2 The Singapore Economy

Navigating Through The Current Economic Weakness

The Singapore economy is currently in a cyclical downturn, posting marginal growth in Q2 before a sharp contraction in Q3. A step-down in modern services activity weighed on growth in Q2, but there were offsetting pockets of strength in the trade-related and domestic-oriented clusters. The subsequent dissipation of support from the trade-related sectors in Q3 tipped the domestic economy into contraction, even as activity in modern services saw a slight pickup.

In the coming quarters, the Singapore economy should see some recovery alongside the mild firming in global growth. A bottoming-out in financial intermediation and firm demand for ICT services should lend support to the modern services cluster, while public spending on capacity expansion in healthcare and transportation services will anchor domestic-oriented activities. There are emerging signs that the weakness in trade-related industries could be reaching a trough, but the extent of upturn will be capped by lingering structural factors. As a highly trade-dependent economy, Singapore will be impacted by changes in global trade elasticities, which reflect in part the ongoing transformation of global value chains. Against this backdrop, Singapore's GDP growth is projected to come in at the lower end of the 1–2% forecast range for 2016, and only slightly higher in 2017.

Looking further ahead, Singapore has to continually adapt to rapid shifts in global economic trends. Over the last decade, rising affluence, ageing populations, and faster adoption and diffusion of technology have facilitated the robust growth of firms in frontier IT, healthcare and lifestyle industries. In contrast, firms that have faced greater difficulties in adapting to technological disruption or changing demand patterns have experienced downward pressure on their profit margins. Alongside these developments, certain high-performing global corporates have had a disproportionate influence on individual countries' broader economic outturns. The complementary strategies of anchoring such firms domestically, to exploit Singapore's existing comparative advantage in niche production and modern services, while at the same time leveraging on structural uptrends in regional consumption demand will, therefore, continue to underpin the economy's outward orientation over the medium term.

2.1 Recent Economic Developments

Persistent Sluggishness

The Singapore economy has weakened over the past six months. Growth in Q2, while still sequentially positive, was lacklustre, reflecting a deterioration in modern services, although there were some offsets from the trade-related and domestic-oriented sectors. The following quarter saw overall GDP slipping into negative territory, with manufacturing witnessing a sharp retraction and the domestic-oriented cluster losing growth momentum. However, there were pockets of strength in the economy, such as the mild turnaround in modern services, retail and tourism.

Economic activity took a step down during Q2–Q3 2016.

The domestic economy has slowed discernibly since the last *Review*. Growth came in largely flat in Q2 before deteriorating in Q3. On average, GDP contracted by 2.0% q-o-q SAAR basis in the last half year, a marked step-down from the average 3.2% growth in the preceding two quarters. (Chart 2.1)

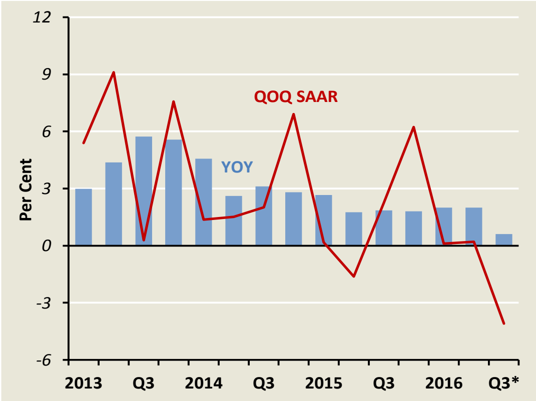
The downshift was broad-based across the economy, with modern services and the trade-related clusters dipping into negative growth in Q2 and Q3, respectively. While the domestic-oriented industries managed to secure positive growth over these two quarters, the momentum was much weaker compared to the previous six months.

The downturn in modern services was the main drag on growth in Q2 ...

In Q2 2016, the Singapore economy grew by a marginal 0.2% on a q-o-q SAAR basis, largely unchanged from the 0.1% in Q1. This muted outcome was due, in part, to weakness in modern services. In particular, the financial services sector declined by 11.2% q-o-q SAAR in Q2, amid subdued demand for intermediation services, both domestically and in the region. ACU non-bank loans extended to East Asia contracted by 1.5% q-o-q during the quarter, due to sluggish trade financing as regional trade flows ebbed. Concomitantly, an environment of heightened market uncertainties and lower projected asset returns also weighed on securities trading, with market turnover value falling by 12.8% q-o-q.

Amid profitability concerns and subdued sentiment, businesses were generally more cautious in their spending. The business services sector contracted by 3.6% q-o-q SAAR in Q2, as demand for professional

Chart 2.1
Singapore's GDP Growth



* *Advance Estimates.*

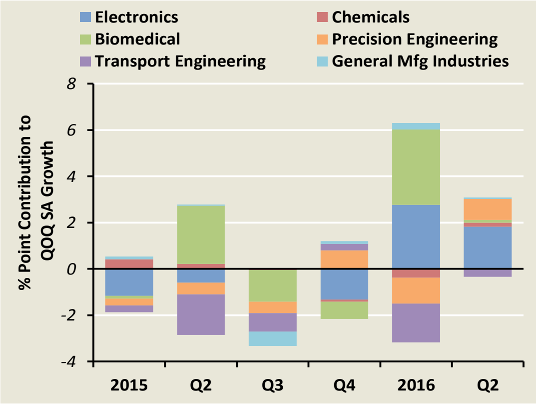
services, such as accounting, head office functions and architectural & engineering services, waned. The information & communications sector was one of the few bright spots, with the telecommunications segment posting strong growth as a result of increased demand for mobile data, broadband and enterprise-related services.

… but there were pockets of strength in the trade-related sectors …

In contrast, the trade-related sectors registered modest gains in Q2, anchored by strength in particular segments, such as sea transport, wholesale trade and electronics manufacturing.

On the whole, the manufacturing sector lost momentum in Q2, with growth easing to 2.1% q-o-q SAAR after an 18.8% surge in the quarter before. This mainly emanated from a sharp slowdown in the biomedical cluster, which resulted from the moderation in pharmaceuticals production growth from 21.0% q-o-q SA in Q1 to 0.9% in Q2. (Chart 2.2)

Chart 2.2
Industrial Production



In comparison, the electronics and precision engineering clusters performed well. More specifically, the semiconductor segment registered its second consecutive quarter of double-digit sequential gains, as some firms benefited from an uptick in demand in China's communications market. The precision engineering cluster also recorded a turnaround in Q2, supported by increased demand for semiconductor-related equipment.

At the same time, growth in the transport & storage industry accelerated to 6.7% q-o-q SAAR in Q2, as a result of a 13.8% q-o-q SA surge in oil cargo handled through Singapore's ports. The wholesale trade industry also recovered somewhat in Q2 as foreign wholesale trade rose by 0.3% q-o-q SA after two consecutive quarters of decline, led by a recovery in telecommunications and computers.

… as well as in the domestic-oriented industries.

The domestic-oriented sector remained relatively stable in Q2. In the construction sector, non-residential public works on transport infrastructure and new buildings were the main driver of growth, offsetting weakness in private sector construction activity. Meanwhile, retail sales (excluding motor vehicles) shrank for the third consecutive quarter, by 1.4% q-o-q SA, as consumers remained cautious in their spending on big-ticket items, such as watches and jewellery.

Growth in visitor arrivals was flat in Q2, following a fall in tourist numbers from the key markets of China and Indonesia. Consequently, the accommodation & food services sector contracted by 4.0% q-o-q SAAR, as average hotel room rates fell and food & beverage services saw broad-based declines.

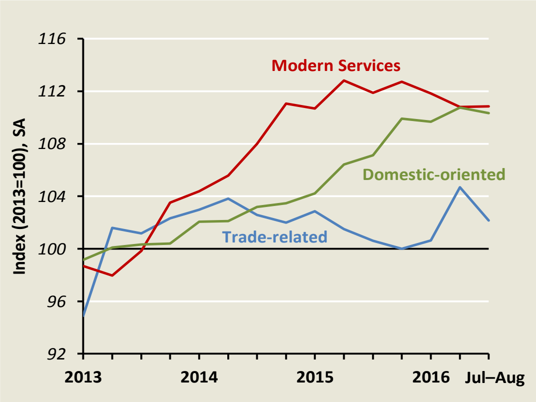
A contraction in the trade-related sectors weighed on the Singapore economy in Q3.

The domestic economy slipped further in Q3, with the *Advance Estimates* pointing to a 4.1% q-o-q SAAR contraction. EPG's Economic Activity Index (EAI) indicated that the downturn was largely concentrated in the trade-related sectors, even as activity in the domestic-oriented sectors saw some moderation. (Chart 2.3) However, modern services managed a marginal turnaround after a disappointing performance earlier in the year.

The trade-related cluster experienced a broad-based retraction across both manufacturing and trade-related services, as previous segments of strength faded in early Q3. Industrial production fell by 5.0% sequentially in Jul–Aug, weighed down largely by further weakness in the pharmaceuticals segment and marine & offshore engineering (M&OE). In particular, domestic M&OE firms are facing their third consecutive quarter of double-digit sequential decline as persistently low oil prices dampened demand for exploration and production equipment, leading to project deferments, cancellations, and a dearth of new orders. Furthermore, support from the semiconductor segment waned, with output declining by 0.2% q-o-q SA in Jul–Aug, a reversal from the 10.5% growth in the preceding quarter.

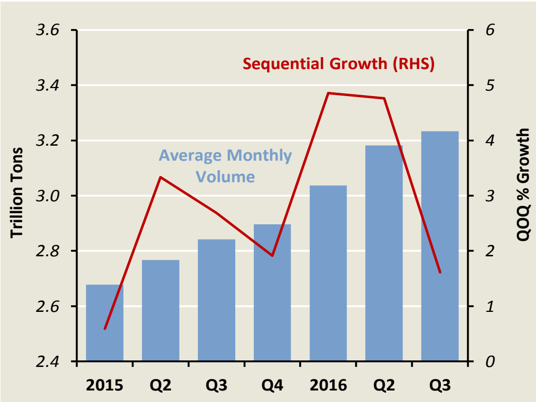
The wholesale and transport & storage industries also registered subdued outturns on the back of lacklustre oil and regional trade. Specifically, oil trade, which has been a key driver of wholesale trade performance since H2 2014, showed signs of softening in Q3. There has been anecdotal evidence that the demand for crude oil inputs by Asian refiners moderated in early Q3 as refining margins came under pressure, partly from an oversupply of refined fuels. There was also some easing off in the extent of China's oil stockpiling, as the growth of China's crude oil imports slowed to 1.6% q-o-q in Q3, from 4.8% in the preceding quarter. (Chart 2.4) Meanwhile, sea

Chart 2.3
Economic Activity Index



Source: EPG, MAS estimates

Chart 2.4
China's Crude Oil Imports



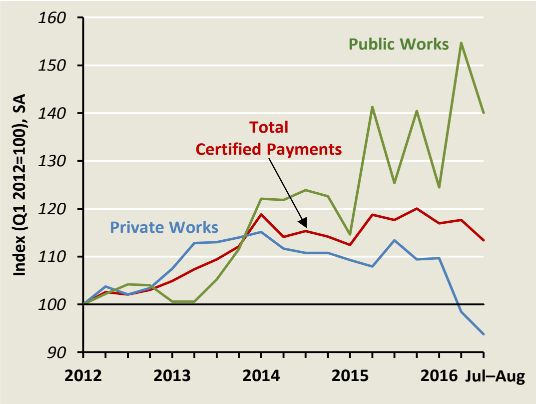
Source: China Customs

cargo handled through Singapore's ports fell by 3.9% q-o-q SA in Q3, with declines in both general cargo and mineral oil cargo.

In addition, the domestic-oriented cluster lost momentum.

The domestic-oriented sectors slowed in Q3 in line with broad-based weakness in construction activity. (Chart 2.5) Certified payments from public sector construction registered a blip in the Jul–Aug period, in addition to a further decline in private construction. However, works on social infrastructure, such as the Thomson-East Coast Line and Sengkang General & Community Hospitals, is expected to continue apace.

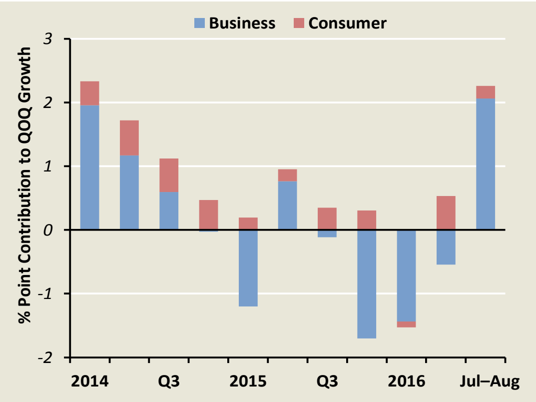
Chart 2.5
Certified Construction Payments



Source: EPG, MAS estimates

The tourism and retail industries, on the other hand, picked up in Q3. Following the sluggish performance in Q2, tourism-related segments rebounded in early Q3 and generated positive spillovers for the accommodation and food & beverage industries. Notably, the 4.5% m-o-m SA uptick in tourist arrivals in July reflected a surge in Chinese and ASEAN arrivals, by 40.4% and 11.4%, respectively. However, there was a slight pullback in August's visitor arrivals as Indonesia's tourist numbers fell sharply by 20.6% m-o-m SA. Overall retail sales volumes (excluding motor vehicles) also rose by an average of 1.0% m-o-m SA in Jul–Aug, with increased expenditures on mass market items, such as apparel and footwear, while spending on furniture and household equipment fell.

Chart 2.6
DBU Non-bank Loans



Modern services saw a slight recovery in Q3.

The modern services cluster grew in Q3 after two quarters of sequential contraction, as the drag from financial services largely dissipated. In particular, the weakness in financial intermediation activities showed tentative signs of bottoming out. DBU non-bank lending saw a relatively firm pickup in growth, averaging 1.1% m-o-m over Jul–Aug, led by a tentative recovery in business loans. (Chart 2.6)

Nonetheless, sentiment-sensitive activities, such as fund management and securities dealings, continued to weigh on the sector's incipient turnaround, amid an environment of increased risk aversion. Despite the global equity rally in early July, uncertainty over Asia's longer-term growth prospects, post-Brexit developments in Europe, and the impact of prospective US interest rate hikes, have led market participants to be more cautious.

2.2 Economic Outlook

Absence Of A Decisive Near-term Pickup

The relatively steady, but mediocre growth in external demand, is likely to continue over the near term. In particular, uneven global demand has been accompanied by a downshift in the relationship between trade and income, reflecting compositional changes in final expenditure of industrialised countries and ongoing restructuring of global value chains. The resulting weakness in global trade has clearly impacted Singapore, given its high trade dependency. In the short term, this has been further compounded by the exposure of the economy to particular underperforming sectors, such as semiconductors and transport services. The confluence of these factors and the associated product price declines have led to heightened pressure on firms' profit margins. The accompanying consolidation within pockets of trade-related industries will further weigh on the economy in the quarters ahead, and consequently, growth will largely be underpinned by activity in the modern services and domestic-oriented sectors. On balance, GDP growth is projected to come in at the lower end of the 1–2% forecast range in 2016, and only slightly higher in 2017.

Singapore's GDP growth is not expected to pick up significantly in the near term.

While the risk of a major global downturn has subsided somewhat, external demand will continue to be uneven across a number of Singapore's key export markets. In addition, growth in some trading partners, including the US, will be largely supported by domestic consumption, which tends to be less import-intensive than investment. Concomitantly, structural headwinds are expected to persist as the ongoing reconfiguration of global value chains and the investment down-cycle continue to restrain global trade flows.

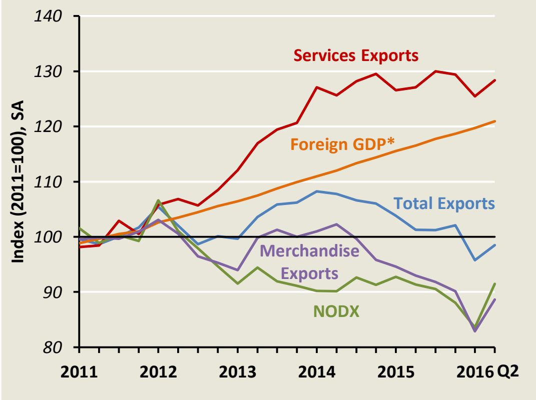
As one of the most trade-dependent economies in the world, Singapore is inevitably impacted by subdued external demand and global trade. Growth in the trade-related industries is likely to be constrained, even though there are signs of a bottoming-out in particular segments.

Instead, support for growth will come largely from the modern services and domestic-oriented industries. In financial services, the general dissipation of weakness in intermediation activity should help shore up the sector, which had slipped in the past two quarters. Sustained government spending on ICT initiatives and a stream of public infrastructure projects alongside robust demand for essential services, such as healthcare, should also provide some support to overall domestic growth. All in, GDP growth is projected to come in at the lower end of the 1–2% forecast range for 2016, and only slightly higher in 2017.

Trade-related activities have been lacklustre in recent years ...

After the strong rebound in 2010–11 that followed the GFC, Singapore's trade and trade-related industries have been generally weak. Chart 2.7 plots the various categories of Singapore's exports against the trade-weighted GDP of major trading partners. Clearly, merchandise exports have been on a downswing since 2012, largely due to a fall in NODX, despite steady growth in foreign GDP. In comparison, services exports saw a sharp rise in 2011–14, before levelling off somewhat in 2015, weighed down primarily by transport and travel-related activities.

Chart 2.7
Singapore's Exports and Foreign GDP



* Weighted by shares in Singapore's NODX.
Source: EPG, MAS estimates

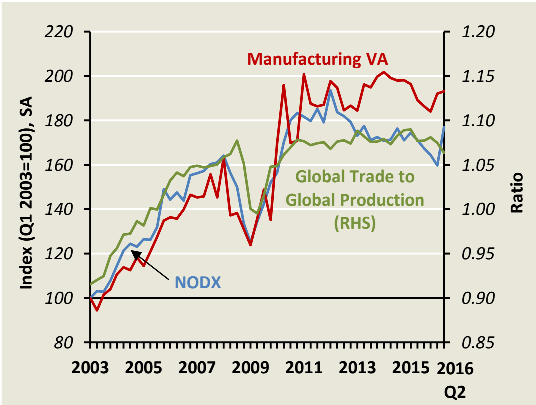
... consistent with the decline in the trade intensity of global production.

Previous issues of the *Review* had identified some of the reasons behind the protracted sluggishness in Singapore's goods exports, including the ongoing servicisation within the manufacturing sector, particularly amongst IT-related producers, and the prolonged slump in global investment growth.

Another key factor has been the changing nature of growth in some major trading partners. In the aftermath of the GFC, growth in the US and China has been increasingly driven by the private consumption of goods and services. As compared to investment, the production of consumption goods and services are generally less amenable to global value chains or the fragmentation of production across countries. Moreover, China is increasingly producing intermediate inputs on its own, such as semiconductors, as its know-how and manufacturing sophistication advances, which mean less demand for intermediate inputs sourced through regional trade. (See Chapter 1.)

These dynamics are reflected in the changing relationship between global trade and economic activity. As one of the most trade-dependent economies in the world, Singapore will be more adversely affected by a lower trade intensity of global production than economies which have larger domestic-oriented sectors. Indeed, Chart 2.8 shows that Singapore's manufacturing value added (VA) and NODX closely track the trade intensity of global production, proxied here by the ratio of world merchandise trade to world industrial production.

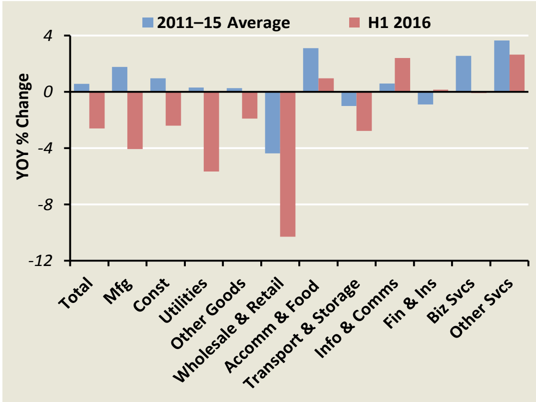
Chart 2.8
Trade Intensity of Global Growth, Singapore's NODX and Manufacturing VA



Source: CPB and EPG, MAS estimates

To shed further light on the factors that underpin Singapore's NODX performance, EPG estimated an export equation with global chip sales, S$REER (deflated by the CPI) and global trade intensity as explanatory variables. The results show that after controlling for the appreciation of the S$REER, which had the expected negative, but relatively small, effect on Singapore's NODX, the other explanatory variables jointly accounted for almost all of the weakness in NODX. Thus, structural changes in global trade flows, as seen in the levelling off of the trade intensity of global production, seem to have had a significant impact on Singapore's trade and manufacturing performance in recent years.

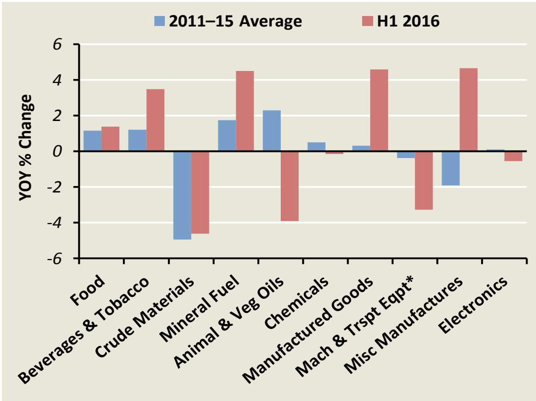
Chart 2.9
Key Industry GDP Deflators



Profit margins in the trade-related industries have been hit by a sharp fall in product prices.

Against this backdrop, profit margins of firms operating in Singapore have taken a hit. A comparison of the GDP deflators by key industries in H1 2016 points to steep declines in the implicit product prices facing the trade-related industries of manufacturing, wholesale and transport & storage. (Chart 2.9) Delving further into Singapore's terms of trade performance by key export products suggests that the deterioration came mainly from primary commodities (crude materials; animal & vegetable oils), machinery & transport equipment (such as oil rigs and ships), as well as, to a lesser extent, electronics. (Chart 2.10) In turn, the margin squeeze has forced firms to consolidate or shift towards higher-value activities. For instance, in the domestic semiconductor manufacturing industry, some firms have switched to the production of higher-margin products such as 3D NAND (which are used in mobile devices and solid state drives). Other firms have placed growing emphasis on services, such as chip design, delivery of IT services, and innovative solutions for corporates.

Chart 2.10
Terms of Trade for Key Export Products



Source: EPG, MAS estimates
* Excludes electronics.

The underperforming segments in global markets continue to dampen Singapore's export performance.

Singapore's exposure to underperforming segments in global markets has also dampened its export performance.

In 2015, worldwide merchandise trade contracted markedly by 13.6% in value terms. The decline was particularly pronounced in the petroleum-related segments, with trade in crude and processed petroleum products plunging by 45.8% and 42.8%, respectively, following the collapse in oil prices. Pockets within the machinery and transport equipment segment also fared poorly, including exports of semiconductors, which contracted by 9.6% on the back of lacklustre end demand for personal computers and consumer electronics.

The 10 worst-performing product categories at the SITC 3-digit level, as defined by their contribution to the fall in global merchandise trade in 2015, together represented approximately a quarter of the world's exports. For Singapore, however, they accounted for 39% of total exports, a substantially higher proportion. This mainly reflected the prominence of semiconductors and processed petroleum products in Singapore's export basket. (Chart 2.11)

Likewise on the services front, Singapore had to contend with a relatively larger exposure to struggling industries. Global trade in commercial services fell by 6.1% in 2015, its first year of contraction following robust growth after the GFC. While the weakness was broad-based across all categories of services, the transport, business services and travel segments accounted for the bulk of the decline. Notably, global transport services shrank by 10.1% in 2015, amid overcapacity and subdued demand. The prices for sea shipment of dry bulk cargo has since tumbled to record lows. Transport services accounted for 34% of Singapore's commercial services exports, significantly higher than the world average of 18%. (Chart 2.12)

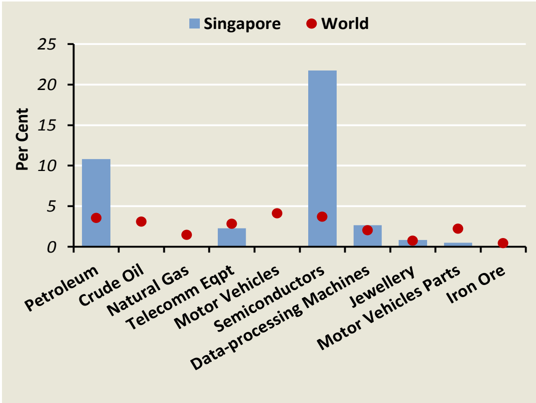
In recent months, there have been incipient signs that the weakness in some of these globally underperforming markets could be reaching a trough, with modest improvements seen in semiconductor prices and freight rates. (Chart 2.13) Nevertheless, the recovery is expected to be hesitant and activity in Singapore's trade-related sectors could remain muted in the coming year.

Growth will largely be anchored by the modern services and domestic-oriented clusters.

Most of the growth momentum next year will likely come from modern services and the domestic-oriented sectors instead.

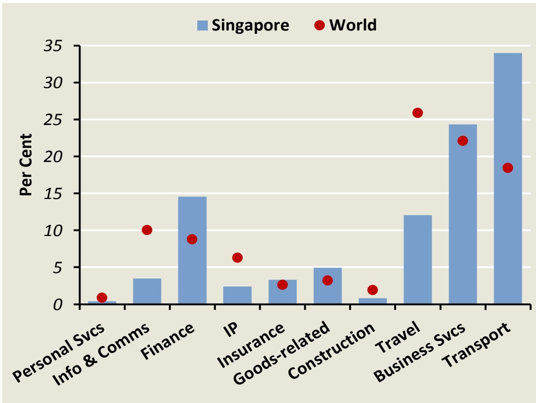
Within the modern services cluster, the drag from financial intermediation activity has shown signs of dissipating. The gradual normalisation of global interest rates, alongside structural growth drivers, such as the rise in regional affluence, will help to bolster fund

Chart 2.11
Shares of the 10 Worst-performing Products in Total Merchandise Exports, 2015



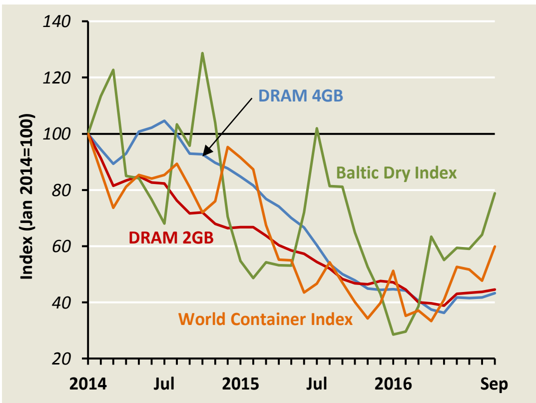
Source: UN Comtrade and EPG, MAS estimates

Chart 2.12
Shares in Commercial Services Exports, 2015



Source: WTO and EPG, MAS estimates

Chart 2.13
Selected Semiconductor Prices and Freight Rates



Source: Bloomberg

management activity. Meanwhile, demand for information & communications services is expected to remain firm, supported in part by increasing ICT adoption among both domestic and regional corporates, as well as the step-up in government expenditure on ICT infrastructure initiatives.

At the same time, domestic-oriented sectors are expected to remain a stable source of growth. Government plans to enhance healthcare and education services will help to meet pent-up demand for essential services, while a steady stream of public infrastructure projects will mitigate continued softness in the private real estate market. (Chart 2.14) Indeed, ongoing upgrades to social services and transport facilities, including the Sengkang General & Community Hospitals, East Coast Integrated Depot and Thomson-East Coast Line, will help to sustain construction activity. However, tender prices for new projects had started to decline from 2014, possibly indicating increased competition among firms during the bidding process. (Chart 2.15) In addition, unit labour cost (ULC) in this sector have been on the rise, putting further pressure on profit margins.

The business outlook remains generally negative, especially among SMEs.

More generally, business sentiment has been lacklustre. In DOS' latest Business Expectations of Services Sector Survey, a net weighted 6% of services firms expect less favourable conditions for H2 2016 (relative to H1). In particular, corporates in the real estate segment and trade-related sectors of wholesale and transport & storage reported a significant deterioration in their industry outlook. This outweighed optimistic responses from firms in the accommodation and food & beverage services industries, which anticipate an uptick in demand due to the year-end festive season.

Meanwhile, in EDB's survey of manufacturers' sentiment, mildly positive responses from the electronics and precision engineering clusters were offset somewhat by pessimism among transport engineering and chemicals firms. Manufacturers cited lacklustre M&OE equipment orders and continued worries over petrochemical refining margins as factors underpinning their negative outlook.

While there was no evidence of widespread consolidation among firms, the subdued business environment could be taking a significant toll on smaller

Chart 2.14
Construction Contracts Awarded

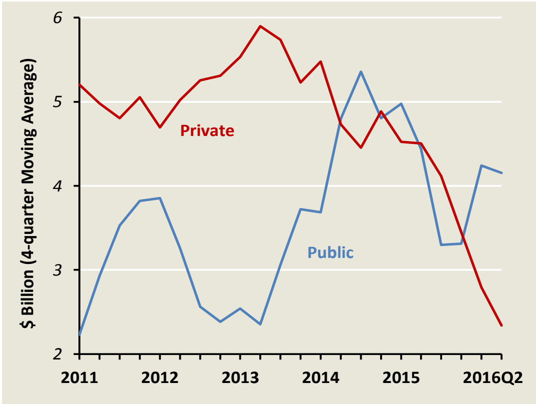
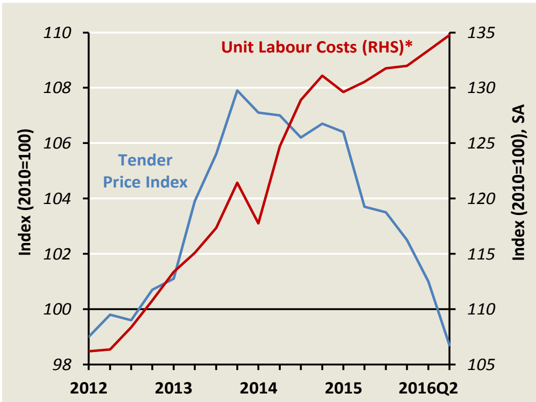


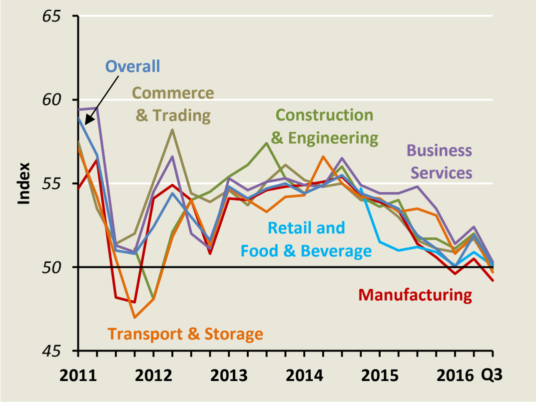
Chart 2.15
Tender Prices and ULC in Construction



* EPG, MAS estimates.

domestic corporates. The quarterly SME business survey, jointly released in September by the Singapore Business Federation and DP Information Group, indicated that SMEs had downgraded their growth prospects for Q4 2016 – Q1 2017. (Chart 2.16) The overall index dropped to 50.2 from 51.9 in the preceding quarter, while firms' profit expectations fell to their lowest level since the GFC, in part due to tepid demand and an increasingly challenging operating environment. Notably, the survey showed that the pullback in SMEs' expectations for hiring, capital investment and capacity utilisation, appears to be broad-based across both manufacturing and services industries. Moreover, property market indicators from URA corroborate the decline in capacity utilisation among businesses, with vacancy rates for both retail and industrial space showing distinct uptrends in recent quarters. (Chart 2.17)

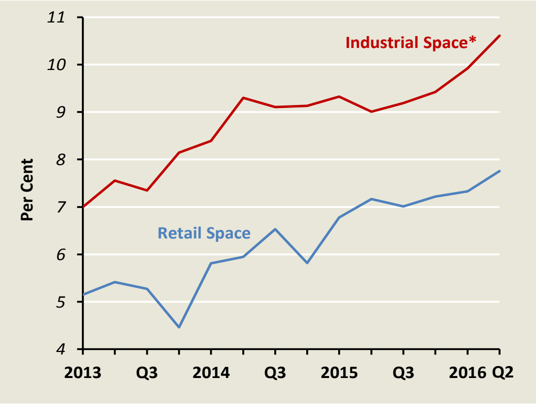
Chart 2.16
Two-quarter Ahead SME Business Outlook



Source: DP Information Group and Singapore Business Federation

Note: A score below 50 represents expectations of a worsening in performance over the next two quarters relative to current-quarter outturns.

Chart 2.17
Vacancy Rates for
Retail and Industrial Space



* EPG, MAS estimates.

2.3 Searching For Growth Drivers

Global Value Creation & Destruction: Implications For Singapore

The accelerated pace of technological advancement and diffusion in recent decades has led to significant adjustments in global trade and business activity. Against this backdrop, industries and firms that have tapped into the driving forces of digitisation, healthcare and lifestyle demand, have grown strongly, while those whose businesses have been eroded by digitisation or are tied to the global commodity cycle have faced intense pressures on profitability. Notwithstanding the near-term challenges, the Singapore economy is well-positioned to take advantage of the opportunities presented by these developments through strengthening the local presence of global high-performing corporates, augmenting niche production and the provision of modern services that have had a head start, and aligning business capabilities to meet domestic and regional consumption demand.

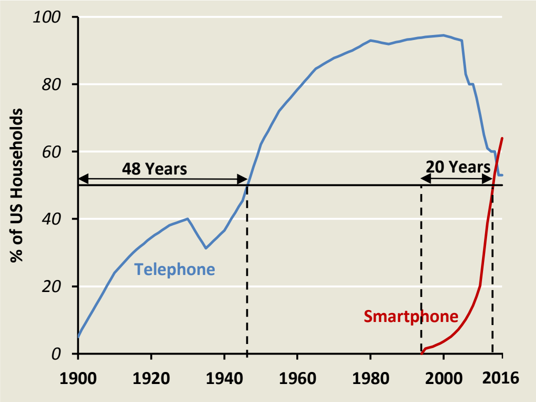
Global value creation and destruction has intensified, presenting growth opportunities for small open economies, such as Singapore.

The acceleration of technological change and its adoption has intensified the pace of global value creation and destruction in recent decades. For example, while it took about 48 years for half of all US households to own a telephone, it only took 20 years for smartphones to reach the same extent of penetration.[1] (Chart 2.18) Technological advancements have also been accompanied by larger shifts in the market shares of global goods exports. As shown in Chart 2.19, prior to 2010, most product categories saw narrow shifts in export shares. In comparison, the changes have become more pronounced after 2010 (red line), with a higher proportion of products experiencing a larger than 30% increase or decrease in their market shares.

This has created new winners and losers in trade …

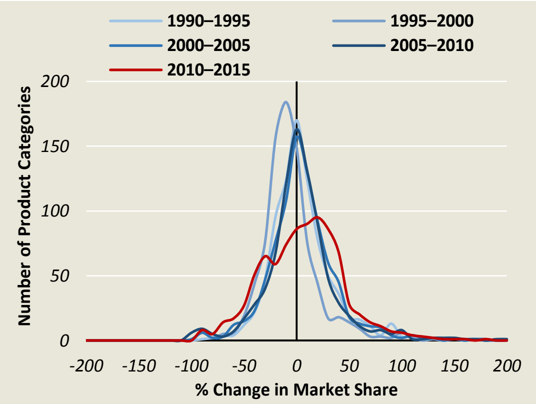
The once high-performing global industries, such as container shipping, have been weak since 2015. The shares of commodities and primary manufactures in global exports have also declined as prices plunged alongside the global commodity downturn. Countries which produce commodities and primary manufactures, such as Venezuela (petroleum and related products) and Japan (iron and steel), respectively, have accordingly lost out in terms of export share.

Chart 2.18
Penetration Rate of Phones



Source: The New York Times (2008) and EPG, MAS estimates

Chart 2.19
Changes in the Share of Total Global Exports by Product Category



Source: UN Comtrade and EPG, MAS estimates

Note: The distribution of changes in global export shares are across 850 product categories as identified by 4-digit SITC codes.

1 Adapted from The New York Times (2008), "Consumption Spreads Faster Today", (URL http://www.nytimes.com /imagepages/2008/02/10/opinion/10op.graphic.ready.html), February.

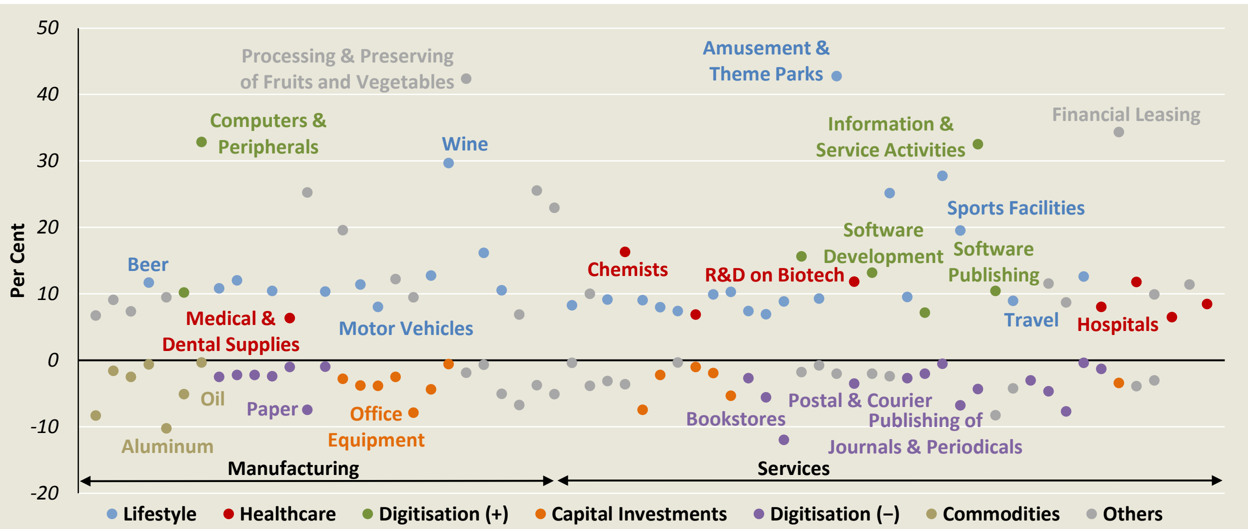
The cluster that saw the greatest increase in its share of world exports was an assortment of consumer goods, comprising furniture, apparel and handbags, which have benefited from the growth of the global middle class. Transport equipment, as well as pharmaceuticals products, also recorded significant increases in their shares, and countries such as China have been able to compete effectively for market share in these products, owing to their relatively lower labour costs. Singapore has also made important strides in pharmaceuticals and chemicals.

... as well as in the corporate space.

Mirroring the shift in global trade patterns, the world's corporate landscape has likewise transformed rapidly. To analyse some of these changes, data on the top 144,000 firms in Bureau Van Dijk's Orbis corporate database in 2006–14 was used to identify globally high-performing industries, defined as those in the top quartile of both the profit and employment growth distributions.

The high-performers are firms which have leveraged successfully on the wave of digitisation. (Chart 2.20) Companies in the IT services and related industries, including software development and publishing (points in green), emerged in the top quartile. Apart from digitisation, rising affluence and stronger healthcare demand have also led to higher profit growth for firms in niche consumer products and services. Examples include research & development (R&D) on biotech, medical and dental supplies (red), and travel and theme parks (blue).

Chart 2.20
Average Annual Profit Growth of Selected Global Industries (2006–14)



Source: Bureau Van Dijk and EPG, MAS estimates

Top activity-generating firms have a disproportionate impact on the economy.

Looking at individual firm-level data, large firms (the top one per cent by revenue) have a significant role in shaping overall global corporate outcomes. These firms consistently account for more than 60% of total worldwide corporate profits annually. This is despite the churn at the top over time—of the largest firms in 2006, only 80.1% remained in the top one per cent by 2014. The corporates that retained their status were responsible for 30.5% of total profit growth across all firms over 2006–14. Meanwhile, the new firms that made it to the top category contributed another 30.4%. (Chart 2.21)

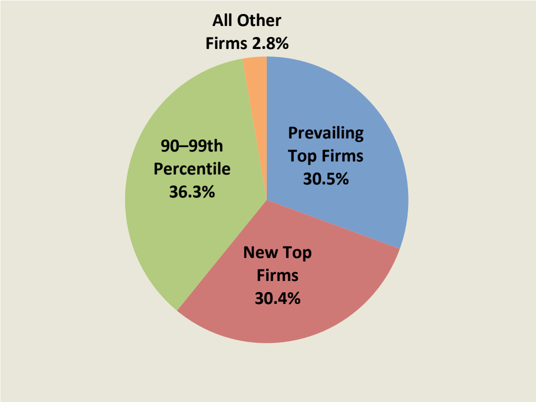
This disproportionate contribution of top firms has also been observed in other areas. Freund and Pierola (2013)[2] found that the top one per cent of exporters can account for over half of a country's total exports and export growth. Such exporters could also create a comparative advantage which would otherwise not have existed, given the sizeable impact each firm has on the structure of the economy. In addition, they noted that most of these 'superstars' tend to start as relatively large exporters and are often foreign-owned, i.e., multinational corporations.

The presence of high-performing corporates will enable Singapore to leverage on these global trends …

Despite the immediate challenges, the Singapore economy is well-placed to leverage on opportunities arising from global trends, aided by the presence of global high-performing firms.

On the production front, several high performers in global electronics manufacturing[3] already have a strong presence in Singapore. Indeed, 65% of such firms feature in Singapore's top 1000 companies and account for 7.4% of total revenue, as captured in DP's 2014 domestic corporate database. However, there has been a general decline in Singapore's share of global electronics exports since 2010. This largely reflected the shift away from production-related activities to IT-related services,

Chart 2.21
Contribution to Global Profit Growth between 2006 and 2014 by Firm Type



Source: Bureau Van Dijk and EPG, MAS estimates

2 Freund, C and Pierola, M D (2013), *Export Superstars*, (URL https://www.wto.org/english/res_e/reser_e/gtdw_e/wkshop13_e/caroline_freund_e.pdf), September.

3 Firms from the "Computer Hardware", "Computer Storage Devices", "Consumer Electronics", "Electrical Equipment", "Electronics", and "Semiconductors" industries in the 2014 edition of *Forbes Global 2000*.

such as chip design and testing, in firms' domestic operations. (Chart 2.22)

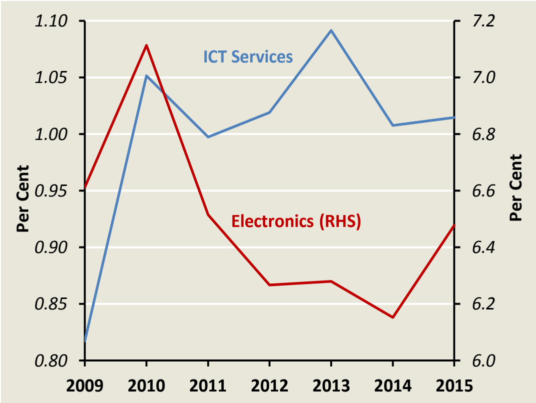
Singapore's global market share in ICT services trade has outpaced that of electronics products since 2010. In July this year, the World Economic Forum placed Singapore among the top five global players in its Networked Readiness Index, leading the world in generating economic impact from ICT investments. Nevertheless, while many of the top ICT services firms in the world, including Google and Facebook, have a presence in Singapore, the scale of their operations here is considerably smaller compared to that of electronics manufacturers. (Chart 2.23) Globally, these ICT services companies have different business models from the traditional electronics manufacturing companies. The bulk of the former's upstream value creation, such as R&D, is typically conducted in their home countries, while offshored functions are mainly downstream activities, such as sales and marketing. In comparison, electronics manufacturing companies operate extensive cross-border production networks [4] based on the offshore country's comparative advantage. As such, the scale of ICT services activity in Singapore is much smaller than that of electronics production.

... even as we build on our existing capabilities.

Apart from anchoring global high-performing companies and industries locally, Singapore can also build further on its existing strengths in niche areas. Of the 990 non-oil product categories in Singapore's merchandise export basket, approximately 25.6% increased their share in growing product markets between 2010 and 2015. These are mainly specialised products, such as the manufacture of mechanotherapy [5] & respiratory appliances, polymers of ethelyene, reaction engines and gas turbines. Currently, they constitute 29.1% of Singapore's NODX, up from 14.4% in 2010. The rapid growth has helped to partially offset the weakness in more mainstream products such as semiconductors over this period. Given strong global demand, there is further potential for niche production segments such as medical equipment to grow.

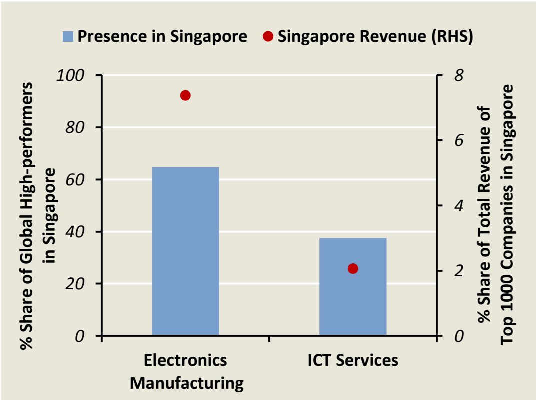
Singapore's comparative advantage in the provision of financial and business services has enabled it to secure a greater share of these expanding markets. Riding on this

Chart 2.22
Singapore's Share of Global Electronics and ICT Services Exports



Source: UN Comtrade, WTO and EPG, MAS estimates

Chart 2.23
Global High-performers in Information & Communications Technology



Source: Forbes Global 2000 (2014), DP Information Group and EPG, MAS estimates

4 The OECD Global Value Chains database estimate that manufacturing and production, in general, have 2.3 stages of production on average, whereas services, in general, have 1.6 stages.

5 Physical and mechanical devices used in medical treatment.

momentum, Singapore is making substantial headway into specific segments, such as FinTech. A recent study by Deloitte placed Singapore as one of the world's leading FinTech hubs alongside London.[6] To facilitate growth in this emerging segment, MAS has set aside S$225 million to develop FinTech projects and has launched initiatives, such as a "regulatory sandbox", to encourage innovation.

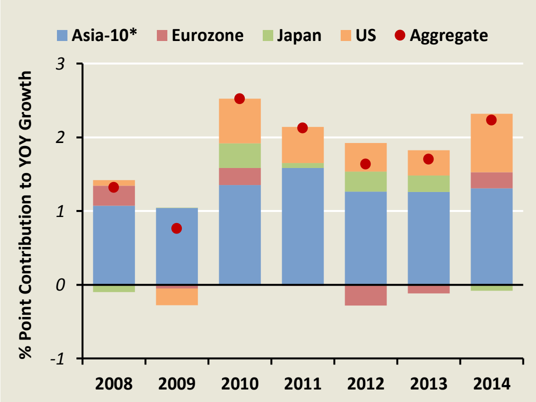
Domestic corporates can capitalise on regional consumption growth trends.

Apart from the digitisation wave, Singapore can also tap into the steady consumption growth in the region. Consumption patterns in the region will shift in tandem with changing demographic profiles, rising affluence and increasing e-commerce penetration. Corporates who are able to recognise and respond to these changes will stand to benefit in the longer term.

Post-GFC, Asian economies have contributed significantly to growth in global real consumption, and these trends are likely to continue. (Chart 2.24) According to Kharas (2010), the Asia Pacific region will account for roughly two-thirds of the world's middle-class consumers by 2030, from around 28% in 2009.[7] This will largely be driven by countries such as China, India, Indonesia, Malaysia and Vietnam, where the population is relatively young and per capita incomes are growing from a low base. (Chart 2.25)

The impact of this rise in regional affluence on consumption trends will be further augmented by the increasing prevalence of e-commerce applications in Asia. In particular, a report released jointly by Google and Temasek estimates that the e-commerce market in the larger ASEAN economies (Singapore, Malaysia, Indonesia, Thailand, Philippines, Vietnam) could grow from around US$6 billion in 2015 to US$88 billion in 2025, driven by a rapid rise in internet penetration and increasing availability of products and services online.[8] The potential for further expansion is especially sizeable given that the share of online sales in regional retail spending is currently estimated at around 3%, compared

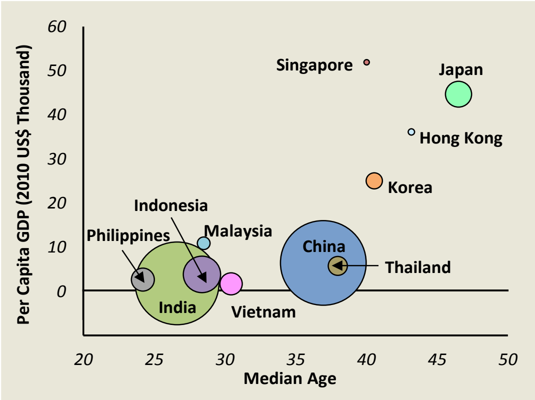
Chart 2.24
Real Final Consumption Expenditure



Source: Haver Analytics, World Bank and EPG, MAS estimates

* Asia-10 refers to China, India, Singapore, ASEAN-4 and NEA-3.

Chart 2.25
Median Age and Per Capita GDP in Asian Economies (2015)



Source: Haver Analytics and UN Population Database

Note: The size of the bubbles indicates the population size of the respective countries.

6 Deloitte (2016), *Connecting Global FinTech: Hub Review 2016.*

7 Kharas, H (2010), "The Emerging Middle Class in Developing Countries", *OECD Development Centre Working Paper* No. 285. Kharas defines the 'global middle class' as those living in households with daily per capita incomes of between US$10 and US$100 in purchasing power parity-adjusted terms.

8 Google, Temasek (2016), *e-economy SEA: Unlocking the $200 Billion Digital Opportunity in Southeast Asia*, (URL http://apac.thinkwithgoogle.com/research-studies/e-conomy-sea-unlocking-200b-digital-opportunity.html), May.

to about 14% for China and the US.[9] Such developments will, in turn, have positive spillovers on regional e-commerce platform operators, logistics services providers and suppliers of fast-moving products, such as consumer electronics and apparel.

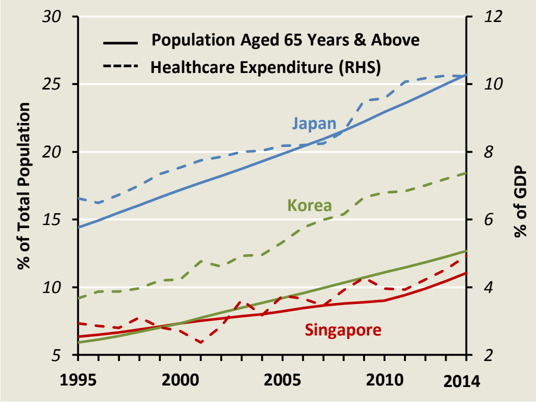
Concomitantly, the structural increase in demand for healthcare services in the region will also provide a boost to overall consumption, especially in countries where population ageing has begun to set in. For instance, in Japan, Korea and Singapore, the proportion of the population aged 65 and older has risen significantly over the last two decades, alongside an increase in the share of healthcare-related expenditures. (Chart 2.26) Not only will local healthcare services firms and medical insurance providers benefit from the increase in domestic health-related outlays, such trends will also bode well for Singapore's medical technology sector. The industry has already seen robust growth in recent years, supported by the development of specialised product segments relating to diagnostics, imaging, research tools and scientific instruments. (Chart 2.27)

In support of corporate internationalisation, the recently-announced Retail Industry Transformation Map (ITM) has also highlighted initiatives such as IE Singapore's e-commerce partnership platforms and the availability of grants for businesses to develop their digital marketing capabilities. Nonetheless, with the exception of electronic goods, consumer products and services, such as beverages, tobacco & food products, textiles & apparel, health & social work and education, generally have lower shares of imported content. (Chart 2.28) This implies that beyond increasing utilisation of e-commerce channels and online marketing, corporates in these segments will also need to raise their physical presence abroad to leverage effectively on regional consumption trends.

Domestic-facing firms will emerge stronger after restructuring.

Meanwhile, firms which predominantly serve the Singapore market will also benefit from continued efforts in skills development and process innovation. A number of sector-specific ITMs will be launched to promote growth and competitiveness in various industry segments, and ICT adoption will feature prominently in this ongoing restructuring process.

Chart 2.26
Population Aged 65 & Above and Healthcare Expenditure



Source: World Bank

Chart 2.27
Manufacturing Production

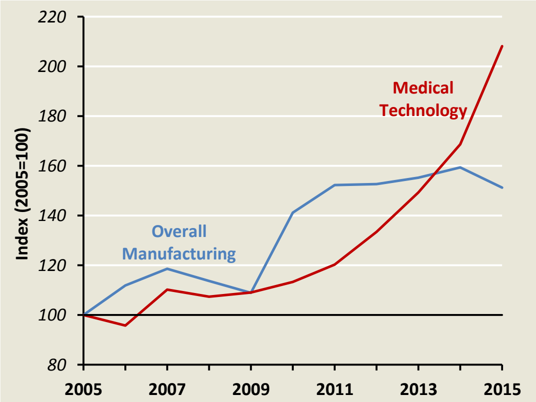
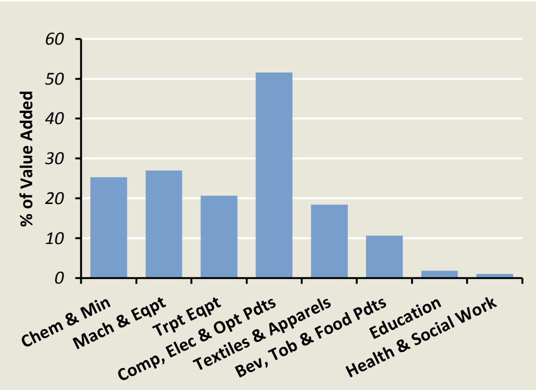


Chart 2.28
Foreign Value Added Content in Asian Domestic Final Demand (2011)



Source: OECD-TiVA Database and EPG, MAS estimates

Note: Countries in the sample include Cambodia, China, India, Japan, Singapore, Vietnam, ASEAN-4 and NEA-3.

9 Bain & Company (2016), *Can Southeast Asia Live Up to its E-commerce Potential?*, (URL http://www.bain.com/Images/BAIN_BRIEF_Can_Southeast_Asia_Live_Up_to_Ecommerce_potential.pdf), March.

A key tenet of these roadmaps involve the establishment of shared platforms, which will allow firms to exploit synergies and reap economies of scale. For instance, as announced in the Food Services ITM, SPRING Singapore will drive the mass adoption of technological solutions in kitchen automation, enhancing firms' capability to run large-scale central kitchens. The consolidation of food preparation processes will improve workflow and provide firms with the flexibility to cater to distinct market segments, from quick service kiosks to elaborate restaurants.

Notwithstanding the current weak consumer sentiment, consumption growth is expected to generally hold up over the longer term, and average around 3.5% p.a. Spending on education and healthcare will continue on a steady rise, while increasing incomes and affluence, together with demographic changes, are also expected to support demand for lifestyle activities, such as recreation, dining out and other discretionary spending. Firms that are able to cater to such demand should benefit accordingly.