours and clear about objectives, then the education system will perform better.

The immediate appointment of a **Transformation Team or a Special Unit** to lead the transformation and monitoring of the SPN 21 education reform. This team will be dedicated to monitoring the changes, while the schools continue to provide critical service. The **type of leadership teachers** require, changes to their terms and conditions of service, their ongoing professional development and the need to stay focused on the goal of raising educational achievement. Thus strengthening support and capacity development for teachers.

6. Next Steps

The Brunei Education System is still undergoing a transformation where the reforms will better position Brunei Darussalam to meet the evolving demands of an education system in the twenty-first century. The Ministry of Education is committed to improving education standards and the quality of schools and student outcomes. The SPN 21 education reform agenda is being implemented with unprecedented levels in Brunei schools, and is working towards making sure that every student has the opportunity to learn and exit with favourable outcomes.

The major conviction of the SPN 21 Implementation and Performance review can best be expressed as 'implementation matters'; to identify workable and practical solutions for overcoming the challenges met in the implementation of SPN 21. To formulate action steps to aid future strategic implementation. In addition, The Ministry of Education continuous efforts to fulfil the needs and challenges of social and economic development of the 21st Century and develop the skills of the 21st Century amongst students in Brunei Darussalam is evident through the strengthening of the implementation of 21st Century Teaching and Learning.

The implementation of current education system is also determined through Brunei's participation with PISA in 2018 which will benchmark our students' competencies and standards compared to other countries. The readiness of our students will be determined through PISA-Based Test for Schools (PBTS) which will be held in 2016.

CHILE

1. General overview

Services have an important participation on GDP in many economies, which varies depending on its development levels. In the case of developing economies, the service sector has a participation of 51% of total GDP, while in developed countries the figure reaches 70%. Particularly for Chile, services represent 72% of total real GDP; however, it represents a small portion of our exports.

2. Context of structural reforms undertaken

- a. What specific services sector structural reforms are you addressing in this questionnaire?

The reform that allowed number portability in the mobile phone industry in Chile was introduced in January 2012. The objective that the government sought with the portability rule was to introduce more competition among incumbents and open the market to new entrants, especially to mobile virtual network operators (MVNO). The MVNO do not own the infrastructure they use, but rent it from one of the network operators. While the effect of the number portability on prices in Chile is largely disputed, MVNOs' market share is still changing leading to more competition due to the insertion of new players over the years.

- b. Why this reform was necessary

Governments around the world have issued different regulations in the past decades with the broad aim of making the telecommunications industry more competitive. One of the leading reforms in the market for mobile phone service has been number portability. Chilean policy-makers considered that lower switching costs will force incumbent companies to charge lower prices by introducing more competition among them and by lifting barriers to entry to new operators. It was the case for the Chilean industry.

After finished the privatization process of the only firm in telecommunications (Entel) in 1992, several minor reforms had taken place in the industry ever since. From then, until before the MNP reform, the given market conditions has made the industry grow up to just 3 players. Certainly not enough to provide a competitive framework for the consumers to take considerable advantage, or to balance surplus between them and the producers.

3. Reform measures

The law allowing mobile number portability in Chile was passed by the Congress on August 2010. On July 2011, the government decided that it would enter into effect on January 2012. Industry insiders claim that the operators only began to prepare commercially for the reform on the second half of 2011. Before number portability, customers typically were bound to the operator by contract for 18 months. In order to cancel the contract, they were required to pay a fee. The reform of number portability made possible for customers the cancellation of their service contract at any given time and also required the operator to unlock the handset of a customer upon request. Nevertheless, contract restrictions still apply for handsets purchases. As a result, when a customer purchases a handset from the operator after the reform, she can switch operator at any time, but still has to pay the handset to the original operator. Mobile phone payments are typically spread over 18 months.

4. Impact of reform(s)

There have been several studies regarding the effect on price of the reform above mentioned, one of them¹ claims that the effect on average price is negative and significant. This study uses customer fixed effects, founding that number portability lowered average price by 7.2 percent.

The government claims that rates of the cheapest plans decreased by 20.0 to 25.0 percent, whereas the National Institute of Statistics of Chile found in consumer expenditure surveys a decrease of 0.1 percent for wireless service, but a decrease of 25.8 percent for handsets. Also, a market survey company found that while the price of voice-only plans dropped by 8 percent, the price of plans with data connection decreased only by 2.0 percent.

5. Challenges and lessons learned

Challenges

One of the few challenges towards an integrated and balanced telecommunication industry aims to the possibility that by 2020, subscribers should have the option to port their number

¹ “Switching Costs and Introductory Pricing in the Wireless Service Industry” Jorge Alé (2013)

between a land service and a mobile service if they desire. Also, Retail tariffs, wholesale termination rates and market developments must be monitored so that the target implementation date of 2020 can be adjusted according to national circumstances.

Operators/service providers will need to make the necessary adjustments to their systems to accommodate these developments. Before long, different hybrid fixed-mobile solutions are expected to continue to emerge on the market.

Lessons learned

In recent years land and mobile wholesale termination fees have been declining. The corresponding impact of this trend on retail tariffs is very positive for consumers. As retail charges continue to decline the difference in cost between land and mobile calls may become negligible in the coming years. This trend, along with a consumer preference for mobile services over land services is likely to drive demand for service portability as the importance of tariff transparency in numbering ranges is diminished.

6. Next steps

In order to complete the number portability goal, just in November of last year 2015, the Chilean government has announced the introduction of geographic land line number portability, allowing all land line users to keep their number when moving to any part of the country. The aim is that families who need to move to another region for work can now stay connected via their usual number, and small businesses that change location won't lose their contacts. The Chile's Department of Telecommunications, points out that the measure also affects VoIP²-based lines and would serve to boost the country's sluggish land telephony sector. In the last 12 months (land telephony) lines have grown by 1.9 percent. Geographic portability is looking to revitalise the market by providing the best options for those using their fixed line equipment for personal or professional reasons.

² voice communications and multimedia sessions over Internet Protocol (IP)

CHINA

1. General overview

Service sector and China's economy

In China, the service sector has evolved into a key force in promoting stable and rapid economic development. It covers a broad range of services divided into producer services and customer services, wherein the former includes technical, transportation and warehousing, postal delivery, information, and financial services and the latter includes residents and family services, health care services, as well as culture and tourism services. In 2011, the service industry replaced the primary industry as the most employee-absorbing sector by providing 272.82 million jobs, accounting for 35.7% of the total of the three industries. In 2012, it overtook the secondary industry as the largest share holder in gross domestic product (GDP) with a share of 45.5%. In 2015, its share in GDP exceeded 50% for the first time; industrial added value grew faster than the national economy for 15 consecutive quarters; and service enterprises accounted for 80.6% of all the newly registered. Whether creating jobs or promoting growth, services have truly become China's largest sector.

As China's economy enters into the new normal state, the importance of the service sector becomes more prominent. In the first quarter of 2016, the added value of the service sector increased by 7.6% year on year to 9.0 trillion yuan, 0.9 percentage points (pps) higher than the GDP growth rate. Moreover, the share in GDP attained 56.9% and the contribution to the national economic growth reached 63.5%, 19.4 and 29.3 pps higher than the secondary industry respectively. Meanwhile, the spillover effects of services continue to appear. In particular, a large number of new models and new types of business, such as e-commerce and science and technology (S&T) services, have formed due to the accelerated integration with other industries with the wide application of information technology, such as the Internet, injecting a strong impetus to innovation-driven transformation and upgrading of the manufacturing sector. In addition, service trade witnesses development. Proportions of services in the country's foreign trade and global trade will increase year by year, and China's total import-export volume of services is expected to exceed 1 trillion US dollars in 2020.

Service sector reform in China

In China, the service sector reform can be traced back to 1992 when the Decision to Accelerate the Development of Tertiary Industry was issued by the State Council. According to that document, the state for the first time emphasized the service sector should grow faster than agricultural and industrial sectors and clearly put forward the gradual establishment of a unified socialist market system and an urban-rural integrated service system and social security system. China's service sector opens to foreign and domestic private investment in an orderly way while a variety of measures are taken, covering market access liberalization, market system improvement, statistical standards establishment, and property rights system reform of enterprises, with a large number of non-public enterprises entering into residential services and the capability to attract and utilize foreign capital continuing to increase.

In recent years, China witnessed comprehensive reform in service with accelerated pace. China promoted the Comprehensive Reform in Service Plan and the Pilots were carried out in 37 cities and districts at first since 2010, which achieved great success in forming regional service centers, establishing production services demonstration area, and optimizing the structure and layout of service. In 2013, the CPC Central Committee issued the Decision on Major Issues Concerning Comprehensively Deepening the Reform, proposing a series of reforms that cover SOEs and public institutions, administrative examination and approval, tax and price formation. Noticeably, the document explicitly called for the orderly liberalization of finance, education, culture, and health care services and relaxation of restrictions on foreign investment in such services as nursery and pension, architecture and design, accounting and auditing, business logistics, and e-commerce. Moreover, all of the above initiatives will come to critical fruition no later than 2020. In fact, lots of open measures had been implemented in China (Shanghai) Pilot Free Trade Zone since 2013, which will be replicated to other Pilot Free Trade Zone in the following years. In March 2016, China also announced to include more areas into the Comprehensive Reform in Service Plan in order to extend and deepen the open and reform in service sector. In addition, China has launched the tax reform in service from business tax to value added tax system successfully in May 2016, which will enhance the competitiveness of service sector by eliminating double taxation and attracting a variety of factors to be input in service. China's service industry is bound to usher in a new round of rapid development.

2. Context of structural reforms undertaken

- a. *What specific services sector structural reforms are you addressing in this questionnaire?*

The Questionnaire mainly discusses the structural reforms of professional services, focusing on S&T services. Issued in 2014, the Major Opinions of the State Council on Accelerating the Development of Science and Technology Services made, for the first time, an all-round national deployment for S&T services by explicitly setting out the initiatives for reform, including orderly liberalization of market access, open access to resources, strengthened technology transfer incentives, institutional restructuring and reorganization, increased fiscal and tax support, and development of new types of business.

- b. *Why this reform was necessary*

S&T services cover research and development (R&D), technology transfer, inspection, testing and certification, business incubation, technology finance, technology consulting, and intellectual property rights (IPRs) related services. S&T service development in China encounters many problems, represented by immaturity of market entities, low level of specialization, lack of high-end service and well-known brands, shortage of interdisciplinary talents and unfavorable development environment. All these can be attributed to limitations in terms of institutions and mechanisms, such as high access threshold, cumbersome administrative examination and approval process, and inefficient allocation of resources. Measures for structural reforms will mobilize the enthusiasm of all kinds of social capital, promote industrial competition, and optimize resource allocation. While developing the S&T services, these initiatives are expected to expedite industrial upgrading through scientific and technological innovation.

3. Reform measures

In order to accelerate the development of S&T services, measures are taken in six aspects to fully promote structure reform.

Orderly liberalization of market access. By supporting partnership enterprises and encouraging social capital to invest in the SOEs reform, private capital will gain access to the inspection, testing, and certification, as well as technology finance, and foreign investment in S&T services will be boosted.

Optimal integration of services resources. Public institutions will share equipment with other institutions and firms and provide social services, in order to achieve efficient use of S&T service resources. Pilots will be carried out in ten universities and research institutes including Tsinghua University, three science and technology parks including Zhongguancun, and seven provinces and municipalities including Beijing.

Enhancement of technology transfer incentives. It is a move to guarantee the income or equity ratio of personnel, agencies and other stakeholders that make important contributions to the transfer and commercialization of scientific and technological achievements. It is clearly stipulated in the Law of the PRC on Promoting the Transformation of S&T Achievements that the major contributors in research, development and commercialization of scientific and technological achievements shall be entitled to no less than 50% of the total awarded incentives.

Restructuring and reorganization of public institutions. S&T service SOEs are required to implement reforms aiming at the establishment of a modern enterprise system and diversification of equity. Where conditions meet, inspection, testing, and certification should be decoupled from administrative departments and transformed into enterprises through cross-sectoral, cross-industry, and cross-level integration, mergers and acquisitions.

Increase of fiscal and tax support. On the one hand, S&T services are classified into high-tech services. Qualified S&T service enterprises enjoy a 15% reduction of corporate income tax rate, and a certain percentage of deductions of employee education expenditure occurred. S&T service enterprises are exempted from property tax and urban land use tax on real estate and land used by themselves or incubators and from business tax on venue and housing rental to incubators and income from incubation services. On the other hand, the tax burden will be reduced by applying a low VAT rate and expanding the tax-deductible scope in the transformation from business tax to value added tax (VAT).

Development of new types of business. New types of business are encouraged, such as management service outsourcing and project management outsourcing. Financial services will be extended to S&T services by introducing S&T insurance, S&T guarantees, and IPR pledge. The National Venture Capital Fund for Emerging Industries and the SME Development Fund, with a total size of over 100 billion yuan, will be created, and Scientific and Technological Achievement Commercialization Guide Fund will be set up, including three venture capital sub-funds. Efforts will be

made to explore and implement the investment-loan integrated financing model and the "incubator + venture" model.

By far, most of the measures have been put in place, among which the reform of SOEs, restructuring and reorganization of public institutions, and development of new business models, involving a wide range, advance in an orderly manner according to the unified deployment. In the reform process, the authorities have consulted widely enterprises, universities, research institutes and the public. Taking technology transfer for example, new provisions that take into account reform practice and public opinions were released in March 2016 based on the amendment to the Law of the People's Republic of China on Transformation of S&T Achievements in 2015, creating conditions for more effective commercialization of technological achievements.

4. Impact of reform

Structural reforms not only drive the fast growth of S&T services, but also contribute to the healthy development of related industries and macro-economy. (1) Owing to the business system reform, reduced access thresholds, and increased opportunities in related fields, significant improvements are seen in such indicators as number of new S&T service enterprises, incremental foreign investment, and profitability. For example, there were 240,000 new enterprises of information transmission software and information technology services in 2015 with an increase of 63.9% year on year. In the first quarter of 2016, the actually utilized foreign investment in information technology services and R&D and design services expanded by 195.3% and 41.6% respectively, much higher than the level of 7.9% in the service industry. According to the survey of service enterprises above the designated scale, the S&T service revenue grew by 8.6% year on year in 2015 and by 12.2% in the first quarter of 2016, keeping up the momentum for growth. (2) Positive results have been achieved in promoting equipment sharing and encouraging universities and research institutions to provide social services. A nationwide large-scale database of scientific instruments has been initially established, which helps the Central Government to reduce up to 3.2 billion yuan of expenditure on the repeated purchase of large equipment in 2015. For example, the Chinese Academy of Sciences (CAS) makes nearly 4,000 sets of large equipment from 90 institutes available for shared use, providing services for a total of 7.01 million hours, and a large number of enterprises thereby have access to high-end equipment and high quality professional services. (3) Tax burden on S&T service enterprises is much eased with the transformation to replace business tax with VAT. Given a VAT rate of 6% and a levy rate of 3%, there is a general tax deduction for enterprises in the upstream and downstream S&T service chain. With expansion of the tax-deductible scope, the increase of tax burden on a few enterprises is expected to last only a short term. (4) The number of incubators increase substantially, which benefit a large number of innovative manufacturing businesses. As of 2015, China had nearly 3,000 national S&T business incubators, covering an area of over 80 million square meters, and more than 2,300 co-working space platforms. Currently, there are more than 100,000 enterprises involving more than 1.5 million people in incubation and over 60,000 businesses have already graduated. (5) S&T financial services grow rapidly, represented by venture capital, private equity and angel investment. In 2014, the venture investment, with a total size of 127.07 billion US dollars, was 2.4 times that of 2008. Venture capital structure also exhibits positive changes, with a noticeable increase in the proportion of

investment in early and growing start-ups. In short, S&T services in accelerated development lay the basis for moving to the high-end global value chain, focusing on R&D and design activities.

5. Challenges and lessons learned

The service sector reform implies that market-oriented reform based on deregulation and streamlined mechanisms can effectively stimulate market vitality and foster new economic momentum. While opening up entry channels for the private and foreign capital, structural reforms play a positive role in mechanisms for resource integration, technology commercialization, and business incubation. Meanwhile, the reform has also encountered many challenges. For example, some state-owned manufacturing enterprises and public institutions are reluctant to implement market-oriented reform or carry out reorganization. Some local institutions ignore the interest of technology transfer intermediaries and allocate more bonuses to the inventors. In addition, the regulatory and service system for technology finance lags behind, resulting in high financial risks incurred by innovation. To deal with these difficulties, administrative coordination and public participation need to be strengthened.

6. Next steps

Structural reforms in S&T services will continue to focus on promoting streamlining administration and delegating more power to lower level government and enhancing fair competition. (1) Deepened reform of business system. Further simplify and/or cancel a one-third of pre-approval matters for business registration in 2016. In addition, social insurance registration and statistical registration will be integrated into the three-in-one certificate for commercial business license, organization code, and tax registration. (2) Expansion of the autonomy of universities and research institutes. Universities and research institutes will enjoy greater autonomy in the use of funds, outcome disposal, title evaluation, and salary distribution, and stock and option incentives in favor of entrepreneurship and innovation of teaching and research personnel will be improved. (3) Promotion of fair competition among various market entities. Efforts are needed to crack down on intellectual property infringement, production and sales of counterfeit and shoddy goods, and illegal fund-raising.

HONG KONG, CHINA

1. General overview

Overview of services sectors:

Hong Kong, China (HKC) is a highly service-oriented economy. In 2014, the services sectors generated 92.7% of GDP and 88.4% of employment in HKC. Among all services sectors, import/export trade is the largest, accounting for 19.1% of GDP in 2014. Other major services sectors include financing and insurance (16.6%); real estate, professional and business services (10.9%) and transportation, storage, postal and courier services (6.2%). This reflects HKC's roles as an international financial centre and a regional business and trading hub. Over the past years, HKC's services sectors enjoyed rapid expansion riding on the back of increasing economic and financial integration between the Mainland and HKC. In the ten years ending 2014, the value-added of the services sectors grew at an average annual rate of 5.8%, faster than that of the nominal GDP. This suggests that the services sectors led the economy in moving up the value chain. HKC is also one of the top trading entities in commercial services trade. According to World Trade Organisation, HKC ranked 14th and 17th globally in the exports and imports of commercial services respectively in 2015.

2. Context of structural reforms undertaken

- a. What specific services sector structural reforms are you addressing in this questionnaire?

In this questionnaire we are addressing structural reforms in the legal services sector of HKC.

- b. Why this reform was necessary?

- HKC's fine reputation for its rule of law and our sophisticated legal services sector are instrumental to our development as a major international financial and commercial centre.
- HKC is a separate jurisdiction from Mainland China and has its own legal system and its own Court of Final Appeal. The common law continues to apply in HKC as provided for by the Basic Law. This is a manifestation of the "One country, Two systems" principle. The independence of the judiciary is fully guaranteed and protected by the Basic Law.
- The reforms undertaken in the legal services sector relate to the operation of the legal profession and the development of dispute resolution services including arbitration and mediation in HKC.
- The reforms are necessary to enhance the competitiveness of our legal services sector and to provide persons doing businesses in and through HKC with access to high quality, multi-jurisdictional legal and dispute resolution services.
- The reform relating to the dispute resolution services is consistent with the long-standing policy of the Government of the Hong Kong Special Administrative Region (HKSAR) to promote HKC as a leading international legal and dispute resolution services centre in the Asia Pacific region.
- As a matter of policy, HKC encourages the use of dispute resolution methods, including arbitration and mediation, to resolve civil and commercial disputes. We regularly update our arbitration legislation to provide for a more user-friendly statutory framework for conducting arbitration. On the mediation front, we encourage the wider use and promote the development of mediation, which is aimed at providing a proper legal framework for the conduct of

mediation in HKC.

Questions 3 – 6 will be addressed separately in relation to specific reforms (A – D) below.

A. Reform in the legal profession - Rights of audience in our higher courts for solicitors

3A. Reform measures

In 2010, HKC enacted the Legal Practitioners (Amendment) Ordinance 2010 (“**2010 Ordinance**”) which grants rights of audience in our higher courts (“HRA”) to solicitors. The steps leading up to this piece of legislation are summarised below:

1. In 1995, the HKSAR Government issued a “Consultation Paper on Legal Services” which, among others, stated that *“The Administration’s view is that it should be possible for solicitors to acquire rights of audience in all courts under statutory provisions similar to those in England and Scotland.”*
2. In June 2004, the Chief Justice established a working party (“WP”) *“[t]o consider whether solicitors’ existing rights of audience should be extended and, if so, the mechanism for dealing with the grant of extended rights of audience to solicitors.”*
3. After issuance of its consultation paper in June 2006, the WP issued its Final Report on Solicitors’ Right of Audience in October 2007 which recommended, among others, that *“[l]egislation should be enacted to provide the necessary framework for the granting of higher rights of audience to solicitors.”*
4. In June 2009, the HKSAR Government introduced the Legal Practitioners (Amendment) Bill 2009 (“Bill”) *“to implement the scheme proposed by the Working Party on Solicitors’ Rights of Audience”*. The Bill was eventually enacted into the 2010 Ordinance which came into full effect on 22 June 2012.

4A. Impact of reform

As of 14 May 2016, 39 solicitors were granted HRA in HKC. Granting HRA to solicitors is expected to increase consumer choice on able advocates to represent them in our higher courts.

Nil return to Q5 & Q6.

B. Reform in the legal profession - Limited liability partnership for law firms in HKC

3B. Reform measures

In 2012, HKC enacted the Legal Practitioners (Amendment) Ordinance 2012 (“**2012 Ordinance**”) which allows law firms in HKC to operate in the form of a Limited Liability Partnership (“LLP”). The steps leading up to this piece of legislation are summarised below:

1. Since 2004, The Law Society of Hong Kong (“LS”) has been calling for an early introduction of LLP. Generally speaking, LLP is a model for doing business which confers the privilege of limited liability on innocent partners so as to insulate their personal assets from claims arising from the professional default of the other partners of the firm.
2. In June 2010, the HKSAR Government submitted the Legal Practitioners (Amendment) Bill 2010 (“Bill”) into the Legislative Council *“to introduce limited liability partnerships for law firms in Hong Kong”*.
3. The Bill was eventually enacted as the 2012 Ordinance which came into full effect on 1 March 2016.

4B. Impact of reform

As of 14 May 2016, there were 6 foreign law firms and 2 solicitors firms operating in the form of LLP. We expect that the number of LLP law firms in HKC will increase over time. The introduction of LLP as a business model for law firms in HKC will encourage overseas law firms to come and operate in HKC. This would help enhance HKC's position as an international legal services hub.

5B. Challenges and lessons learned

One principal challenge in the legislative process on LLP was to arrive at a proposal that would maintain a proper balance between limiting professional liability and safeguarding public interests in such a way that was also acceptable to its stakeholders. To address this, a number of consumer protection measures were included in the 2012 Ordinance, including the requirement for LLP to take out top-up insurance for additional indemnity coverage of HK\$10 million in respect of any one claim. This top-up insurance together with the mandatory coverage of HK\$10 million on each law firm provided by the compulsory primary insurance scheme under the existing legislation provides a total of at least HK\$20 million per claim for clients who engage the services of a LLP.

Nil return to Q6.

C. Reform measures relating to dispute resolution - Arbitration

3C. Reform measures

- It was necessary to reform the arbitration legislation (by repealing the previous Arbitration Ordinance, Cap. 341 and enacting a new Arbitration Ordinance) to enable the HKC business community and arbitration practitioners to operate an arbitration regime which would accord with widely accepted international arbitration practices and development. It was hoped that, by introducing the reform, HKC would attract more business parties to choose HKC as the place to conduct arbitral proceedings.
- Specific measure was taken to reform the arbitration legislation based on the Model Law on International Commercial Arbitration of the United Nations Commission on International Trade Law (as amended in 2006) ("Model Law") to unify the previous different arbitration regimes for domestic and international arbitration. As the Model Law is familiar to arbitration practitioners in both civil law and common law jurisdictions around the world, the reform would have the effect of achieving the aim stated in paragraph 2b above.
- The proposed reform was first made in a report issued in 2003 by the Committee on Hong Kong Arbitration Law ("Committee") established by the Hong Kong Institute of Arbitrators in cooperation with the Hong Kong International Arbitration Centre. In 2005, the Department of Justice ("DoJ") set up a Working Group to implement the report of the Committee. The Working Group was chaired by the Solicitor General and comprised representatives of the legal profession, arbitration experts and relevant government officials, to formulate legislative proposals to implement the recommendations in the report of the Committee.
- In December 2007, DoJ published a Consultation Paper on Reform of the Law of Arbitration in Hong Kong and a draft Arbitration Bill for a 6-month consultation. After studying the comments received during the consultation period, DoJ reported the outcome of the consultation at a meeting of the Legislative Council Panel on Administration of Justice and Legal Services ("Panel") in February 2009. At the end of that meeting, the Panel indicated support for introducing the Arbitration Bill.

- In June 2009, the Arbitration Bill was introduced into the Legislative Council. A Bills Committee was formed to study the Bill in 15 meetings with DoJ's representatives. The Bills Committee received views from eight deputations at one of its meetings. Subsequently, the new Arbitration Ordinance, Cap. 609 was enacted on 10 November 2010 and came into effect on 1 June 2011.

4C. Impact of reform

- We take the view that the rise in ranking of HKC as a preferred seat of arbitration in recent years has been largely attributed to the reform introduced to the arbitration legislation. The supporting evidence of our view is set out in the following paragraph.
- Two international arbitration surveys were conducted by Queen Mary University of London in 2010 and 2015 respectively. In both surveys, respondents (mainly users of arbitration from around the world) ranked '*national arbitration law*' as one of the three most important factors for their preference for certain seats of arbitration. In the results of the 2010 survey, which was conducted prior to the enactment of the new Arbitration Ordinance, Cap. 609, HKC was not in the list of top 6 preferred seats of arbitration (namely, London, Geneva, Paris, Tokyo, Singapore and New York in descending order). In the results of the 2015 survey, which was conducted a few years after the new Arbitration Ordinance had come into effect, HKC was ranked 3rd in the world, after London (1st) and Paris (2nd).
- Regarding the impact of this reform on global value chain, the Arbitration Ordinance is based on the Model Law which is familiar to arbitration practitioners in both civil law and common law jurisdictions around the world. This no doubt facilitates the involvement of all the actors in arbitration.

5C. Challenges and lessons learned

- As the reform involved a revamp of the entire arbitration legislation, care had to be taken to ensure that the provisions in the draft Bill would accurately reflect the policy intent of the new legislation. Besides, comments were received from 42 respondents in the consultation exercise and it took time to incorporate those comments before the Bill could be introduced to the Legislative Council. In hindsight, DoJ would still diligently follow the same procedure in carrying out this reform, because of the profound impact of the new arbitration legislation on users of arbitration both in and outside HKC.

6C. Next steps

- Some amendments to the Arbitration Ordinance were introduced in 2013 and 2015. In future, DoJ will review and, if necessary, amend the Arbitration Ordinance from time to time to ensure that the latest developments in the arbitration sector can be promptly reflected in the legislation.

D. Reform measures relating to dispute resolution – Mediation

3D. Reform measures

- The HKSAR Government is committed to fostering a wider use of mediation to resolve disputes and the development of mediation services in HKC. With the efforts of the Steering Committee on Mediation chaired by the Secretary for Justice and comprising members from different sectors (the Steering Committee), initiatives and measures have continuously been taken to provide a favourable regulatory framework to conduct mediation in HKC, maintain the standard of mediators and enhance the awareness of the general public and targeted sectors for mediation.

- The Mediation Ordinance (Cap. 620) came into effect on 1 January 2013. It provides a legal framework for the conduct of mediation in HKC, addresses fundamental issues such as confidentiality and admissibility of mediation communications without hampering the flexibility of the mediation process.
- With a view to facilitating the further development of mediation in HKC by making available mediation communications for research, evaluation and educational purposes, the Steering Committee has published a set of guidelines (“the Guidelines”). The Guidelines aim to assist persons intending to use mediation communications for research, evaluation or educational purposes in compliance with the relevant provision of the Mediation Ordinance that allows the disclosure of mediation communications for those purposes.
- The Steering Committee is also studying the need to introduce apology legislation in HKC by removing the legal uncertainty regarding the making of an apology and thus promoting the use of apology which may facilitate settlement of disputes. The Steering Committee is formulating its final recommendations for introducing apology legislation in the legislative year 2016-2017.

4D. Impact of reform

- Over the years, the public’s awareness of mediation and the use of mediation have increased significantly. According to the Judiciary’s statistics, in 2015, 645 cases in the Court of First Instance were mediated and 294 cases were settled with full or partial agreement as compared to 421 cases in the Court of First Instance mediated and 159 cases settled with full or partial agreement in 2011.
- A number of mediation organisations have since been established in HKC to provide a wide range of mediation services, including the Mediation Information Office, Joint Mediation Helpline Office and the Financial Dispute Resolution Centre. The recent establishment of the CCPIT-HKMC Joint Mediation Centre by the China Council for the Promotion of International Trade (CCPIT) and the Hong Kong Mediation Centre (HKMC) enhances the collaboration and co-operation between mediation organisations and provides an effective platform in HKC for resolving cross-border commercial disputes. It also strengthens HKC’s status as the leading dispute resolution centre in the region.

Nil return to Q5.

6D. Next steps

- The Steering Committee will continue to monitor the implementation of the Mediation Ordinance, to ensure the quality of mediators and consistency of standards, and to promote the mediation culture.

INDONESIA

1. General overview

Indonesian services sector

Services sectors have significant roles in economic development. Not only does it contribute to its own output, but also functions as input to other sectors, hence determining the performance of other sectors. Parallel to Indonesia's structural transformation from an agricultural-based economy to a manufacturing and services-based economy, the services sectors' contribution to Indonesia's GDP has increased from 38% in 1970 to 51% in 2014. Moreover, the services sectors have a more important role as the new source of growth and the source of job creation as well, where services sectors currently employ 43% of total employment in Indonesia.

Services sector reform

Recently, Indonesia has undertaken deregulation in its economic policy. A number of economic policy packages have been issued in the last ten months and more will be issued in the near future to simplify procedures, reduce time and cost of doing business as well as to ensure fair competition. The packages cover several strategic issues such as industrial reformation, improving ease of doing business, improving logistic performance, strengthening MSMEs, providing soft loans for low-income households, introducing a one map policy to address land issues and the launching of a new Negative Investment List to attract more investment.

2. Context of structural reforms undertaken

- a. What specific services sector structural reforms are you addressing in this questionnaire?

In this questionnaire, Indonesia is addressing regulatory reform in the logistics sector. Under the national deregulation program, policy packages for logistics reform were included in the economic policy packages issued by the government in 2015. The specific services sector structural reform addressed is the establishment of Bonded Logistics Centers (BLC) as part of Indonesia's national strategy for improving logistics performance.

- b. Why this reform was necessary

Improvement of logistics is now an important objective in many countries around the world. Successful integration into the world economy depends to a large extent on improving logistics. These improvements must take place both at the border and behind the border. With the emergence of global supply chains, increasingly high value is being placed on the ability to meet delivery schedules not only in a cost-effective manner, but also in a reliable and predictable way.

Logistics becomes an important sector in Indonesia since it greatly affects national competitiveness. However, logistics in Indonesia has not yet met its desired objectives. Logistical costs remain high; up to 24% of national GDP. Currently, logistics is still unable to serve national industries and allow efficient trade by enabling the smooth flow of goods. Since Indonesia does not have bonded logistics

centers, when industries need imported raw material, they have to get it from neighboring countries. Further to that, there are several Indonesia logistics warehouses located in these neighboring countries. And for exportation, Indonesian exporters especially SMEs do not have an international warehouse for their products.

3. Reform measures

Under Government Regulation No. 32 of 2009 on Bonded Storage Place, Indonesia has implemented a number of custom facilities for bonded areas. However, the regulation has not accommodated a facility for Bonded Logistics Centers (BLC). BLC itself is a storage that meets certain requirements which is used to store goods for certain purposes and obtains import duty postponement.

Considering the need for BLC for the manufacturing sector, at the start of 2015, the Government has initiated an amendment of Government Regulation No. 32 of 2009 in order to accommodate BLC. This amendment is included in the national deregulation program, specifically the second economic policy package released in September 2015.

In November 2015, the Government issued Government Regulation No. 85 of 2015 which amends Government Regulation No. 32 of 2009. The new regulation introduces the concept of BLC as one type of Bonded Storage Place in Indonesia. The introduction of BLC is expected to encourage the manufacturing sector because these BLCs would increase the smooth flows of basic materials. In order to find suitable facilities for BLC, a series of public-private consultation and public hearings were held.

4. Impact of reform(s)

a. Quantitative and qualitative

As a direct result of the new regulation, in March 2016, the President formalized 11 BLCs in Indonesia. The establishment of BLCs is expected to significantly lower logistics costs as well as secure the availability of basic material supply for primary manufacturing industries in Indonesia such as textile, food and beverage, and more. Based on recent reports from the textile industries, BLC is expected to curtail logistics costs by approximately 30%.

b. What effect has this reform(s) had on global value chains?

Since BLC is a type of international storage for basic material, it is expected that BLC can improve Indonesia's role in the international supply chain as well as global value chains.

5. Challenges and lessons learned

The biggest challenge in implementing BLCs is on the distribution of BLCs in Indonesia given Indonesia's large geographical area. Current BLCs are mostly located in Western Indonesia.

6. Next steps

To attract more investors to establish new BLCs, specifically in Eastern Indonesia, there needs to be more dissemination and promotion of the Government Regulation No. 85 of 2015.

JAPAN

1. General overview

In recent years, the service industry has accounted for approximately 70% of all industries in Japan in terms of both gross domestic product (GDP) and employment.

As a share of GDP, the service industry increased from approximately 66% in 2000 to around 71% in 2014 and its employment rose from about 37 million (62%) to 41 million (70%) in the same period. Notably, while total employment decreased by 1.2%, workers in the service industry increased by 11.4%.

As these figures show, on the back of expanding demand for services tailored to the changing social structure as exemplified by rising income levels, aging population, and declining birthrate, Japan's economy is becoming increasingly service-oriented, shifting from manufacturing to services. The service industry, therefore, is exerting a stronger influence on the economy as a whole.

However, the growth of the service industry's share of GDP (from 2000 to 2014) reveals significant differences among areas, with ICT (5.2%), transportation (4.0%), real estate (3.4%) and others achieving positive growth, but electricity/gas/water supply (-27.8%), finance/insurance (-16.8%), wholesale/retail (-0.6%) and others recording negative growth.

Since the mid-1990s, deregulation has proceeded in such areas as telecommunications, transportation, energy, and finance. Furthermore, since 2000, deregulation initiatives for individual industrial sectors have expanded into initiatives for introducing and executing basic systems and rules across multiple or all industries. Deregulation has been implemented in a host of fields including the environment, tourism, logistics, and agriculture, and has allowed the private sector to enter such areas as healthcare, education, welfare, and childcare services, while also promoting information technology (IT) in a wide range of areas.

Furthermore, since 2012, the Abe administration has been decisively undertaking the first reforms of bedrock regulations of the post-war era in agriculture, energy, healthcare, and other areas. Specific initiatives include: (1) Reforming the agricultural cooperative system, relaxing requirements for the ownership of farmland by agricultural production corporations, and reforming the rice production adjustment program in the agricultural sector; (2) Accelerating the practical usage of regenerative medicine and promoting business alliances through a new healthcare corporation system in the healthcare sector; and (3) Fully liberalizing the electricity retail market from April 2016, approving the legal unbundling of power transmission from April 2020, and fully liberalizing the gas retail market from April 2017 in the energy sector.

Going forward, improvement of the service industry's productivity is indispensable for people to really feel economic growth and vitality of the community. In the service industry, the principal driver of today's economy, it is crucial to shift into provision of data-driven services as the fourth industrial revolution unfolds.

In the service industry, however, a huge productivity gap exists among companies, and service details differ by type of business. In addition, an overwhelming majority of the businesses are community-based, making it difficult for measures to spread among them. Given such reality of the service industry, political approaches which are not standardized but made from a variety of perspectives are required.

Therefore, the government will push forward with a productivity revolution in the service industry with strong determination by undertaking the following initiatives: (1) At the Service Productivity & Innovation for Growth (SPRING) established jointly by the public and private sectors in June 2015, the manufacturing industry's "Kaizen" (improvement activities) will be applied to the service industry, and productivity improvement models will be created and standardized for each business area to proliferate excellent practices across the board; and (2) Based on the Service Industry Challenge Program approved in April 2015, best practices will be proliferated through the presentation of the Japan Service Grand Prize, IT investment in small and medium-sized service providers will be promoted, and a hospitality license designed to make service quality more visible will be created and rolled out. Furthermore, support will be provided to initiatives based on sector-by-sector guidelines developed in accordance with the SMEs Business Enhancement Act and community-based initiatives leveraging small business associations will be fostered.

2. Context of structural reforms undertaken

In this questionnaire we are addressing structural reforms in the Japanese tourism sector.

The number of foreign tourists to Japan was 5.21 million in 2003, when the Visit-Japan project was launched¹; in 2013, for the first time ever, the figure exceeded 10 million, reaching 10.36 million. The Japanese government convened the Ministerial Council on the Promotion of Japan as a Tourism-Oriented Country in March 2013, in order to achieve the ambitious new target of 20 million foreign tourists and to make Japan a more attractive, more tourism-oriented country than its neighbors by restoring the Japanese economy through a growth strategy. The Working Team for Attracting Foreign Tourists to Japan, whose members are from all government ministries and agencies related to this purpose, coordinated discussions while listening to the opinions of experts. The team drafted the Action Program, which consists of policies and measures for making Japan a more tourism-oriented country.

¹ The Visit Japan Project:

Based on the Visit-Japan promotion policy, this project seeks to communicate Japan's attractions overseas and draw foreign tourists to Japan by running advertisements in overseas media, organizing exhibits at overseas tourism fairs, etc.

3. Reform measures

The original target of 20 million foreign tourists is expected to be met soon. Toward setting new targets and determining measures for achieving them, in November 2015, the Japanese government established the Meeting of the Council for the Development of a Tourism Vision

to Support the Future of Japan, whose Chairman is Prime Minister Abe. After several discussions, the Japanese government drafted that vision.

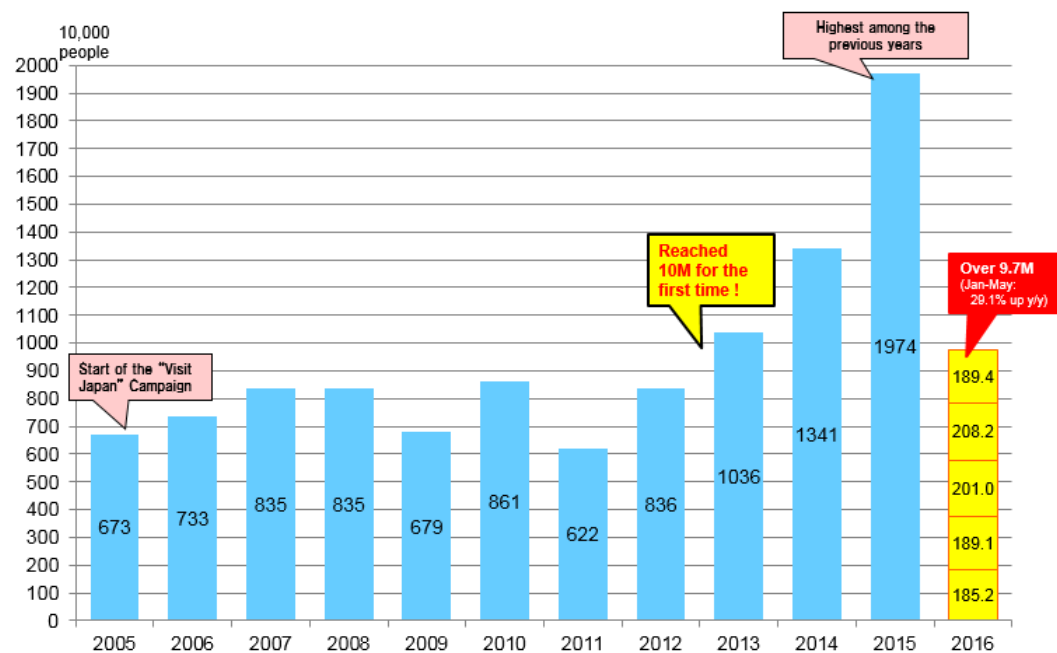
4. Impact of reform(s)

As a result of the concerted efforts of the entire government, the number of foreign tourists in 2014 increased by more than 3.0 million to 13.41 million. Consumption by foreign tourists doubled in the 2 years since the Ministerial Council was established, exceeding 2 trillion yen.

The number of foreign tourists increased in 2015 to 19.74 million.

The main factors behind the increase are not only the trend of recent yen depreciation, but also visa relaxation, extension of the consumption tax exemption system, expansion of airline networks and ongoing Visit-Japan projects and so forth. Measures of solidarity in government agencies and contributions in which the public and private sectors cooperate have led to this success.

Figure 1. Trend of the Number of Foreign Tourists Visiting Japan



Source: Japan National Tourism Organization (JNTO)

5. Challenges and lessons learned

Japan is blessed with rich tourism resources, and its neighbors are growing Asian countries; thus, Japan has great potential to become a more tourism-oriented country. However, Japan has shortcomings, such as insufficiently convenient Wi-Fi access, railway and bus transportation, and cash advance services. The Japanese Government should recognize such shortcomings and work to overcome them, toward accepting new tourists and increasing repeater tourists.

To this end, the Japanese government decided to make a vision in FY 2015 that set new targets and identified measures necessary to achieve those targets. The Meeting of the Council for the Development of a Tourism Vision to Support the Future of Japan and the working group chaired by the Chief Cabinet Secretary held meetings to deepen discussion on each topic, so as to identify issues and remedies.

For regional revitalization, tourism is our ace in the hole, the pillar of an economic growth strategy that aims to achieve GDP of 600 trillion yen.

A firm decision must be made by the whole country to launch a new endeavor to make Japan ‘tourism – oriented developed nation’ and to grow tourism as a major industry in Japan.

6. Next steps

The below-mentioned new targets have been set. The new targets aim to achieve former goals set by government much earlier than the original plan, so as to accelerate high-quality tourism exchanges between residents and tourists.

Item	By 2020	By 2030
Foreign tourists	40 mil. people	60 mil. people
	(Former target for 2020: 20 mil.; for 2030: 30 mil.)	
Consumption by foreign tourists	8 tr. yen	15 tr. yen
	(Former target: 4 tr. yen in the first year that 20 mil. people visit)	
Guest nights spent by foreign tourists in outlying regions (other than the three major metropolitan areas, the national capital region, the Kinki region, and the Chukyo region)	70 mil. guest nights	130 mil. guest nights
Repeat foreign tourists	24 mil. people	36 mil. people
Consumption on travel by domestic Japanese tourists	21 tr. yen	22 tr. Yen

Based on the issues and measures identified at the Meeting of the Council for the Development of a Tourism Vision to Support the Future of Japan, the Tourism Vision proposes the following ‘three visions’ and ‘ten reforms’ under the recognition that ‘Tourism is a major pillar of Japan’s strategy for economic growth and regional revitalization.’

All levels of government, all ministries, and the public and private sectors will work together to make Japan ‘a country of advanced tourism’.

Three visions

Vision 1: Maximizing the attractiveness of tourism resources towards making tourism the base of regional revitalization

Vision 2: Innovate tourism industry, boost its international competitiveness, develop it into Japan’s key industry

Vision 3: Creating a tourism environment where every visitor can travel comfortably without any stress

Ten reforms

1. Allowing domestic and foreign tourists entry to attractive public facilities

2. Shifting the use of cultural properties from ‘an emphasis on preservation’ to ‘an emphasis on their appreciation’ and ‘active use’ by tourists
3. Upgrading the current ‘national parks’ into world-class ‘national parks’
4. Making ‘landscaping plans’ for major tourism sites towards achieving beautiful townscapes
5. Review old regulations, develop the tourism industry into one which respects productivity
6. Develop new markets, realize both long-term stays & expansion of consumer consumption
7. Regenerate & revitalize deadbeat hot-spring districts & local towns with future-oriented management
8. Greatly improving tourism’s hard and soft infrastructure so that tourists can enjoy the most pleasant accommodation environment in the world
9. Completing ‘regional revitalization corridors’ towards realizing comfortable travel to every corner of Japan
10. Reforming the system of ‘work days’ and ‘days off’ towards realizing a more vibrant society

REPUBLIC OF KOREA

1. General overview

Service sector of the Republic of Korea

Korea has been transitioning into a service-led economy, as the service sector's share of total GDP and employment has continued to grow. In 2015, the amount of value added of service industries was 846.4 trillion won, accounting for 59.7% of the total GDP which was approximately 1.4176 quadrillion won. The service sector expanded by 2.8% in 2015 led by the growth of wholesale and retail trade, finance and insurance industries. The real GDP growth rate of 2015 was 2.6%.

In particular, the service sector has played an instrumental role in creating jobs. More than 18.2 million people, accounting for 70.1% of the total number of employees, were employed in the service sector in 2015.

However, the productivity of Korea's service sector is not yet on an equal footing with that of more advanced economies. Relatively low productivity of Korea's service sector is restricting the competitiveness of the manufacturing sector and negatively impacting overall economic performance.

In order to boost the productivity of Korea's service sector, the Korean government has implemented more than 30 policy measures since 2008. They include comprehensive measures such as modernizing the domestic service sector and encouraging overseas service trade as well as sectoral measures with regard to contents/media/3D industries, leisure/tourism industries, etc.

These measures have helped the private sector to further embrace the necessity of service sector development and have also produced positive results in many service industries including tourism, healthcare, and education. For example, the number of international inbound tourists to Korea exceeded 13 million in 2015, up from 6.9 million people in 2008. The reform of Korea's visa system and expansion of tourism infrastructure have helped to achieve this number. As of 2015, more than 141 Korean medical institutions have established overseas branches, and over 280,000 foreign patients have come to Korea in 2015 for medical services. Furthermore, Korea allowed the establishment of foreign educational institutions in free economic zones and the Jeju Special Self-governing Province. Korea attracted more than 90,000 international students in 2015, which is a 7.6 % increase from 2014.

2. Context of structural reforms undertaken

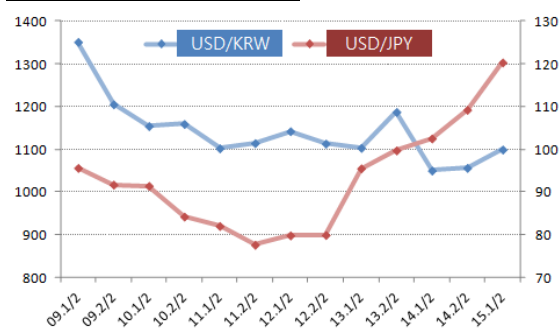
- a. *What specific services sector structural reforms are you addressing in this questionnaire?*

In this questionnaire, we are addressing structural reforms in Korea's tourism industry. Tourism is an important economic pillar in Korea, a benefit of which spills over to other economic sectors.

b. Why this reform was necessary

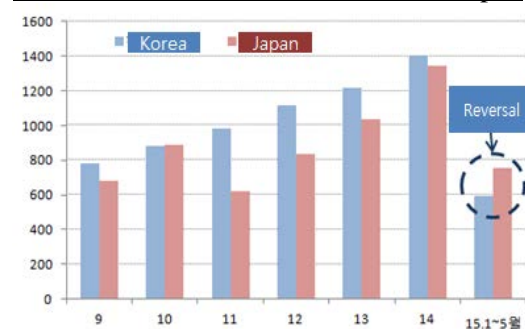
Intensified low-price competition among Korea's inbound travel agencies lowered the overall quality of Korea's tourism industry. There was also a need to develop tourists' programmes which could showcase Korean cultural heritage such as traditional homes and cuisine as well as Hallyu, including K-Pop and Korean dramas. In addition, the price competitiveness of Japan's tourism industry was strengthened thanks to the depreciation of the Japanese Yen. In 2015, the number of visitors to Japan exceeded the number of inbound travellers to Korea.

Trends in KRW and JPY



Source: Bank of Korea

Number of inbound visitors to Korea/Japan



Source: Korea Culture & Tourism Institute, Japan National Tourism Organization

Chinese visitors, the driving force behind the growth of Korea's tourism industry, have increasingly tended to choose Japan rather than Korea to visit since 2014.

Trends in the number of Chinese visitors to Korea/Japan

(Unit: 10,000 people)

	2011	2012	2013	2014	1~5	2015.1~5
Chinese visitors to Korea	222 (18.1%)	284 (27.9%)	433 (52.5%)	613 (41.6%)	210 (56.7%)	267 (27.3%)
Chinese visitors to Japan	104 (Δ26.2%)	143 (37.5%)	131 (Δ8.4%)	241 (84.0%)	83 (90.8%)	172 (105.7%)

3. Reform measures

Q. What are the specific measures for structural reforms?

The Korean government has implemented many policy measures including regulatory reform, taxation support, financial support, human resources training, and fiscal support to expand the base of the service industries.

In particular, the government decided to issue more licenses for new downtown duty-free shops to expand tourism infrastructure. The government also announced to improve duty-free shop regulations as it will extend the license period from 5 years to 10 years and allow renewal of the license. This revision is designed to encourage

market competition as the 5 year single-term license discouraged investment and led to concerns over weakening competitiveness.

In addition, the Korean government promoted the construction of tourist accommodations by providing one trillion won in construction support and easing regulations on hotel REITs, including establishment, management and listing regulations.

4. Impact of reform(s)

The number of international travellers has increased following the reform measures. In spite of the outbreak of the Middle East Respiratory Syndrome (MERS) in 2015, the number of foreign visitors increased to 13.2 million people in 2015 from 12.2 million people in 2013. Total travel revenue stood at USD 15.2 billion in 2015, up from USD 14.1 billion in 2013.

5. Challenges and lessons learned

Lessons

A long-term strategic approach with the participation of stakeholders should be taken when pursuing structural reforms. Measures with a lower risk of conflicting interests should be pursued first. Measures with a higher risk of conflicting interests should be carried out on the basis of social consensus. Cooperation with interest groups, the National Assembly as well as various administrative agencies is also essential.

6. Next steps

The Korean government is preparing the ‘Strategy for Service Economy Development’ (to be announced later this year), which will lay the foundation for the long-term vision, policy goals and sub-strategies of overall service sector development.

Fostering promising service industries

Seven service industries - healthcare, education, tourism, finance, software, contents, and distribution – will be the targets of the intensive measures of regulatory reforms by the Korean government. These industries are more effective in creating jobs and stimulating economic growth. Recent technological developments will be utilized in creating new kinds of services in these industries and the overseas provision of new services will be encouraged. Regulatory reforms to tap into the creativity and investment schemes of the private sector will be actively pursued.

Convergence and globalization

The Korean government will encourage the convergence and integration of service industries in creating new kinds of services. Law and regulations hindering the convergence and integration of service industries will be abolished, and what’s called a “total support system” will be established to help the convergence of service industries. Incentives, policy funds, and overall help for domestic and overseas market access will be provided.

Service sector infrastructure

Laws and regulations for the entry and operation of service firms which hinder the development of service industries will be deregulated. Discriminatory measures for service industries in all areas including tax, financial and fiscal policies will be addressed. Public and private R&D in the service sector will be increased through incentive schemes. Education/vocational training for service sector employees will be strengthened in consideration of the overall supply/demand of human resources in the service sector.

MALAYSIA

1. General overview

For Malaysia, to move towards a high income nation, the services sector will continue to be the main source of growth, output and employment. In 2014, the services sector contributed 55% to the GDP and provided 8 million jobs representing 61% of total employment. By 2020, the contribution of services sector is targeted to increase to 58%. Therefore, it is critical for Malaysia to accelerate the transformation of the sector from one of that is dependent on low cost labour to a sector that thrives on innovation and creates high paying job.

In view of this, the Government has opened up a number of important services sub-sectors to foreign participation in order to accelerate the growth of the services industry. Allowing foreigners to own businesses in Malaysia or in partnership with locals can help to upgrade the skills of Malaysians and also assist them to establish business links overseas.

In April 2009, the Government had liberalised the services sector to strengthen the Malaysian economy, face challenges of globalisation, attract more foreign investments and bring more professionals and technology as well as strengthen competitiveness of the sector. Recognising the growth potential in the services sector, the Government has decided to liberalise 27 services subsectors for foreign participation up to 100 percent.

These sub-sectors are in the areas of health and social services, tourism services, transport services, business services and computer and related services. The Government had further liberalised an additional 7 broad services sectors, consisting of 18 sub-sectors in 2012 to allow up to 100% foreign equity participation in phases. These sub-sectors are:

Telecommunications

- Telecommunication services (network service providers and network facilities providers licences)
- Telecommunication Services (Application Service Providers licence)

Healthcare

- Private hospital services
- Medical specialist services
- Dental specialist services

Professional Services

- Accounting and taxation
- Architectural services
- Engineering services
- Legal services
- Quantity surveying services

Environmental Services

- Incineration services

Distributive Trade Services

- Departmental stores and specialty stores

Education Services

- Private higher education with university status
- International schools
- Technical and vocational secondary education services
- Technical and vocational secondary education services for students with special needs
- Skills training centre

Courier Services

In pursuing the target-to increase the contribution of services sector to GDP, Malaysia has given focus in ensuring that growth is real and inclusive targeting the most important element which is developing human capital. Malaysia must produce, attract and retain skilled talent who can be employed in high income services sub-sectors.

2. Context of structural reforms undertaken

- a. What specific services sector structural reforms are you addressing in this questionnaire?

In this questionnaire, Malaysia is addressing structural reforms in the education sector.

- b. Why this reform was necessary?

Human capital lies at the core of innovation and a productive high income economy. No economy can succeed without a highly skilled talent base that is able to rapidly respond creatively to economic changes, and is centred on developing and utilising knowledge. To achieve the Malaysia's aspirations, it is imperative to develop its human talent. The talent base and workforce of high-income nations include a number of key characteristics, specifically around higher education qualifications to promote knowledge generation and innovation and high skill-levels in both technical and professional fields.

Apart from developing its human talent with the reform of the education services sector, the reform was necessary to develop education as a significant component of the services industry and increase contribution to GDP. In addition, Malaysia envisions internationalising education and developing it as an export industry.

3. Reform measures

Educational reforms were introduced since mid-1990s to encourage the private sector to play a more dynamic and expanded role in higher education to meet excess demand and to produce sufficient skilled talents. It was apparent that self-sufficiency in education was critical to the nations' drive to achieve develop nation status and within this context that reforms in education were introduced. The liberalisation of the education sector has facilitated private sector participation in education and training services. During this time, local private universities and branch campuses of foreign universities and private colleges were established, with the latter conducting all

modules of foreign degree programme locally. Over the years, the number of private higher learning and training institutions has increased which some of the universities have become public listed companies and been recognised as international education providers.

Education has continuously become the utmost important in Malaysia's policy. Malaysia has placed education and training as one of the focus areas under the Third Industrial Master Plan (IMP3), 10th Malaysia Plan (10MP) and the recently launched 11th Malaysia Plan (11MP).

Under the Third Industrial Master Plan (2006 - 2020), the Government has placed education and training as one of the eight services sub-sectors that have been targeted for greater development, promotion and increased in exports. A major focus of development is the promotion of exports including positioning Malaysia to become a regional center for education. In developing and promoting the sector, areas of focus include undertaking progressive liberalisation of the sector.

Under the 10th Malaysia Plan (2011 – 2015), the Government's target was to increase the contribution of private education to GDP by 1.5% to two times to 2% in 2015 and attract 150,000 international students by 2015. Several initiatives have been adopted across all levels of education with specific focus on tertiary education to achieve this growth target and enhance Malaysia's position as a leading destination for education. It is still work in progress and continues under the 11th Malaysia Plan (11MP).

In 2012, foreign equity for international schools, technical and vocational schools (including for the special needs) and private universities is allowed up to 100 per cent, subject to approval from the Ministry of Education (MOE) and Ministry of Higher Education (MOHE).

4. Impact of reform(s)

- a. Quantitative and qualitative (including anecdotal) *information to demonstrate the impact the reform(s) had on your economy, including flow-on effects to other sectors/the wider economy, unexpected consequences (both positive and negative)*

In 2016, there are 144 international schools and 13 expatriates schools established in Malaysia. This demonstrates Malaysia's commitments to facilitate demand from expatriates community as well as Malaysians returning from abroad. Part of the reason for this success is the continued increase of local students enrolled in international schools in Malaysia. Since January 2016, the total of students studying in private international schools is 35,750.

On another note, there are 486 Private Higher Education Institute (PHEI) in Malaysia. The composition is as follows:

- i. 44 PHEI with university status;
- ii. 31 PHEI with college university status;
- iii. 402 PHEI are non-university status; and
- iv. 9 foreign universities branch campuses.

A total of 88, 665 number of foreign students studying in the PHEI.

In 2011, foreign investment in the Malaysia's education sector recorded RM 461.8 Million (USD 153.9 Million) as to compare to RM 6.3 Million (USD 2.1 Million) in 2009.

5. Challenges and lessons learned

Malaysia has always put an emphasis on raising the quality of education through regulatory reforms. Malaysia has learned that maintaining quality education is the key to education liberalisation for the benefit of its people. A key initiative involves the implementation of Malaysia Quality Evaluation System (known as My Quest), which is an instrument to evaluate the current performance of private Universities/Colleges in Malaysia. The evaluation of private Universities/Colleges is aimed at driving improvements towards quality education through developmental approaches, ratings and self-assessments.

Another important tool is the Rating System for Higher Education Institutions in Malaysia (known as D-SETARA). D-SETARA measures the quality of teaching and learning at level six of the Malaysia Qualifications Framework (undergraduate level) in academic disciplines in universities and Colleges in Malaysia. It classifies its rating into six tiers ranging from 1 as weak to 6 for outstanding. Among the results, Taylor's University ranked at Tier 6; Universiti Teknologi MARA at Tier 5 for Hospitality and Tourism; and University Malaya achieving Tier 5 for medicine, dentistry and pharmacy.

To facilitate the entry of international students to study in Malaysia, Malaysia has streamline visa passes for foreign students. In 2011, the Malaysian government has introduced the Employment Pass II which enables high-performing foreign graduates who had completed their education and young professionals to pursue employment in the country. At present, there are 122,061 international students. The number is expected to grow to 200,000 students by 2020 in line with Malaysia's National Key Economic Area target.

With the interest of ensuring quality private education, Malaysia imposes a two-year Moratorium on applications for private higher education institutions beginning 1 February 2013 to 2015. This moratorium was later extended for another two years to 31 January 2017. Among key reasons for the moratorium is to rationalise quality of the programmes offered by the Private Universities.

However, to facilitate quality private education institutions to establish in Malaysia, Malaysia has introduced interim measures which include:

- Private Universities which are already in operations will be allowed to apply for an upgrading for their status to university/college; and
- university and applications from foreign universities to establish branch campuses will still be processed provided that these applications are from the top 100 universities.

MEXICO

1. General overview

On March 24, 2014 President Enrique Peña Nieto, submitted before the Senate an Initiative decree to Reform the Federal Telecommunications and Broadcasting Federal Law, amending certain provisions in the telecommunications and broadcasting sectors.

This initiative was subject of discussions and debates within Congress, who approved it by a large majority, making various modifications to enrich the proposal, which was enacted on July 14, 2014.

Access to information and communications technologies (ICT's) has rapidly become a key element to increase growth and productivity, while serving as an essential element to strengthen democracy, access to culture, education, health, and overall the full exercise of human rights.

The telecommunications reform had as its guiding principles the welfare of consumers and the promotion of economic and social development. To achieve these goals, the reform prioritized achieving universal coverage of services and the elimination of extraordinary profit margins obtained by flaws in competition conditions (which used to result in expensive and low quality services).

Before this reform was enacted, the current administration performed a context diagnosis regarding the prevailing situation in the telecommunications and broadcasting sectors. The diagnosis concluded that the Mexican government had lost its steering capacity due to the following factors:

- i. An inadequate legal framework existing at that time;
- ii. The existence of deficiencies in the design of the institutions responsible for developing and implementing the regulatory framework;

- iii. Previous barriers to the entry for new competitors;
- iv. Inadequate coverage of services; and
- v. High prices and poor quality of telecommunication services.

Despite more than 20 years ago Mexico made the decision to promote competition by privatizing the state enterprises of telecommunications and broadcasting, Mexico still presented high levels of concentration before the reform. For this reason, Mexico's government, with the support of the main political forces, made the decision to promote competition in telecommunications and broadcasting.

2. Context of structural reforms undertaken

- a. What specific services sector structural reforms are you addressing in this questionnaire?

- Telecommunications

- b. Why this reform was necessary?

The reform reaffirmed the importance of the telecommunications sector as a public service of general interest, and helped rebuild the rectory of the Mexican State to ensure the provision of services under adequate conditions of competition, coverage, quality and price.

The Telecommunications reform in Mexico focused on addressing the following challenges:

1. Promote effective competition

- *Ex-ante* asymmetric measures to regulate preponderant/dominant market players.
- Openness up to 100% of foreign direct investment in the telecommunications sector.

2. Reinforcement of the institutional framework

- Constitutional reform and General Law and Regulation in the matter.

- Creation of the Federal Institute of Telecommunications (IFT), an independent Regulatory Agency invested with a broad mandate (which includes the adoption of anti-trust measurements).
- Establishment of specialized courts for the resolution of telecommunications related disputes.
- Allowing the implementation of the IFT's regulations, regardless if they are challenged.

3. Strengthening of the telecommunications infrastructure and promoting penetration in Mexico

- Creation of a national “Carrier of Carriers” mobile network (*Red Compartida*) in the 700 MHz band, which will become operational by 2018.
- Expansion of the optical fiber network of *Comisión Federal de Electricidad (Red Troncal)* for fixed broadband transport and other universal access projects.

4. Extend and recognize citizens' rights of access to telecommunication services

- Access to broadband.
- Additional consumers' rights.

5. Reform measures

The Mexican government enacted the Telecommunications Reform, whose main objectives were to ensure access to ICT's in order to achieve integration, and thus increase productivity and competitiveness in the country. To accomplish its objectives, the reform defined an innovative institutional framework to transform the telecommunications sector for the benefit of all Mexicans and established the implementation of a series of projects that frame an integral model of leaning towards universal access to telecommunications services. The initiative presented by the President and the decree passed by the Congress include this model as part of a careful design to ensure the fundamental right of access to ICT's, recognized in the Mexican

Constitution. According to this new institutional design, the deployment of these public policy projects is responsibility of the Federal Government through the Secretariat of Communications and Transportation. The most relevant projects that constitutes this model are:

Red Compartida

This is the most important project resulting from the reform. It establishes the mandate of constructing a network able to commercialize capacity and mobile services at wholesale pricing levels. Currently, the investment required for the construction of mobile networks is very high, therefore, their deployment in small, scattered locations and marginalized communities results unattractive for private capital. Consequently, the reform sets the mandatory creation of a shared network, which will use at least 90 MHz of the 700 MHz band; which consists of the spectrum that was successfully released thanks to the Transition to Digital Terrestrial Television (DTT) program.

Red Troncal

The reform also establishes the mandate of deploying a robust backbone telecommunications network that will use the already existing optical fiber network of the Federal Electricity Commission (CFE), with the aim of expanding it to reach currently underserved localities, while encouraging competition in those localities in which coverage is already provided. This strategy seeks to improve the telecommunications infrastructure, and make broadband services more affordable.

Government properties

The reform aims to generate a uniform policy for the deployment of infrastructure across the country. Moreover, this process seeks to identify the number of federal public places, pipelines, posts, and existing rights of way that may be made available to operators of telecommunications in order to expedite the deployment of their networks.

DTT Program

The transition to digital television (DTT) program carried out by the Mexican Government in 2015 which disappeared traditional analogue television signals, in order to cater digital terrestrial television, granted access to audio and video of higher quality and increased the number of transmitted channels, generating more availability of programming and content, as well as releasing spectrum to be used with other purposes by the government.

Through this program, the transition was achieved in an extremely short period of time and in just 1 year Mexico reduced the number households relying on analog television, from 14 million in 2014 to 4 million in 2015 (less than 4% of the population).

México Conectado

The reform mandated the Federal Government to design a broadband program in public places that identifies the number of sites to be connected each year to achieve universal coverage. The “México Conectado” project responds to such mandate, by providing Internet access in schools, health centers, libraries, community centers, and other public spaces at local, state and federal levels.

6. Impact of reform(s)

After three years since its enactment, there are several achievements:

1. Gross Domestic Product (GDP): During 2015, the GDP of the sector reported an annual growth rate of 9.7%. In the quarterly comparison, the fourth quarter of 2015 represented an increase of 21% over the same period of 2014. These figures place the telecommunications sector as the most dynamic of the national economy.
2. Foreign Direct Investment (FDI): In 2015, FDI in the telecommunications sector accounted for about 10% of the total FDI registered in the country, doubling its share in relation to 2013. Today, the telecommunications sector, constitutes the second sector that attracts more FDI into the country.
3. Private Investment: The total amount of private investment in fixed and mobile telecommunications during 2015 reached 65,800 million pesos, reflecting an increase of 34.8% over the numbers observed in 2014.

4. Internet Users: From 2014 to 2015, the number of Internet users increased from 44 to 57 per 100 inhabitants. The largest growth of Internet users occurred among young people, where more than 70% of the population from ages 6 to 17 uses Internet, while 76.5% of the population aged 18 to 34 years also makes use of this tool.
5. International recognition: In February 2016, the World Organization for Mobile Operators, awarded Mexico with the Government Leadership Award in recognition of the implementation of the reform of telecommunications. It is the most important award of its kind given by industry to national government.

The OECD acknowledged that Mexico's telecommunications regulation is less restrictive than the average of OECD countries.

Mexico climbed 10 positions in the Network Readiness Index, published by the WEF.

7. Challenges and lessons learned

Several challenges were identified and addressed to build a robust legal framework. For example, the telecommunications and broadcasting sector diagnosis showed profound deficiencies in the design of institutions responsible for developing and implementing the regulatory framework, which resulted in the creation of the Federal Institute of Telecommunications (IFT); inadequate coverage of services, which was addressed by establishing a strong network to improve the infrastructure and make access more affordable.

8. Next steps

Are there any next steps in implementing this reform(s)? Is your economy planning to implement other services-related structural reform(s) in the near future?

In terms of public policy projects that were set in the reform of telecommunications, the following steps will be to give continuity to the processes established for each project.

NEW ZEALAND

1. General overview

Services form a vital component of New Zealand's economy, contributing around 70% of GDP and maintaining an average annual growth rate at 1.9% in real terms between 2008/09 and 2013/14. Service firms account for 70% of all registered New Zealand businesses, which implies that earnings and aggregate demand depends crucially on productivity in the services sector.

New Zealand is one of the most open countries to services trade, taking into account all modes of supply. Services exports reached NZ\$20 billion in 2015 and currently make up almost 30% of New Zealand's total export earnings. Since 2012, growth in services exports has also outstripped growth in goods exports. This reflects the important role that cost-effective, internationally competitive services play in supporting the competitiveness of manufacturing and agricultural production in New Zealand.

Travel, education, transport and business services are New Zealand's main services exports, but both the range of services exported and the markets they are exported to have diversified in recent years. Travel services (including tourism, travel for education purposes and air transport) are by far the most important, accounting for 60% of total value of exports of services in 2015. Other areas that have seen strong growth are financial services, computer and information services and audio-visual services. Exports of commercial services in particular have experienced rapid growth and have outpaced goods exports over the last 20 years.

By international standards, there are few discriminatory restrictions that impact foreign service suppliers' access to the New Zealand market. New Zealand continues to augment its open domestic services market by actively pursuing improved access for New Zealand services exporters in overseas markets, including through a free trade agreement (FTA) agenda and at the WTO. New Zealand is a participant in the Trade in Services Agreement negotiations, and has commitments in 90 of 155 sectors under General Agreement on Trade in Services.

2. Context of structural reforms undertaken

This report addresses structural reform in New Zealand's telecommunications sector.

The sector is governed by general competition regulation (the Commerce Act 1986) and the Telecommunications Act 2001 (the **Act**), with the stated purpose of ensuring the promotion of competition in telecommunications markets for the long-term benefit of end users.

New Zealand does not impose licensing requirements for entry into the telecommunications market and control over retail prices is minimal. The Commerce Commission, the agency charged with promoting competition and monitoring the market, does regulate some wholesale prices and conditions.

A review of the telecommunications sector in 2005/2006 identified key problems with the existing regime, including a lack of access for small players, a lack of robust enforcement provisions and low broadband penetration.

An amendment to the Act in 2006 saw Telecom New Zealand (**Telecom**), the incumbent wholesale/retail telecommunications provider, separated into three business units; Telecom Retail; Telecom Wholesale; and Chorus, which owns the copper-wire network. Telecom was also required to upgrade its network and unbundle the local loop, ending any remnants of monopoly that Telecom once had in the retail market.

The 2006 reforms met the Government's short term objectives of improving competition and incentivising investment. However, following these reforms the Government recognised that operational separation alone was insufficient to ensure investment in appropriate infrastructure to realise the services trade opportunities that the internet offers, and in 2011 Telecom underwent structural separation.

3. Reform measures

In 2009, the Government launched the Ultra Fast Broadband (**UFB**) Initiative. This programme aimed to roll out a fibre-to-the-premises broadband network to 75% of the population by 2020, giving priority to businesses, schools and health services. To ensure greater competition in the UFB rollout process, the Government stipulated that it would only invest in Local Fibre Companies that are not controlled by shareholders who also operate retail telecommunications business. This meant that the incumbent operator, Telecom, would need to commit to structural separation to be successful in bidding for a UFB contract.

In 2011, Telecom structurally separated by way of a demerger between its retail arm and its wholesale division (**Chorus**). Each became a separate listed company, thus removing the incentive and the ability to place access-seekers at a disadvantage by supplying wholesale services on less favourable terms and conditions (through both price and non-price factors) than they make available to their own retail arm.

Telecom, which changed its name to Spark New Zealand (**Spark**) in 2014, now owns fixed line retail and mobile networks, while Chorus owns the copper and fibre networks. Amendments were made to the Telecommunications Act 2001 as part of the Ultra Fast Broadband Initiative, which require all services provided using networks developed with Crown funding to enter into undertakings to provide wholesale services on a non-discriminatory basis. As the owner of the legacy copper access network, Chorus is also required to enter into undertakings for its copper access network.

Wholesale prices for fibre services on the UFB network were then set through commercial negotiation as part of the competitive process for contracting with UFB partners. The demerger enabled Chorus to successfully bid for about 70% of the Government subsidised roll-out of the UFB network. In addition to the participation of Chorus, three other local fibre companies were selected through a tender procedure.

Public consultation

In 2011, the Ministry of Economic Development undertook extensive consultation as part of the development of the Ultra Fast Broadband Initiative, and the regulatory changes required to achieve this. An Expression of Interest process sought views on the structure of the programme, and submissions to this were considered when determining final policy proposals. Based on the content of these submissions, cross-submissions on particular issues were also sought, and workshops were set up for further discussion. Public views were also

sought on the structural separation proposal, and at the Select Committee stage of amendments to the Act that facilitated the separation.

4. Impact of reforms

Annual monitoring reports by the Commerce Commission indicated that in the five years following the 2006 operational separation, an increase in competition resulted in increased investment, greater consumer choice, lower prices and better quality across the spectrum of telecommunications services in New Zealand. In the OECD broadband penetration rankings, New Zealand climbed from 22nd to 17th over the same period.

Structural separation in 2011 facilitated the UFB rollout, allowing rapid market expansion and increased investment in the sector. Broadband connections of all types continue to grow as a result. As at March 2016, telecommunications sector investment increased in 2014/15 to reach \$1.69 billion, equal to the previous high set in 2008/09, and over 921,600 end users were able to connect to the fibre network. By 2020, this is expected to extend to 1.45 million end users, while access to data should be ten times faster than with current technology.

Structural reform also supported Government's rollout of the Rural Broadband Initiative which is on track to deliver improved broadband access to 86% of rural communities by June 2016. This initiative is also benefitting from the introduction of new 4G technologies. Such technologies have resulted in faster fixed mobile broadband speeds and growing uptake of mobile broadband.

Fixed-line broadband connections have continued to grow steadily in New Zealand and reached 1.45 million in June 2015 (up from 0.68 million in June 2007). As at 30 June 2015, New Zealand had 32.6 fixed-line broadband subscriptions per 100 of population, compared with the OECD average of 28.8. This gave New Zealand a continued ranking of 14 out of 34 OECD countries, ahead of the United States at 16 and Australia at 24.

Over time, the retail share held by Telecom (now Spark) has diminished, although competitors are still heavily reliant on Chorus' copper and fibre networks for fixed line access to customers. Competition has also been enhanced significantly by new technologies that enable content and applications to be delivered online.

5. Challenges and lessons learned

Reform outcomes have been positive in terms of greater competition, increased investment and the availability of high quality infrastructure. However, considerable industry resources have been invested in lengthy regulatory pricing proceedings in recent years, creating uncertainty. The challenge is to preserve the benefits of reform, but also provide a predictable and stable regulatory environment.

Inconsistencies between access rights for installation for old and new infrastructure also pose a challenge. Local Fibre Companies do not have ongoing rights of access to maintain fibre infrastructure once installed on private property. This is in contrast to the situation with legacy copper telecommunications infrastructure for which they do have enduring rights of access. As a result, updates to legislation are being considered to extend the same rights of access they have with copper infrastructure to fibre.

In general, progressing reform of this nature often requires several incremental steps, particularly given the rapid growth of the competitiveness of new technologies.

6. Next steps

It is considered that a change from a vertically integrated incumbent with a high degree of market power to two structurally separate companies requires a re-assessment of whether broader regulatory settings in the telecommunications sector appropriately reflect industry structure. Therefore, the regulatory framework for telecommunications, including the Telecommunications Act 2001, is currently under review to address the remaining challenges facing the communications regulatory system. Technology and customer expectations are changing rapidly, and the system must be ‘future-proofed’ and remain up to date. It is also important to identify remaining barriers to Chorus stopping copper services in fibre areas.

The review will focus on the optimal framework for regulation after the completion of the fibre network in 2020, and will consider how best to set access prices under the framework. It will also look to build competition in mobile services in order to support further growth.

THE PHILIPPINES

1. General overview¹

The services sector is an important source of output and employment in the Philippines. In 2015, services contributed 57 percent of total gross value added and 55 percent of total employment. Wholesale and retail trade constituted the bulk of the services sector gross value added, followed by real estate, renting and business activities; other services; transport, storage and communication; and financial intermediation services.

The country is a net exporter of services due to a strong Information Technology-Business Process Management (IT-BPM) sector, especially in legal, accounting, tax consultancy, bookkeeping and auditing, business and management consultancy, engineering services, and computer and information services. Services exports generated US\$28.2 billion in 2015, 10.5 percent higher compared to 2014 while imports of services amounted to US\$23.9 billion. Other business services which include IT-BPM accounted for 59.1 percent of total services exports.

The dominance of the services sector highlights the importance of ensuring that it is competitive and efficient in order to maximize its contribution to the country's economic growth and development. An efficient services sector also has indirect consequences for economic growth through the efficiency of other sectors in the economy such as manufacturing and agriculture which utilize services as inputs. Thus, the country embarked on various liberalization and other reforms in the services sector.

The reforms in the services sector came in the late 80s with the opening up of power generation, followed by the liberalization of the telecommunications and shipping industry in the early 90s and deregulation of the air transport industry, and the foreign bank liberalization allowing the operation of ten (10) foreign banks, in the mid-90s. The water sector was likewise privatized through competitive bidding and the downstream oil industry deregulated in the late 1990s. Later in 2000s, the Retail Trade Liberalization Law and the Electric Power Industry Reform Act (EPIRA) were enacted and implemented. As part of the continuing thrust to ensure energy security, the Renewable Energy Act was passed in 2008 which paved the way to optimize the potential of the country's renewable energy and generate investments.

These reforms were crucial in introducing competition in key sectors such as telecommunications, power, shipping and ports, as well as in disciplining incumbent monopolies, the absence of clear rules and appropriate regulatory framework, as well as efficient regulators have limited the impact of reforms on competition. The country's liberalization experience highlighted the need for unilateral reform initiatives in promoting domestic policies.

Recently, the laws on competition (Republic Act (RA) 10667), foreign co-loading (RA 10668) and full entry of foreign banks (RA 10641) were passed.

¹ Culled from PIDS Paper Discussion No. 2013-02 "The ASEAN Economic Community and the Philippines: Implementation, Outcomes, Impacts and Ways Forward (Integrative Report) –Melanie S. Milo

2. Context of structural reforms undertaken

- a. *What specific services sector structural reforms are you addressing in this questionnaire? Why this reform was necessary?*

Banking

Further opening of the banking sector to foreign banks is seen to build a stronger banking industry. With more players in the market, the banking industry is envisioned to become more competitive and beneficial to consumer welfare given the increased banking products, improved services and foreign technology/practices which these new players may bring. Greater participation in the banking and financial sector is expected to augment the financial resources to which the Philippine economy may have access, thus supporting various infrastructure projects and initiatives of the government. The reforms are also in preparation for regional integration.

Power

Rising per capita electricity consumption tend to be positively correlated with an economy's growth and other development indicators. But in order for an economy to demonstrate this, its power sector must be capable of providing electricity as efficiently and accessibly as possible, which necessitates the undertaking of power sector reforms.

Power sector reform and restructuring aimed to address the inadequacies of the electricity supply industry and to foster competitive markets that will help ensure efficiency and cost effectiveness from generation to the distribution and retail of electricity. In 2001, the EPIRA was enacted with the intention of ensuring affordable and reliable electricity to all power consumers in the Philippines. The law sought to achieve this through the introduction of sweeping reforms including the restructuring and deregulation of the entire power industry and the privatization of most state-owned power generation and transmission assets. From a vertically integrated, extensively publicly-owned utility business, the industry was envisioned to be broken down into its main components with a deregulated and effectively privatized generation and supply sectors. These reforms were intended to introduce more competition and choices for consumers while levelling the playing field in the power industry in order to encourage greater private sector participation. However, since EPIRA's introduction in 2001, power rates in the Philippines continue to be among the highest in Asia and remain a source of concern for industries in the country struggling to remain competitive with their regional counterparts².

3. Reform measures

What was the specific measure(s) undertaken? How were reforms/measures sequenced?

Banking

The banking sector has been opened up to competition, both local and overseas, largely through a series of government-initiated liberalization measures. Twenty years after RA 7721, the government further liberalized the entry of foreign banks with the issuance of RA 10641 in 2014. Under the new law, foreign banks may now own up to 100% of an existing bank's voting stock. Foreign banks are given equal treatment to that accorded domestic banks, as they "shall perform the same functions, enjoy the

²Tanchuco (2008), Cost Structure and Implications for Power Sector Reforms

same privileges, and be subject to the same limitations imposed upon a Philippine bank of the same category.” Similarly, under the new law, domestic banks under the new law also enjoy “any right, privilege or incentive granted to foreign banks or their subsidiaries or affiliates.” As a result of the changes in the policy regime for the sector and in the overall economic environment, commercial banks have been undertaking different organizational and business adjustments to make their operations viable, efficient and profitable.

The banking sector also proactively pursued reforms on risk management practices, capital build-up, corporate governance, financial inclusion, financial literacy and consumer protection. The Bangko Sentral ng Pilipinas (BSP) implemented a comprehensive risk-based approach that is aligned with international best practices. This includes the Basel Committee's standards as articulated in the updated Core Principles for Effective Bank Supervision. Bank supervision is focused on assuring the public of the safety and soundness of individual banks. Periodic on-site examination and regular off-site supervision of banks are being implemented.

The reforms were necessary as structural shifts in the global economy such as the gradual recovery and growth slowdown in many emerging market economies posed near term risks of increased financial market volatility and lower growth output to the domestic economy. Changing global remittance policies and de-risking may also have implication in the growth of banks' balance sheets and overall profitability. The increasing sophistication of global financial services coupled with increasing interconnectedness and cross-border exposures further redefines the traditional risks assumed by banking institutions which could lead to systemic imbalances that may affect the overall performance and health of the banking system.

Given these rapid and ongoing changes, the reform initiatives undertaken by the BSP and other financial regulators were meant to align the needs of a growing economy with a sound and responsive financial system. As markets have become more attractive through financial stability, markets are also targeted destinations for capital flows. On this basis, the BSP recognized the urgency to maintain a strong monetary and macro-prudential framework to attain its objectives.

Power

Relative to power, EPIRA restructured the industry and introduced policy and institutional reforms. Restructuring broke up National Power Corporation, the state-owned power generating company, into its constituent generation and transmission components and privatized these assets. It also established a wholesale power market; and introduced retail competition through a policy of open access to the distribution networks. The policy intent of unbundling the power sector was to ensure appropriate investment and efficient operation through increased competition. Due to delayed implementation of open access, power sector reforms have, however, not yet translated in real declines in electricity prices

To ensure affordable and competitive electricity prices, transparency was fostered through the unbundling of rates to reflect the different charges from the generation up

to delivery of electricity and other charges ³ such as universal charge. The Energy Regulatory Commission, an independent, quasi, judicial body, established under the law, continued to regulate transmission and distribution. The Department of Energy monitors and plans for the development needs of the country.

4. Impact of reform(s)

- a. Quantitative and qualitative (including anecdotal) *information to demonstrate the impact of the reform(s) had on your economy, including flow-on effects to other sectors/the wider economy, unexpected consequences (both positive and negative)*

As of end December 2015, there were 23 foreign banks which were authorized to operate in the Philippines. Four (4) of these banks started operations as new foreign bank branches in the Philippines with full banking authority in 2015 pursuant to RA 10641. These are Sumitomo Mitsui Banking Corporation of Japan, Shinhan Bank Co. Ltd. and Industrial Bank of Korea, and Cathay United Bank Co. Ltd of Chinese Taipei. ⁴The number is seen to further increase due to the potential entry of qualified ASEAN banks due to the ASEAN Banking Integration Framework.

Through the reform (post-EPIRA), power shortages were managed and did not reach nationwide crisis levels such that in the 1990s, although power supply reliability is still an ongoing concern. Production efficiency gains were also achieved through the reduction of system losses.⁵ However, electricity prices in the Philippines remain high.

5. Challenges and lessons learned

The reform of the power sector has been in the government's priority agenda since the early 1990s, but the law was passed only in 2001. The delays in passing the legislation reflected the difficulties of getting legislative approval for a complex reform measure. Implementation of the reform agenda has been slower than expected, which observers noted to be due to among others, excessive politics, regulatory bottlenecks and poor institutional coordination among concerned government agencies.⁶ The establishment and implementation of an effective regulatory regime in a market driven setting also proved to be difficult. Addressing these issues, as well as good governance and sound management will be important in achieving the goal of providing reliable supply of electricity that is affordable and accessible to those who are willing to pay for the service.

The early enactment of RA 10641 may be attributed to the interest shown by the local banking industry and the full support of the BSP, which recognized the benefits of further opening up the banking sector to foreign competition.

³ Universal charge includes collection for missionary electrification, environmental fund, removal of cross subsidies, and for stranded debts and contract costs of NPC as well as for stranded contract costs of private distribution utilities.

⁴ Source www.bsp.gov.ph/downloads/Publications/2015/StatRep_2Sem2b.pdf

⁵ Source: Navarro, Adoracion M., et. al, "Post-EPIRA Impacts of Electric Power Industry Competition Policies," Discussion Paper Series No. 2016-15, May 2016, Philippine Institute for Development Studies.

⁶ Cham, Ma. Rowena, M., "The Philippine Power Sector: Issues and Solutions; The Philippine Review of Economics, Vol. XLIV, 1 June 2007, pp.33-63, Asian Development Bank.

6. Next steps

The incoming Philippine Congress is expected to file anew proposed reforms in the EPIRA. A number of bills were introduced in the previous Philippine Congress seeking to introduce amendments to the law to address perceived weaknesses and to clarify certain ambiguous provisions. One bill for instance, sought to address cross ownership, market power abuse and anti-competitive behaviour by prohibiting generation companies to hold interest and/ or undertake the business of distributing electricity and the distribution companies to directly or indirectly venture to energy generation.⁷ But some quarters were of the view that completely restricting cross-ownership between generators and distributors will pose a barrier to investments and make privatization difficult. Other proposed amendments include tightening of the rules on rate setting, hastening the implementation of open access and retail competition, and detailing the rights of electricity consumers, among others.⁸

Among the eight-point economic agenda of the incoming administration is to ensure the attractiveness of the Philippines to foreign direct investments by easing economic restrictions and by enhancing competitiveness of doing business in the Philippines. In light of the general policy of openness, the review and update of the Foreign Investments Act of 1991, as amended, particularly the specific laws cited in the Foreign Investment Negative List should be pursued. The conduct of a comprehensive mapping and audit of laws and regulatory measures on services could be a first step to serve as a guide to identifying priorities for reforms.

⁷ Senate Bill 2059 filed by Senator Joseph Victor Ejercito in the 16th Congress.

⁸ Policy Brief 08-03, Senate Economic Planning Office, June 2008.

THE RUSSIAN FEDERATION

1. General overview

After the period of implementation of market reforms in Russia the service sector had achieved a qualitatively new level of development. Nowadays Russian economy disposes well-diversified service sector. Largest service sectors in Russia are commerce, education, transportation, finance, credit, insurance, and communication. Rapid development also show such sectors as tourism, personal services, cleaning, medicine, repair and construction services; services associated with recreational and entertainment activities.

Taking into account the importance of structure reforms for economic development, Russia also takes necessary measures aimed at developing and improving public services through the promotion of e-government.

2. Context of structural reforms undertaken

- a. What specific services sector structural reforms are you addressing in this questionnaire?

Public services provided via electronic government (e-government)

- b. Why this reform was necessary?

The purpose to develop of e-government was to simplify and optimize the process of providing public services to citizens and businesses. E-government reduces the time to obtain necessary documents or information and increase the quality of services.

3. Reform measures

The Presidential Decree number 601 of 2012 "On the main directions of improving the system of the public administration" had included the task of development of public services in electronic form.

Further development of the public services in electronic form was ensured by the following main legislative acts approved by the Government of the Russian Federation:

- State Program "Information Society" for 2011 - 2020 years.
- Federal Law from February 9, 2009, N 8-FZ, that introduced provisions on access to information about activities of state authorities and local governments.
- Resolution N 583 from July 10, 2013, , "On ensuring access to public information about the activities of state bodies and local government in the information and telecommunication network "Internet" in the form of open data".
- The Concept of openness of the federal bodies of executive power (the Decree N 93-p, 2014). It is based on the principles of openness and transparency in governance and accountability to civil society.

The Government Commission for the Coordination of “open government” coordinates interactions of the federal bodies of executive power with representatives of civil society on the formation of the "Open Government". This Commission is chaired by the head of the Russian Government Dmitry Medvedev.

Minister M. Abizov was appointed responsible for organizing the work of the Government Commission on coordination of "Open Government".

The federal bodies of executive power of the Russian Federation published open data, both on they own and third-party sites. Some Russian regions also publish public data on specific sites.

4. Impact of reform(s)

- a. Quantitative and qualitative (including anecdotal) *information to demonstrate the impact the reform(s) had on your economy, including flow-on effects to other sectors/the wider economy, unexpected consequences (both positive and negative)*

The single portal of public services (hereinafter - EPGU) (gosuslugi.ru) is visited monthly by about 5 millions users.

Only in 2015, almost 10 millions users registered in the portal. Currently in the EPGU registered more than 28 millions citizens.

According to the ranking of the United Nations on e-government development, in 2014 Russia took 27th place, going up 32 points since 2010.

In Russia it was implemented all stages of involvement of citizens in the electronic interaction with the government. Information technologies are used for conveying information to the public, taking initiatives, and to consult with citizens for joint decision-making.

Official website of public procurement and tendering torgi.gov.ru informs citizens on tenders opened by official bodies and companies with state participation.

Draft legal acts are placed on a separate site - <http://regulation.gov.ru>. There, citizens can participate in the public discussion on these acts.

Citizens registered in e-government, may file a petition. To do this, they can use a separate site - roi.ru. Those initiatives that have collected a certain number of votes pass for further consideration of the authorities.

Currently, the work on integration of e-government and judicial system of the Russian Federation is also under way.

E-government in Russia is based on several principles. They are 1) multi-channel system of interagency electronic interaction (hereinafter - SMEV), 2) single window and 3) single entry point.

To access the e-government it is necessary to register in a single system of identification and authentication. This system is so popular that every three seconds a new user is registered in it. Users can register in the system from home, or from

multiple points placed across the country. Now the number of these points is above 10 thousand.

The SMEV ensures the safety of personal data. It uses electronic signatures. It is stable and has capacity to handle a huge amount of requests.

- b. What effect has this reform(s) had on global value chains?(if relevant/possible; response can be anecdotal if necessary)

Using open data of e-government, interested entrepreneurs can create applications for gadgets. For example, in many regions it is popular to create applications that allow observing traffic of public transport. Russian search engine Yandex also uses open data of e-government in its services.

Currently, the work on preparing the release of e-passport is under way. E-passport will be used in many applications. For example, citizens can use it for accessing the public services. The main difference of new type of passport is that it allows the usage of electronic signature. In turn, it will make available legal actions between citizens in electronic form.

In addition, further development of e-government services will simplify interactions of citizens and businesses. Considering a loan application from individuals, a bank can use e-government data to assess the creditworthiness of citizens.

5. Challenges and lessons learned

What were the challenges to introducing and implementing the reform(s)? In hindsight, what would you do differently (e.g. in terms of sequencing reforms, coordination between institutions, public consultations)?

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6. Next steps

By 2020 Russia aims to enter the top-10 leading countries in the index of development of information technologies.

By 2018, 70 percent of Russian citizens who use public services, should give priority to electronic form for their preparation. The level of satisfaction with the quality should be no less than 90 percent.

To develop e-government and improve the quality of public and municipal services provided in electronic form the following actions are to be done:

1. Introduction of the registry model of providing public and municipal services. The main principal of this model is that a result of a requested service (information, certificate, reference, etc.) is to be saved as the registry entry in the basic state information resource without issuing the result of service on paper. At the same time a citizen at any time can get a statement from the information resource.

2. Minimization of the number of obligatory personal documents that may be required from an applicant during the period of service rendering, as well as reduction

of the time that is necessary to get a response on inter-agency electronic request from 5 days up to a few seconds.

3. Introduction of regulation for archival storing of documents in electronic form, including the procedure for storing documents, signed by a qualified electronic signature, and authentication of documents with expired certificate of electronic signature key.

4. Removing restrictions from sectoral laws on the use of documents in electronic form outside the public sector, as many of documents are used in transactions and confirmations of different types in civil legal relations.

5. Bringing to a single standard of the main regional (municipal) services through their typification and shaping in electronic form in the EPGU. It will lead to a significant reduction of the regional (municipal) budget costs by using common forms without duplication in regional portals.

6. Insuring proper informing citizens about their rights in the field of public services (transition to a proactive model).

7. Developing new e-services regarding different life situations (eg, loss of documents, birth of a child).

8. Regulatory consolidation of the information specified in the Federal Register of public and municipal services and displayed in the EPGU as the only true, and establishing personal responsibility of public servants for relevance of this information.

9. Conducting service quality monitoring on ongoing basis in all priority services, including those once that are listed in the Decree of the Government of the Russian Federation of number 2516-p from 12.25.2013.

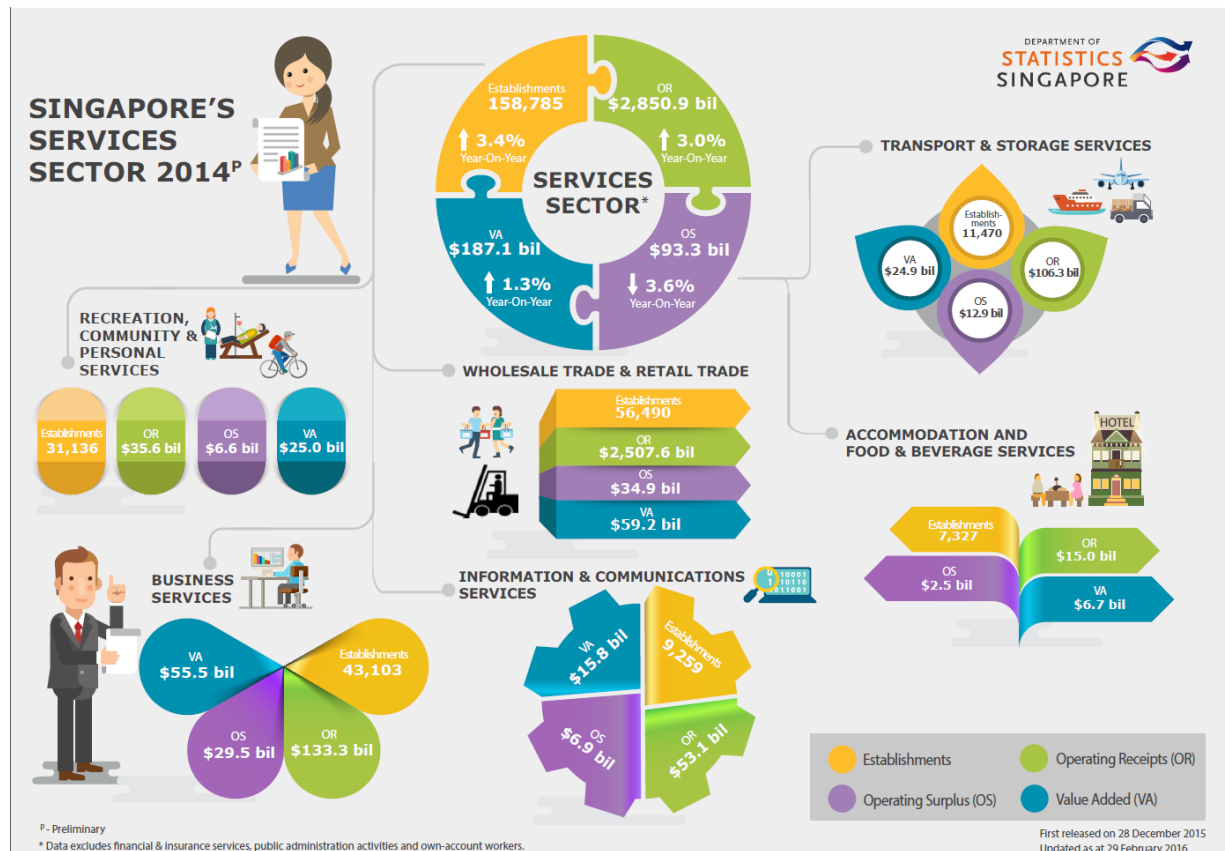
10. Implementation of the automatic distribution of data updates of members of interagency cooperation to ensure the relevance of the information contained in information systems.

11. Conducting specialized distance learning courses for the staff of government bodies and local authorities, as well as activities designated for popularization of e-services.

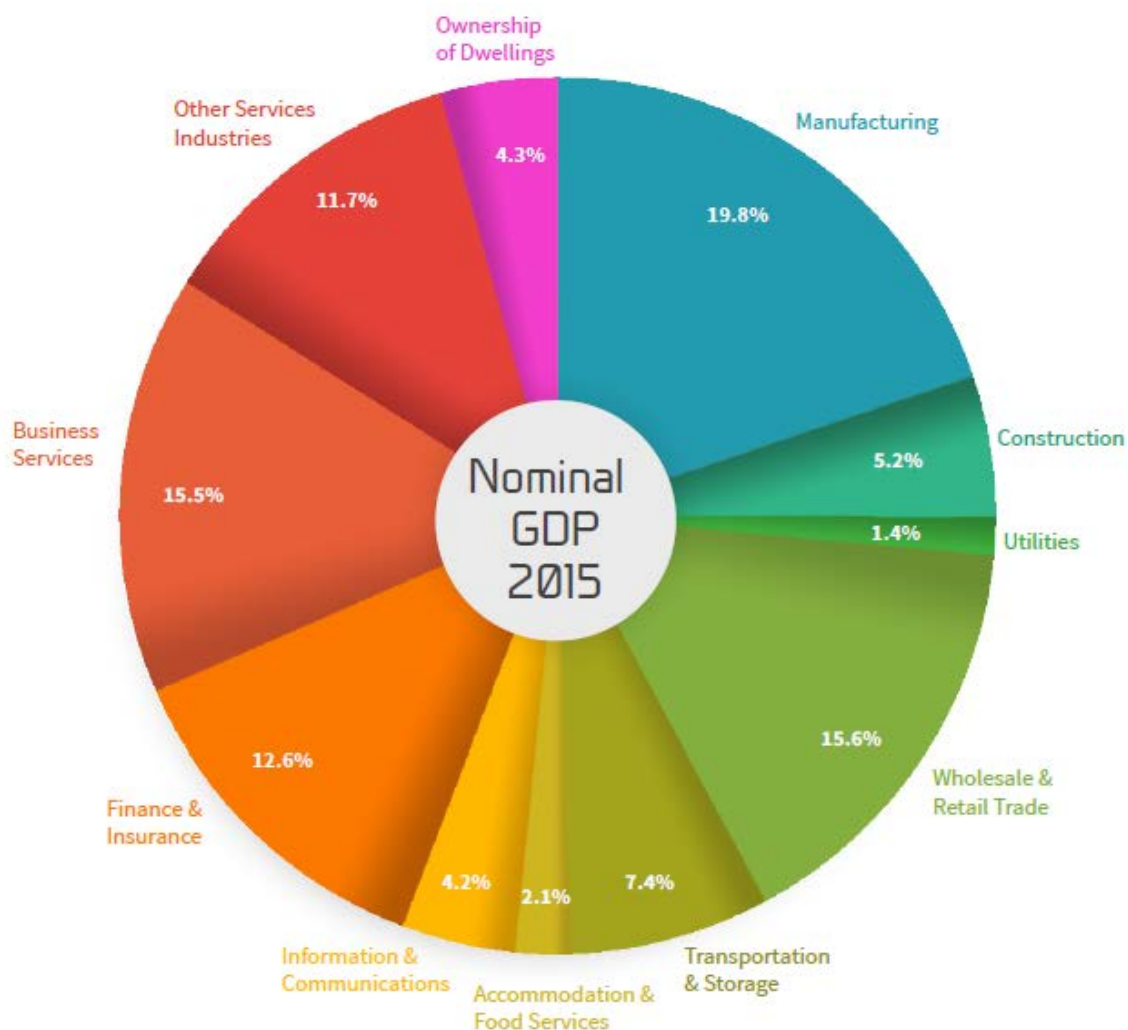
SINGAPORE

1. General overview

An overview of Singapore's services sector is captured in the info-graphics below (Source: Department of Statistics, Singapore). Some reforms that have impacted Singapore's services sector include deregulation in the electricity sector. These reforms were implemented against the backdrop of a changing economic context. Singapore's growing energy demands and requirements for investment in infrastructure, for instance, was the impetus for reform in the electricity sector.







2. Context of structural reforms undertaken

- What specific services sector structural reforms are you addressing in this questionnaire?
- Why this reform was necessary

Underpinning Singapore's growth into a modern city-state and quest to remain competitive is an efficient and modern electricity system. With Singapore's growing energy demands and requirements for investment in infrastructure, deregulation was seen as a way to inject efficiency into system through keener competition using price signals to guide production and consumption decisions, spur innovation and widen consumer choice. The Government had a role in structuring the industry, regulating it and making strategic investments beyond the capabilities of the private sector. It was left to market forces through competition and the pursuit of profit by the operators, to raise service standards, promote innovation, improve efficiency and consumer benefits.

3. Reform measures

What was the specific measure(s) undertaken? Were public consultations/other forms of public participation and regulatory impact analyses used? How were reforms/measures sequenced?

In the past, Singapore had a vertically integrated electricity and gas supply industry which was regulated by the Public Utilities Board (PUB), a government statutory board.

Deregulation started in 1995 when the electricity and gas functions of the PUB were corporatized to form Singapore Power (SP). PUB was restructured to continue to supply water, and take on the new role as the regulator of the electricity and gas industries. The intention was to gradually introduce competition into the sector so that market forces, rather than central planning, drive investment, production and pricing decisions. The Singapore Electricity Pool commenced operations in 1998 for day-ahead trading of electricity in a competitive environment. This was a stepping stone to the next stage of reform.

In September 1999, the Government carried out a comprehensive review of the electricity industry. Following the review, the Government decided in March 2000 to continue with further deregulation of the sector. It opened up generation and retail markets to commercial players, split off the power grid into a separate company, introduced a wholesale electricity market with spot bidding every 30 minutes, and market clearing and settlement. The Energy Market Company (EMC) was set up to operate and administer market clearing and settlement.

On 1 April 2001, PUB was restructured into a water authority under the Ministry of the Environment. The Energy Market Authority (EMA) was established to regulate the electricity and gas industries and, in its capacity as the Power System Operator, for ensuring the secure operation of the power system. Concurrently, the Government also decided to restructure the gas industry and put in place a competitive market framework to mirror that of the electricity sector.

4. Impact of reform(s)

- a. Quantitative and qualitative (including anecdotal) *information to demonstrate the impact the reform(s) had on your economy, including flow-on effects to other sectors/the wider economy, unexpected consequences (both positive and negative)*
- b. What effect has this reform(s) had on global value chains? *(if relevant/possible; response can be anecdotal if necessary)*

Today, Singapore's electricity grid continues to be one of the most reliable in the world with an average interruption time of less than 1 minute per customer per year. Since January 2008, grid charges have fallen from 5.35cts/kWh to 5.30cts/kWh (a 1% reduction). The fees for providing billing and meter reading services have also decreased from 0.28ct/kWh to 0.17ct/kWh (a 39% reduction). This is a good example of how private operators, working in competitive markets, can outperform state-owned, nationalised industries. Without deregulation, the tendency could be to just pass on the extra costs to consumers and firms, who would have to bear higher electricity bills.

Since market deregulation, Singapore has been able to attract new entrants like Keppel and Pacific Light to set up new plants. Competition has also encouraged incumbent power generation companies to adopt newer and more efficient

technology. The move towards the greater use of natural gas for power generation occurred in the early 2000s during the “Dash for Gas” where the generation companies capitalised on opportunities to replace their less efficient fuel oil steam plants with more efficient combined cycle gas turbine (CCGT). This benefitted Singapore as the switch from fuel oil to natural gas lowered the cost of producing electricity, given the higher efficiency level of the gas-fired plants. It also significantly reduced Singapore’s overall carbon footprint.

5. Challenges and lessons learned

Firstly, there is a need to tackle the issue of market power in the electricity generation sector. Singapore has three large incumbent power generation companies which can exercise market power and raise prices in the wholesale electricity market. EMA introduced Vesting Contracts in 2004, under which power generation companies are required to sell specified quantities of electricity at a specified price. This removes the power generation companies’ incentive to exercise their market power by withholding their generation capacity to push up prices in the wholesale electricity market. EMA’s long term goal is to remove Vesting Contracts following the dilution of market power in the electricity generation sector.

Secondly, there is a need to provide investors with regulatory certainty. In the case of the electricity sector, power generation investments require high investment outlay and significant lead time to bring new capacity on stream; coupled with a long pay-back period. To address this, EMA provides information about the longer term outlook of the sector to help investors to make informed decisions. It also ensures that Singapore maintains a clear and transparent regulatory regime, and is consistent in its regulatory decisions so that investors are confident of the rules they will operate under.

Thirdly, setting the optimal price for monopoly providers is another key challenge. EMA regulates the SP companies and the EMC to ensure that their fees and charges are reasonable, whilst keeping reliability standards high and incentivising the companies to reduce their costs through efficiency and productivity improvements. EMA also oversees transmission and system planning to ensure that Singapore’s current and future energy needs are met. This ensures that regulated firms do not gold plate and overinvest, whilst balancing against having sufficient redundancy in the system to ensure a secure and reliable energy supply.

Lastly, there is a need for a consultative approach during the deregulation process, which would increase transparency and trust between the regulator and stakeholders. The close tripartite relationship between the Government, employers and unions was crucial in working out harmonious settlements and garnering stakeholder buy-in during the period of structural change.

6. Next steps

Singapore has progressively opened up the retail electricity market since 2001 to give consumers the option to source and buy electricity at competitive rates from electricity retailers of their choice. They serve as alternatives to the regulated tariff. The introduction of competition has given consumers more options to manage their energy usage and costs, gain access to new products and services, help drive better service standards and improve efficiency.

Today, around 80% of electricity demand (or 89,500 accounts) have this flexibility and choice. EMA is working with industry stakeholders to implement the final phase of retail electricity market liberalisation, known as Full Retail Competition, to take place in the second half of 2018. This will enable the remaining 1.3 million consumers, which are mainly households, to have the same flexibility and choice in their electricity purchase. Those who prefer to remain with SP Services to buy electricity at the regulated tariff will still be able to do so.

CHINESE TAIPEI

1. General overview

The services sector plays a crucial role in the economic development of Chinese Taipei. It is not only the biggest contributor to the GDP of Chinese Taipei, but also creates substantial employment opportunities. In 2015, the output of the services sector reached USD 326.3 billion, accounting for 62.8% of the GDP of Chinese Taipei; and the sector provides 6.6 million jobs, accounting for 59% of total employment. The services export of Chinese Taipei continued expanding over the years and reached USD 56.8 billion in 2015, ranked 23rd in the world.

The overall economic context for implementing reforms in the financial services sector could be depicted by the following:

(1) Profitability of financial industries

The net income before tax of overall financial industries in 2015 reached NTD 561.4 billion dollars, a NTD 18.6 billion gain compared to in 2014, up by 3.4%.

(2) Improvement of the assets quality of domestic banks and good intermediary function

(a) As of December, 2015, the average NPL ratio of domestic banks had fallen significantly to 0.23% compared to 11.76% as of April, 2002.

(b) The coverage ratio of allowances for NPLs had increased to 555.43% compared to 14.29% as of April, 2002.

(c) As of the end of 2015, loans by financial institutions amounted NTD 27.1 trillion, an increase of NTD 2.17 trillion as compared to the end of 2013, support the development of other industries overall.

(d) The loans extended to SMEs by domestic banks, as of the end of 2015, amounted to NTD 5,452 billion, an increase of NTD 691 billion as compared to the end of 2013.

(3) Development of the capital markets

There were 58 Initial Public Offering companies in 2015. As of the end of 2015, 1,586 companies were listed on the Taiwan Stock Exchange (TWSE) or and the Taipei Exchange (TPEX), with the total market capitalization of listed companies reaching NTD 27.1 trillion. Through the issuance of common stock for cash and corporate bonds, enterprises can obtain NTD 500 billion capital annually for facilitating their development.

(4) Development of insurance industry

In 2015, the total premium income of our insurance industry was NTD 3,062.8 billion (life NTD 2,926.7 billion/non-life NTD 136.1 billion), an increase of NTD 159.5 billion or 5.5% over the previous year. Life and non-life insurance accounted for 95.56% and 4.44% of total premium income respectively.

2. Context of structural reforms undertaken

(1) In recent years, the Asian region has experienced rapid economic growth and will continue to be the epicentre of global economic growth. According to the Asian Development Bank, the Asian region accounted for about 36% of global GDP in 2012, which is expected to grow significantly to 50% by 2050. With the great growth potential of the Asian region and the excellent financial services of Chinese Taipei, we aim to further expand our presence in the Asian

region so as to tap the vast business potentials and facilitate the economic development of the region.

- (2) The reform and sound development of the financial services industry is helpful for enhancing international competitiveness, upgrading productivity, and promoting investment. In Chinese Taipei, there are many innovative MSMEs and start-ups, which are small in size and in terms of market capitalization and oftentimes lacking capital. It is thus essential to support them in the early stages of development so that they can prosper with their creativity and innovation. In addition, faced with the trend of ageing population and the associated economic safety issues for the elderly, Chinese Taipei actively encourages insurers to develop protection-type insurance, annuity insurance, and long-term care insurance products to fulfill the needs of the elderly. In so doing, the social safety net can be strengthened and the fiscal burden of the administration can be reduced.
- (3) The challenges currently faced by the financial services industry are not only the fierce competition of the financial market, but also the urgent need to adapt themselves to the rise of the mobile era, the rapid development of technology innovation, as well as the business model revolution of the global financial services industry. Especially, the development trend of five major technologies, including the Internet, mobile telecommunications, social media, cloud computing, and big data, has progressively reshaped the way financial services are provided and consumers' behavior. Therefore, it is necessary to build a digital financial environment that responds to the arrival of the digital financial era.
- (4) Financial consumer protection has become the world trend since the 2008 financial crisis. In response, Chinese Taipei has adopted a two-pronged supervisory approach. On the one hand, we moderately relax regulatory restrictions to facilitate the development of innovative services and further growth of financial industries. On the other hand, we also stress the importance of risk management to protect the interests of the consumers. To this end, related laws and regulations have been established and an ombudsman body has been set up to implement the policies.

3. Reform measures

To promote business environment reforms and speed up our pace in integrating into the regional economy, regulatory reform policy is sought to raise the overall welfare through regulatory review, rather than merely meeting demands from specific stakeholder groups. Major regulatory reform measures include:

- (1) **Advancing regulatory harmonization with international standards**
Chinese Taipei has systematically examined and reviewed the suggestions proposed by domestic and foreign industrial organizations, coordinated the work of various agencies on the international harmonization of laws and regulations, and made timely public reports on related progress. The deregulation achievements in recent years include domestic listed securities and OTC (Over-The-Counter) market companies were permitted to issue non-capital-raising deposit receipts for overseas OTC trading, and securities firms may set up offshore securities units (OSUs) to conduct offshore securities business.
- (2) **Promoting Business Environment Reforms**

Since 2008, Chinese Taipei has been conducting business environment reforms. With seven years of efforts, the overall World Bank “Ease of Doing Business” ranking of Chinese Taipei has risen from 61st in 2008 to 11th in 2015. In 2016, Chinese Taipei will take further actions to enhance the functionality of the Property Secured Transaction Online Registration and Public Inquiry Website, while promoting floating lien system.

With regards to the enhancement of the financial services, Chinese Taipei has undertaken the following reform measures:

- (1) Building a stronger Asian presence

In order to encourage domestic financial institutions to grasp the opportunities offered by the economic growth of the Asian region and to meet the needs for financial services of foreign enterprises and overseas enterprises of Chinese Taipei, we have formulated the four key strategies: deregulating to simplify procedures, strengthening supervisory cooperation, cultivating international talent, and building database for overseas deployment, so as to assist financial institutions to actively expand their Asian presence.
- (2) Promoting sound development of capital markets
 - (a) Launching a program to boost securities market

Chinese Taipei announced the launch of a program to boost the securities market on February 3, 2015 and the advanced version on December 15, 2015. The program aims to establish a transparent, fair and efficient capital market, develop a more flourishing securities market in line with world trends, and improve global competitiveness. The measures include: launching a crowdfunding platform with equity characteristics, encouraging top-notch domestic and foreign enterprises to apply for TWSE or TPEX listings, enlarging the scope of targets for day-trading, easing the price fluctuation limit to 10%, and promoting a master plan of corporate governance, etc.
 - (b) Developing a multi-layer capital market

Chinese Taipei allowed first international bonds issuance in October 2005 and completed the planning to allow RMB-denominated Formosa bonds issuance in October 2012. Relevant rules and measures are sound and thorough. Moreover, the Go Incubation Board for Startup and Acceleration Firms (GISA) was established in January 2014. GISA is primarily for small-sized non-public innovative companies with creative ideas and offers equity fundraising and integrative counselling mechanisms for those companies.
- (3) Strengthening management and development of the insurance industry
 - (a) In order to enhance the efficiency and flexibility of insurers’ fund allocation, Chinese Taipei has continually reviewed and amended the regulations related to fund allocation of insurers. Furthermore, Chinese Taipei has continuously required insurers to strengthen their risk management capability to ensure the soundness of insurers.
 - (b) In order to meet the demands of an ageing society, Chinese Taipei has launched the model provisions for long-term care insurance policies and group annuity insurance policies (interest-sensitive).
- (4) Building a digitalized financial environment
 - (a) Expanding online and mobile payment financial services

Banks’ clients are able to enjoy 12 major online services including deposit, loan, credit card, wealth management and co-marketing. Securities firms

and futures commission merchants (FCMs) are allowed to offer account opening and other services through electronic media. Insurers are allowed to engage in online sales of insurance at different stages. Regulations on types of insurance products have been relaxed, with differential supervisory measures implemented and information security enhancement required.

(b) Promoting the development of innovative financial services

Chinese Taipei has established the Financial Technology Office, set up the Financial Technology Consulting Committee, and accordingly held related meetings. Furthermore, we have also published the Financial Technology Development Policy White Paper as the FinTech blueprint of Chinese Taipei. The White Paper encompasses policy measures in five major dimensions: financial services, innovative R&D, talent cultivation, risk management, and infrastructure.

(5) Strengthening financial consumer protection

(a) The Financial Consumer Protection Act (FCPA) and associated legislations entered into force on December 30, 2011. The Financial Ombudsman Institution (FOI), which is totally funded by the administration, was established and commenced operations on January 2, 2012 in accordance with the FCPA. The FOI handles financial consumer disputes, and conducts education and awareness programs for financial services enterprises (FSEs) and financial consumers.

(b) Chinese Taipei has formulated the Principles of Treating Customers Fairly (TCF Principles), which have been implemented and become the guideline for FSEs.

4. Impact of reform(s)

The impacts of the aforementioned reform programs can be demonstrated via the following five aspects accordingly:

(1) Building a stronger Asian presence

(a) Since the end of 2013, Chinese Taipei has strongly promoted the policy of building up the Asian presence of our financial institutions to help them grasp the opportunities presented by Asian economic growth and rapid regional economic integration, and thus become regional financial institutions in Asia; and, at the same time, provide the funding for the local market development of foreign and domestic enterprises.

(b) By the end of 2015, the number of overseas offices/branches of Chinese Taipei's financial institutions had reached 608, an increase of 36.3% on the end of 2013. Among the overseas establishments, 473 of them are located in Asia, up by 52.1% for the same period.

(c) As for overseas M&As, from the second half of 2013 to the end of 2015, 26 M&As deals were completed, including 5 cases in the banking industry, 9 cases in the securities industry, and 12 cases in the insurance industry.

(2) Promoting sound development of capital markets

(a) The benefits of the program to boost the securities market and the advanced version cover several aspects, including:

- facilitating diversified financing channels and helping youth realize their innovative and creative powers and development potential;
- meeting investors' trading needs and creating a more efficient trading market under a complete risk management mechanism;

- meeting investors needs for global asset allocation and trading via domestic securities markets by providing investors with a diversified selection of products and appropriately linking to overseas targets;
 - enhancing the quality of services by integrating resources of related parties and strengthening the efficiency of market operations.
- (b) As of the end of 2015, 273 International Bonds had been issued and the total issuance amount was USD 61.6 billion, including 97 Formosa Bonds issued with total issuance amount RMB 62.57 billion. Furthermore, 82 companies have registered on the GISA board and raised approximately USD 6.63 million in capital through the GISA platform.
- (3) Strengthening management and development of the insurance industry
Measures related to deregulating regulations for insurers' fund allocation are working effectively, especially the measure allowing insurers to have the invested amount of foreign-denominated equities or bonds traded in Chinese Taipei not included in the foreign investment ceiling. As of the end of 2015, the issuing scale of foreign-denominated equities or bonds traded in Chinese Taipei was about NTD 1,878 billion, of which the insurance industry accounted for approximately 78%.
- (4) Building a digitalized financial environment
Chinese Taipei has launched the "Digital Financial Environment 3.0" program. Related laws and regulations are being progressively amended to create a comprehensive legal environment to foster the development of high-tech finance. By the end of December 2015, Chinese Taipei has achieved the following:
- (a) 12 types of banking business are allowed to accept online applications (from January 2015);
 - (b) 59 securities firms can accept customer orders online;
 - (c) 33 securities firms can accept electronic signing of risk disclosure statements;
 - (d) 15 securities firms can accept the signing of trading agreement documents electronically;
 - (e) 34 FCMs can accept customer orders online;
 - (f) 5 FCMs can offer services through electronic media;
 - (g) 4 FCMs can offer account opening service through electronic media to their customers;
 - (h) the average percentage of electronic trading for FCMs and securities firms is 82% and 48.22%, respectively;
 - (i) 9 life insurance firms and 12 non-life insurance firms have been approved to conduct online insurance business.
- (5) Strengthening financial consumer protection
By the end of December 2015, the dispute resolution rate of complaints that the FOI referred to FSEs for handling was over 40%. Of the disputes not resolved after referral to an FSE and then filed with the FOI by the consumer, over 50% of them were solved.

5. Challenges and lessons learned

The lessons learned through the implementation of the various reform programs can be explicated in the following five aspects as well:

- (1) Building up a stronger Asian presence

Chinese Taipei recognizes that industrial development needs the financial industry to provide adequate funding and the financial industry also relies on other industries to grow. They are inseparable and mutually reinforcing. In view of the fact that Asia is the main investing target for enterprises of Chinese Taipei, domestic financial institutions should follow their footsteps and provide the capital they need to grow, so as to share mutual growth and benefits and to promote the regional economic development.

- (2) Promoting sound development of capital markets
Following the introduction of measure allowing insurance companies to invest in international bonds listed on the Taipei Exchange, with the investment excluded from the foreign investment cap, the amount of international bonds issued has increased significantly.
- (3) Strengthening management and development of the insurance industry
To cope with an ageing population, Chinese Taipei encourages financial institutions to appropriately adjust resource allocation and develop financial products that meet the needs of the elderly. In addition, financial institutions can integrate the resources of medical and care service institutions to enhance the protection and living quality of the elderly.
- (4) Building a digitalized financial environment
 - (a) Technologitization and digitization of financial services may lead to job losses. Thus, related personnel in the financial services industry need to upgrade their professional capabilities so as to provide differentiated services and to enhance competitiveness.
 - (b) In order to enhance the efficiency of payment, save the cost of cash payment processing, stimulate economic growth through consumer spending, reduce the scale of the underground economy, increase financial transparency, reduce the circulation of false money, and lower the crime rate, Chinese Taipei is striving to double the ratio of e-payment within five years from the present ratio of 26% via the dual routes of public promotion and private sector participation.
- (5) Strengthening financial consumer protection
Of the financial consumer disputes that were filed with the FOI, over 40% of disputes are not solved satisfactorily, with many financial consumers not satisfied with the results of ombudsman decisions filing a petition with an administrative authority. For this reason, it's necessary to further promote the upgrading of the quality of ombudsman decisions to enhance consumers' willingness to use this alternative dispute resolution mechanism.
- (6) Implementation of RIA
 - (a) Chinese Taipei has been conducting capacity-building programs for public servants and encouraging agencies to improve RIA procedures and reports, so as to improve the general rule-making quality and reduce unnecessary regulatory cost.
 - (b) Chinese Taipei has compiled an RIA handbook tailored to Chinese Taipei's specific conditions, while making reference to views and practices learned from APEC workshops and international seminars, and comparisons between domestic and foreign methods.

6. Next steps

Chinese Taipei is planning to undertake the following reforms in the financial services sector in the near future:

- (1) Building a stronger Asian presence

By taking into account the regional development situation, risk control, as well as the potential benefits for the financial industry and overseas enterprises, Chinese Taipei will continue supporting the expansion of overseas presence by financial institutions to assist foreign and domestic enterprises in participating in the regional economic development.

- (2) Promoting sound development of capital markets
Chinese Taipei will continue to encourage top-notch domestic and foreign enterprises to apply for TWSE or TPEX listings in Chinese Taipei, so as to create a fund raising platform characterized by a diversity of industries and strengthen cooperation with foreign organizations in promoting new futures products. Furthermore, Chinese Taipei will also continue the development of International Bond Market, including the diversification of issuers and issuance products.
- (3) Strengthening management and development of the insurance industry
 - (a) In order to conform to the requirements of IFRS4-Phase II, Chinese Taipei will keep reviewing and strengthening the solvency supervision of insurers such as the liability reserves of life insurers and the Risk Based Capital system.
 - (b) Commercial long-term care insurance products will be adjusted in line with the long-term care system to be launched by Chinese Taipei's Ministry of Health and Welfare in the near future to supplement the system's insufficiency. Before the long-term care system is finalized, Chinese Taipei will keep promoting and advocating all kinds of ageing insurance products (including long-term care insurance), as well as raising public awareness of the importance of long-term care insurance.
- (4) Building up a digitalized financial environment
 - (a) Chinese Taipei will continue promoting such emerging payment tools as mobile payment, blockchain, and biometrics technology, etc.
 - (b) In order to study the incentives for mobile payment, small-sized enterprises such as night market vendors will be chosen to research the feasibility of tax reduction or exemption when implementing mobile payment, so that the money flow of the underground economy could be traced and tax revenue would be increased.
 - (c) Chinese Taipei aims to jointly develop and introduce practical blockchain applications to the financial services industry by accommodating the needs of the industry, integrating domestic research resources, and making reference to the research progress of large-scale international financial institutions.
 - (d) In order to diversify the development of the biometrics technology, Chinese Taipei will strive to coordinate and matchmake related technologies while maintaining its neutrality and allowing experimental projects being conducted.
- (5) Strengthening financial consumer protection
In addition to assisting financial consumers to resolve financial disputes, through education and advocacy, the financial services industry is to pay further attention to consumers' interests and consumers are to enhance their abilities to plan financial projects so as to prevent financial disputes.

In addition, Chinese Taipei is committed to promoting such services sector as:

- (1) Tourism industry: Chinese Taipei is committed to constructing high-quality tourist services environment, including strengthening the brand image of

Chinese Taipei's tourism, enhancing the quality of the hotel industry, and cultivating key talents. Moreover, Chinese Taipei will develop tourism products of local specialty and promote the diversity of tourism, as well as aim to integrate Chinese Taipei's ICT advantages, so as to offer tourists intelligence services and travel information.

- (2) Cultural and Creative Industry: Chinese Taipei keeps implementing open data of cultural contents, expanding value-added applications, and promoting digitalization of cultural materials to facilitate cross-border and cross-sector synergies. Furthermore, we are strengthening digital technology application in films, television, popular music, as well as promoting talent cultivation and cooperation between industries and universities, so as to improve the quality of cultural products and expand international markets.
- (3) Engineering Technical Services: Chinese Taipei is working to strengthen the promoting organization by establishing a cross-ministerial coordination platform and an ad-hoc project office. Furthermore, we are taking proactive measures in searching overseas engineering business opportunities and continually providing full support for domestic firms to expand foreign markets.

THAILAND

1. General overview

Thailand is an upper-middle income country, and its economy is comprised of the agriculture, manufacturing, and service sectors which contributed approximately 9.14%, 30.03%, and 60.83%, respectively to the GDP (NESDB, 2015). Over the past few decades, the significance of the service and manufacturing sectors in terms of real GDP has increased steadily while the share of real GDP derived from the agriculture sector has subsided.

Among the three major sectors, the service sector has contributed the largest percentage to Thailand's GDP since the period of the 6th National Economic and Social Development Plan: NESDP (1987-1991), and tended to increase continuously. In the first year of the 11th NESDP (2012-2016), the service sector contributed 58.78% of GDP at 6.96 trillion baht.

In 2015, the service sector generated 7.67 trillion baht, standing for 60.83% of the GDP expanding for 9.3% from 2012. Three main sub-sectors in Thailand's service sector are transportation and communication, retail and wholesale, and banking, followed by real estates, public administration, education, and hotel and restaurant, respectively.

The sub-sector, particularly transportation and communication are crucial elements facilitating other sectors and provides efficiency for doing business in the country. Therefore, the 11th NESDP set up "the Strategy for Restructuring the Economy toward Quality Growth and Sustainability" to enhance infrastructure systems, reduce costs of logistics, and support green development. The 11th NESDP also focuses on "the shifted mode and the shifted fuel" and has two key measures, namely "to encourage development of multimodal transportation by advancing energy efficient forms of transportation" and "to promote the use of alternative clean sources of energy" in order to support the use of alternative energy in transportation toward sustainability.

Hence, the policy reform for eco-friendly and energy-saving in transportations by applying alternative energy will be addressed here in the IER Questionnaire.

2. Context of structural reforms undertaken

Thailand has applied the energy policy reform for eco-friendly and energy-saving activities in transportations, by using alternative energy (bio-fuel) for the transportation, particularly road transport, which is the highest share in Thai logistics and the most popular use in ASEAN. Likewise many countries, the road transport in Thailand relies heavily on fossil fuel, which has to be imported from abroad, and also gives negative impacts on the global climate change. Thai government therefore develops alternative energy policies to replace fossil fuel.

Under this structural reform the target of alternative energy use in transportation sector is 25 per cent in 2036 currently the ratio was 6.65 per cent in 2014 (DEDE, 2015).

Expected beneficiaries under the positive impacts on the policy reform are; (1) reducing costs of transportation; (2) reducing dependency on fossil fuel; (3) enhancing the national competitiveness in the world market; (4) increasing values of the agricultural (bio-fuel) products; and (5) alleviating environmental (pollution) problems, in line with the sustainable development.

3. Reform measures

At the policy level, there are five important policies related to energy conservation and eco-friendly transportation to promote alternative energy in Thailand.

Firstly, the Energy Conservation Promotion Act. B.E.2535 (1992) was enacted and then amended by the Energy Conservation Promotion Act (No.2), B.E.2550 (2007). The Energy Act designated the general scope, requirements and responsibilities for key energy consuming sectors. It also defines government institutional and financial arrangements, governments' responsibilities, and requirements for entities with in energy consuming sectors.

Secondly, Thailand introduced the 20-year Energy Efficiency Development Plan: the EEDP 2011-2030 to provide the national policy framework and guidelines on energy conservation implementation in the long term. Emphasis is placed on measures, which will bring about market transformation and energy consumers' behavioural change.

Thirdly, the Alternative Energy Development Plan: the AEDP 2012-2021 was formulated to promote usage of alternative energy consumption to 25 per cent of the total energy consumption by replacing fossil fuel (e.g. oil and natural gas), and reducing dependency on energy import within ten years.

Fourthly, Office of Transport and Traffic Policy and Planning (OTP), Ministry of Transport introduced the Plan for Developing Logistics and Transport (2011-2020), which included the improvement in transportation system and also the energy saving and environmental friendly measurements.

To create public participation, the AEDP 2012-2021 and the EEDP 2011-2030 set up policy consultation throughout Thailand in order to raise public awareness and to formulate the action plans for the local. However, the official process of the Regulatory Impact Assessment (RIA) in Thailand has not been applied for this case because the RIA is a new procedure for the country which needs to be more studied and applied.

At the implementation level; Measures of Technology Promotion and Development for Eco-friendly and Energy-saving in Transportations

Under the plans for energy efficiency, many projects promoted eco-friendly and energy-saving practices in transportations, such as non-motorized transport, mass transit operations (to alleviate traffic problems), or developing eco-vehicles such as bio-diesel, solar-cell, electrical energy. Thailand has implemented policies to promote the alternative energy in transport sector, replacing fossil fuel, by considering the balance between production and utilization, as follows:

- 1) Cancellation of 91-octane gasoline from 2013.
- 2) Public relations and provision of knowledge about clean and alternative energy to the general public.
- 3) Expansion of the numbers of petrol stations distributing Gasohol E10, E20, and E85 for increasing bio-fuel accessibility.

- 4) Provision of tax incentives; by reducing the excise tax to the car manufacturers, who produced the Flexible-fuel vehicles and Eco-cars.
- 5) Set up several measures for the ethanol industry in Thailand (e.g. the government's oil fund has kept gasohol prices lower than those of ULG 95 gasoline).
- 6) Continuation of the promotion on bio- energy and efficiency energy for transport sector.

4. Impact of reform(s)

After the reform, data from the DEDE showed that the bio-fuel consumption is accepted and supported extensively. The bio-diesel consumption in transportation rose up from 1.65 million litres per day (MLD) in 2010 to 2.55 MLD in the first five months of 2015. Moreover, Thailand expanded numbers of bio-diesel plants up to 10 plants in 2014 with their capacity of about 4.96 MLD. These could substitute the diesel consumption 1,054.92 million litre equivalent to 2.89 MLD.

For the ethanol consumption, it also rose up from 1.2 MLD in 2010 to 3.5 MLD in the first four month of 2015, due to increasing demands in Gasohol consumption. In 2014, numbers of ethanol plants increased to 22 plants, with their capacity of about 5.31 MLD.

As a result, Thailand's energy consumption in transport sector has gradually shifted to alternative fuel. Significantly, increase of the other alternative consumption would ensure Thailand for energy security, response to different demands, enhance more efficient use of energy, and raise awareness of consumer.

Indeed, the reform gives several impacts on economic, environmental and social sectors, namely;

Economically, domestic production for alternative energy reduces trade deficit on energy import, meanwhile increases energy security. It also helps farmers to stabilise the price gap when the crops prices are in the over-supply, and prevent them from the price falls. Besides, by-product of sugar production can be used as a material for ethanol production, thus both ethanol and sugar producers would be better-off by reducing cost of raw materials and waste management, respectively.

Environmentally, alternative energy is eco-friendly and has less negative effects than the fossil fuel.

Socially, employment creation along the process of ethanol production in rural areas would reduce cross-sector labour movement and also prevent rural-urban migration of labour forces, which causes population density in urban and other problems.

As the demand grows, the Thai government needs to have preventive measures to protect deforestation through 'land use and land-use change activities'.

5. Challenges and lessons learned

As the above mentioned, alternative energy from agricultural products plays a significant role in clean energy for transportation and help to reduce costs of logistics. However, the bio-fuel production relies mostly on agricultural production which often fluctuates in terms of market, pricing, climate and so on. Thus, there are challenges, needed to manage.

The challenges are (1) the national food and energy security, (2) imbalanced demands for land uses and land-use changes, (3) constant supply of bio-fuel, and (4) changing in consumption behaviour.

With respect to the above challenges, the line agencies (energy, agricultural, transportation, trading, and industrial sectors as well as the national planning agency) should set a strategic target for the shares of food and energy production. The discussion will also be very useful for the policy formulation for food and energy security and also protect overlapping in the implementation. Furthermore, the line agencies should consult with local people, farmers and other stakeholders to find appropriate measures, which will be benefit for the country.

6. Next steps

- 1) The line agencies should work closely together in order to find out the solution between for food and energy security, and then provide other supports for the alternative energy production and consumption.
- 2) The government should continuously implement the long term plans: the Energy Conservation Promotion Act (No.2), B.E.2550 (2007), the EEDP 2011-2030, the AEDP 2012-2021 and the Plan for Developing Logistics and Transport (2011-2020) to let them achieve the objectives.
- 3) The DEDE continuously promote energy efficiency activities and create public awareness for all kinds of eco-friendly transportation. Also it should more promote R&D in technology and innovation for alternative energies with academic sector.

UNITED STATES

1. Overview of the Services Economy in the United States

The U.S. economy today is characterized as a “service economy” because the majority of the working population is employed in the service sector. Since the 1950s, the service sector has been both the largest and the fastest growing component of the U.S. economy. Sixty-five years ago, the service sector accounted for about sixty percent of U.S. output and employment. Today, the service sector's share of the U.S. economy has risen to over 80 percent of U.S. GDP and accounts for approximately 80% of U.S. jobs, employing over 100 million Americans. Professional and business services, education and health services, retail trade services, and leisure and hospitality services are the largest service providing industries in the United States. Over 70 percent of all new U.S. private businesses are service companies.

Services also play an important role in U.S. international trade. During the 1960s and 1970s, service exports constituted just over 20 percent of U.S. exports. In 2015, services accounted for over 30 percent of the total exports with a value of \$716 billion.

In 2011, President Obama called on Federal agencies to undertake an unprecedented government-wide regulatory review to identify rules on the books with outdated requirements or unjustified costs. Since the release of Executive Order 13563 in 2011, Federal agencies have been continually identifying outdated and duplicative regulations and have taken action to modify or eliminate them where possible. As of March 2016, the regulatory lookback effort has achieved an estimated \$28 billion in net 5-year savings. Moreover, these efforts significantly benefit states, local and tribal governments, businesses, and the American people by making all levels of government more efficient and effective. The Office of Information and Regulatory Affairs, housed in the Executive Office of the President, is the central authority for the review of regulations.

The regulation of the services industry varies by sector. Several services sectors are regulated at the state level. Some services sectors in the United States are self-regulated, with standard setting bodies and other such organizations monitoring the sectors' adherence to their own standards.

2. Context of structural reforms undertaken

- a. *What specific services sector structural reforms are you addressing in this questionnaire?*
- b. *Why this reform was necessary?*

-

3. Reform measures

The U.S. Department of Transportation (DOT) oversees policies and programs that contribute to providing fast, safe, efficient, and convenient transportation at the lowest cost consistent with domestic objectives such as the general welfare, economic growth and stability, and security of the United States, as well as the efficient use and conservation of natural resources.

Because of DOT's extensive experience with environmentally-responsible infrastructure planning and development through its Federal Aviation, Highway, Railroad, Transit, and Maritime Administrations, it is one of the co-leaders of the Federal government's Cross-Agency Priority Goal for Infrastructure Permitting Modernization.

As part of this effort, DOT utilizes the Permitting Dashboard, which is an online tool for Federal government agencies, project developers, and interested members of the public to track the Federal government's permitting and review process for large or complex infrastructure projects. This Permitting Dashboard is one element of a larger, government-wide effort to streamline the Federal permitting and review process while increasing transparency, in addition to improving environmental and community outcomes. This streamlining of Federal permitting and review processes is a significant and positive reform.

4. Impact of reform(s)

- a. Quantitative and qualitative (including anecdotal) *information to demonstrate the impact the reform(s) had on your economy, including flow-on effects to other sectors/the wider economy, unexpected consequences (both positive and negative)*
 - a. This Dashboard will increase transparency of permitting and review processes to the public.
 - b. It will shorten review timelines by encouraging early coordination and synchronization of agency review schedules, which has, historically, been one of the most significant inefficiencies in these processes.
 - c. It will provide data that government agencies can use to improve processes.
 - d. It will track improved environmental and community outcomes, which will help to highlight the important role that these processes play in safeguarding these resources.
- b. What effect has this reform(s) had on global value chains? *(if relevant/possible; response can be anecdotal if necessary)*
 - a. Though the United States does not yet know how the Dashboard will improve permitting and review processes (through transparency), it is anticipated that these reform efforts will positively impact the quality, efficiency, and duration of these processes.
 - b. When permitting and review processes linked to major transportation infrastructure development or redevelopment projects take too long or, worse, do

not follow a steady continuum of activity from start to end, project developers, private developers, and communities can suffer economically.

- c. The transparency and process improvements that the Dashboard will enable are expected to have positive economic benefits.

5. Challenges and lessons learned

Creating the Permitting Dashboard has been a relatively smooth process. That said, it was critical early in the process to incorporate opinions and feedback from a wide range of stakeholders.

6. Next steps

No next steps are envisioned at the present time.

VIET NAM

1. General overview

The services sector has retained importance in Viet Nam's economy, despite different pattern of growth in 2000-2006 and 2007-2014. During 2000-2006, services sector growth has been robust, averaging at 7.18 per cent per annum. Due to relatively slower growth compared to overall GDP, the services sector witnessed smaller share in GDP. The share of services sector in GDP fell from 38.73 per cent in 2000 to 38.06 per cent in 2006. Meanwhile, the share of services sector in total employment went up to 25.6 per cent in 2006 from 21.8 per cent in 2000. Labour productivity¹ in services sector increased on average by 8.2 per cent per annum during 2000-2006.

Over the years from 2007 to 2014, Viet Nam's economy experienced slower growth, due to more modest growth momentum in all three sectors, i.e. agriculture-forestry-fishery, industry-construction, and services. Still, the decrease of GDP growth in services sector was significantly smaller compared to other sectors. On average, GDP growth of services sector reached 6.88 per cent per annum during 2007-2014. During this period, the share of services in total employment rose from 28.2 per cent to 32.3 per cent. Labour productivity² in services sector went up on average by 11.5 per cent in the same period.

Continuous growth of the services sector since 2000 was driven by series of reforms in Viet Nam. *First*, the legal framework was gradually improved towards facilitating private business activities in general and private provision of services in particular. Specifically, the common Investment Law and unified Enterprise Law were issued in 2005 to establish framework for more equal regulatory treatment over business and investment activities, irrespective of the ownership form. In 2014, both of these Laws were amended again, aiming to realize "full freedom of doing business" for the business entities, unless there are prohibitions or conditions imposed by the State. *Second*, Viet Nam equitized a number of State-owned enterprises since early 2000. It should be noted that many of the equitized enterprises were dominant firms or monopoly in key services areas such as distribution, telecommunication, banking, etc. *Third*, the competition policy was improved and enforced more effectively. In various sectors, such as telecommunication, post, financial services, etc. the competition between State-owned services providers and private ones were gradually nurtured and protected. *Finally*, Viet Nam actively participated in a number of free trade agreements (FTAs), which both opened up the opportunities for services and incorporated liberalization of the services sector. The first important arrangement was Viet Nam -US bilateral trade agreement – signed in 2000, in effect since 2001. Viet Nam has committed to open market to 11 services sectors, or 110 subsectors out of 155 subsectors according to the WTO's services classification. In general, regarding the committed services sectors, Viet Nam has few restrictions related to Mode 1 and Mode 2, a lot more restrictions related to Mode 3, and almost no commitment related to Mode 4.

It seems that the reforms of services sector were more rapid in 2000-2006 than in 2007-2015. During 2000-2006, Viet Nam just recovered from the Asian financial-monetary crisis and promoted radical reforms of the economy, including the services sector. Such reforms were also aimed to prepare for Viet Nam's accession to the World Trade

¹ At current prices.

² At current prices.

Organization in 2007. Since 2007, however, several factors have slowed down the pace of services sector reforms in Viet Nam. These factors include: (i) adverse and prolonged impacts of the global financial crisis and economic recession; (ii) Viet Nam's prioritization of macroeconomic stabilization, following high inflation in 2008 and 2011; and (iii) high commitment of services liberalization under WTO, which makes services commitments under various FTAs less meaningful.

2. Context of structural reforms undertaken

- a. What specific services sector structural reforms are you addressing in this questionnaire?

This response focuses on structural reforms over the telecommunication sector in Viet Nam.

- b. Why this reform was necessary?

The structural reforms of Viet Nam's telecommunication sector were aimed to: (i) enhance competition and productivity in the market; (ii) mobilize private investment in the sector; and (iii) reduce service fee for users, thereby making telecommunication services more accessible to the people.

3. Reform measures

Reforms of the telecommunication sector include: (i) horizontal measures which affect all sectors in Viet Nam's economy; and (ii) specific measures on the telecommunication sector in Viet Nam. Specific structural reform measures in the telecommunication sector since 2000 include: (i) relaxation of entry for private providers, including foreign ones, in the telecommunication market; (ii) equitization of State-owned telecommunication providers; and (iii) enhancement of competition in the telecommunication market via regulatory changes and enforcement of competition law.

Reforming Viet Nam's telecommunication sector was a long process. The Government Decree 55/2001/ND-CP issued in 2001 excludes Internet services from the state-dominating policy. Specifically, ISP business were open to the private sector and foreign investors, though the provision of Internet exchange was reserved to state-owned operators or operators where the state holds majority shares.

Meanwhile, foreign investment in Viet Nam's telecommunications sector was first introduced in the form of a Business Cooperation Contract (BCC) scheme. However, the foreign partner does not have an equity claim in the assets and does not have any managerial control on the project. The first BCC scheme was established in 1988. Till 2009, there remained a number of BCCs in operation. Relaxation in foreign participation took a significant step forward when Viet Nam ratified the Viet Nam -USA BTA. The Viet Nam -USA BTA includes not only Viet Nam's commitments Viet Nam and obligations in the telecommunications sector but also a roadmap and blueprints for future reform. The BTA requires Viet Nam, amongst other things, to adopt the regulatory principles set out in the WTO Reference Paper on Basic Telecommunications so as to establish a transparent and pro-competitive regulatory regime, with the regime maintaining an arm's length with operators.

A second reform milestone was Viet Nam's WTO accession in 2007. As part of its accession commitments, Viet Nam in essence offered to all WTO members, on a most-favoured nation basis, more favourable market access conditions than those offered to US companies in the BTA. This allowed joint ventures with foreign partners to provide

telecommunications services related to network infrastructure such as telephone services, packet-switched data transmission services, circuit-switched data transmission services, telex services, telegraph services, facsimile services and private leased circuit services.

In terms of domestic regulations, the Law on Telecommunication in 2009 and the Competition Law in 2004 have delivered the key reforms of competition in the telecommunication sector. The Law on Telecommunications in essence establishes a framework for telecommunications regulations, with many specific regulatory items to be developed by implementation rules and regulations in the future. Relaxation of entry to the telecommunication, as per Viet Nam's commitment upon joining WTO, was also incorporated in the Law. The Law also provides for a regulatory authority to be established and in charge of regulating competition issues in the telecommunications sector and will act as a dispute settlement body for interconnection and infrastructure sharing disputes. Meanwhile, the Competition Law and its Implementation Decree No. 116/2005/ND-CP classify various telecommunication providers in Viet Nam as those with significant market power. Therefore, such providers must submit any proposal to change the retail tariff to the Ministry of Information and Telecommunication (MIC) before issuing the tariff. Moreover, 'basic' and 'important' interconnection charges that would greatly affect the telecommunications market are decided by the MIC.

The Law on Legal Normative Documents, which incorporated substances of good regulatory practices (such as regulatory impact assessment, public consultation), was only issued in 2008. As such, one could hardly expect to collect regulatory impact assessment for related regulations of telecommunication sector. Nor were there any attempts to consult stakeholders other than the Government agencies and key State-owned providers in the sector. Since 2009, however, the regulations that ignited reforms in telecommunications were widely consulted and incorporate regulatory impact assessment. Nonetheless, the impact assessment was rather simple and largely qualitative in manner.

4. Impact of reform(s)

- a. Quantitative and qualitative (including anecdotal) information to demonstrate the impact the reform(s) had on your economy, including flow-on effects to other sectors/the wider economy, unexpected consequences (both positive and negative)

The reforms led to significant growth of telecommunication. Gross revenues³ of telecommunication sector rose by almost 6.3 times over the period 2007-2015, or on average by 25.8 per cent per annum. GDP of the sector⁴ increased by almost 7.0 per cent per annum on average in the same period. In addition, Viet Nam has since moved from an under-developed economy to join many of its developed peers in the region in fixed-line availability. Mobile services in Viet Nam again shows a jump-start style of network expansion, surpassing both Indonesia and the Philippines during 2007-08. The number of mobile subscribers increased by roughly 13.1 per cent per annum during 2007-2015. In the same period, the number of ADSL subscribers rose by 24.9 per cent on average in the same period.

- b. What effect has this reform(s) had on global value chains? (if relevant/possible; response can be anecdotal if necessary)

The reforms contributed to improve the efficiency of various enterprises in Viet Nam. With improved quality and availability of telecommunication services, the enterprises in

³ At current prices.

⁴ At comparable prices.

Viet Nam could contact and/or coordinate with their customers and network of suppliers at enjoyably smaller costs. This enhances the competitiveness of Vietnamese enterprises, and ensure that they could join the global value chains in a timely manner.

5. Challenges and lessons learned

Reforms of the telecommunication sector in Viet Nam encountered several challenges, particularly before 2007 (the milestone of major reforms). *First*, increasing competition and private participation in the sector encountered difficulties, due to: (i) previous dominance of the State-owned providers; (ii) inadequate institutional and technical capacity of competition authority to address competition cases in the sector; and (iii) ambiguity in the classification of telecommunication as public services, given that rural access to such services was also a priority⁵. *Second*, improving regulatory institutions and processes were seen as critical, but entailed ample technical challenges. Third, restructuring and reforming the dominant carriers are no easy task, as Viet Nam was observed in the generally slow process of reforming State-owned enterprises in Viet Nam.

Some key lessons could be drawn from the reforms of telecommunication sector as follows:

- The sizeable benefits from reforming telecommunication sector shows that such reforms were simply irreversible;
- Enhancing competition and/or contestability of telecommunication helps maximize the value for consumers;
- Devising a consistent and feasible roadmap for reforming telecommunication sector plays an essential role;
- Leveraging the external pressures can be beneficial in sustaining the momentum for reforming telecommunication sector.

6. Next steps

The reforms of telecommunication sector will continue till 2020, in line with the Master Plan for Developing Telecommunication Sector until 2020. Key measures included in this Master Plan are:

- To improve regulations on management of licensing, tariff, service quality, connection, resources, telecommunication infrastructure;
- To study the mechanism for investment and procurement in telecommunication sector to avoid excessive reliance on a single supplier;
- To restructure the telecommunication market in terms of both service and suppliers, in line with the overall reforms of State-owned enterprises in the sector; to improve capacity to identify and address competition cases in the sector.
- To further encourage and attract foreign investment in the telecommunication sector.

⁵ And the private sector was reluctant to supply services in these areas.



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