Malaysia Economic Monitor

Boosting Trade Competitiveness

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MALAYSIA ECONOMIC MONITOR
JUNE 2014
BOOSTING TRADE COMPETITIVENESS

World Bank Office—Bangkok
Country Director: Ulrich Zachau
Sector Director: Sudhir Shetty

Comments to:
Mathew A. Verghis
mverghis@worldbank.org
Frederico Gil Sander
fgilsander@worldbank.org

30th Floor, Siam Tower
989 Rama I Road, Pathumwan
Bangkok 10330, Thailand
+66 (0) 2 686-8300
www.worldbank.org/my

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ABBREVIATIONS

AANZFTA	ASEAN-Australia-New Zealand Free Trade Agreement
AEC	ASEAN Economic Community
AFTA	ASEAN Free Trade Agreement
ASEAN	Association of Southeast Asian Nations
ATIGA	ASEAN Trade in Goods Agreement
AVE	Ad-valorem equivalent
BEC	Broad Economic Category
BNM	Bank Negara Malaysia
BP	British Petroleum
BR1M	Bantuan Rakyat 1 Malaysia
CAGR	Compounded annual growth rate
CCC	City College of Chicago
CEPT	Common Effective Preferential Tariff
CUSFTA	Canada-United States Free Trade Agreement
DECPG	Development Economics Prospect Group
DOSM	Department of Statistics Malaysia
DPO	Development Policy Operation
DRUID	Danish Research Unit for Industrial Dynamics
E&E	Electrical and Electronics
EA	East Asia
EAP	East Asia and Pacific
EPP	Entry-Point Project
ETP	Economic Transformation Programme
EU	European Union
FDI	Foreign direct investment
FTA	Free Trade Agreements
G&S	Goods and Services
G3	Group of 3 advanced economies
GATS	General Agreement on Trade in Services
GATT	General Agreement on Trade and Tariffs
GDP	Gross Domestic Product
GEMS	Graduate Employment Management Scheme
GFC	Global Financial Crisis
GFCF	Gross fixed capital formation
GNI	Gross National Income
GST	Goods and Services Tax
GTA	Global Trade Atlas
GVC	Global Value Chains
HDD	Hard Disk Drive
HS	Harmonized System
I2E	Import 2 Export
ICT	Information and Communication Technology
IES	Institute of Economic Studies
ILMIA	Institute for Labor Market Intelligence and Analysis
ILO	International Labour Organization
IMF	International Monetary Fund
IPR	Intellectual Property Rights
IPTS	Institut Pengajian Tinggi Swasta
ISDS	Investor-State Dispute Settlement
ISIC	International Standard Industrial Classification
IT	Information Technology
ITC	International Trade Commission
ITS	Industrial Training Scheme
JETRO	Japan External Trade Organization
JMEPA	Japan-Malaysia Economic Partnership Agreement
LNG	Liquefied Natural Gas
LPI	Logistics Performance Index
MAC	Migration Advisory Committee
MDeC	Multimedia Development Corporation
MIC	Middle Income Countries
MIDA	Malaysia Industrial Development Association
MIDF	Malaysian Industrial Development Finance Berhad
MNC	Multinational Corporation
MOF	Ministry of Finance
MoHE	Ministry of Higher Education

MRT	Mass Rapid Transit
MSC	Multimedia Super Corridor
M&TE	Machinery and Transport Equipment
NAFTA	North America Free Trade Agreement
NBER	National Bureau of Economic Research
NBFIs	Non-Bank Financial Institutions
NFPE	Non-Financial Public Enterprises
NKEA	National Key Economic Area
NTM	Non-Tariff Measure
ODM	Original Design Manufacturing
OECD	Organization for Economic Cooperation and Development
OPR	Overnight Policy Rate
PC	Personal Computer
PDR	People's Democratic Republic
PEMANDU	Performance Management and Delivery Unit
PIC	Pengerang Integrated Complex
PISA	Program for International Student Assessment
PITA	Petroleum Income Tax Act
PMI	Purchasing Managers' Index
PPP	Public-Private Partnership
q/q	Quarter-on-Quarter
R&D	Research and Development
RAPID	Refinery and Petrochemicals Integrated Development
RCA	Revealed comparative advantage
RCEP	Regional Comprehensive Economic Partnership
RM	Ringgit Malaysia
RMB	Renminbi
RON	Research Octane Number
RTA	Regional trade agreements
SAAR	Seasonally adjusted annualized rate
SIP	Structured Internship Program
SME	Small and Medium Enterprise
SOC	Standard Occupational Classification
SOEs	State-Owned Enterprises
TiVA	Trade in Value Added
TPPA	Trans Pacific Partnership Agreement
TRIMs	Trade Related Investment Measures
TRIPs	Trade-Related aspects of Intellectual Property rights
UGRAD	Malaysia Undergraduate Apprenticeship and Development Programme
UK	United Kingdom
UN	United Nations
US	United States
USAID	United States Agency for International Development
USD	United States Dollar
VA	Value-added
VS	Vertical Specialization
WDI	World Development Indicators
WEO	World Economic Outlook
WIOD	World Input-Output Database
WITS	World Integrated Trade Solution
WTO	World Trade Organization
y-o-y	Year-on-Year

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EXECUTIVE SUMMARY

RECENT ECONOMIC DEVELOPMENTS AND OUTLOOK

Malaysia's economy overcame a weak start to the year and GDP grew by 4.7 percent in 2013. The economy expanded vigorously in the last three quarters of the year after a soft patch early on. This better-than-expected performance was mainly due to a recovery in exports: after contracting in 2012 and the first half of 2013 (-1.8 and -3.9 percent), exports expanded by 5.2 percent in the second half. This offset weaker domestic demand. As the Government implemented fiscal and credit tightening measures, domestic demand growth decelerated from 7.3 percent in the first half to 5.5 percent in the second half of 2013.

Better export performance led to a higher current account surplus. The recovery in exports was broad-based, including the long-ailing electrical and electronics (E&E) sector. The current account surplus hit a 15-year low of 0.8 percent of GDP in mid-2013, before improving to 7.9 percent in early 2014. This partly offset negative flows of 14.9 percent of GDP in the financial account in the first quarter. Global portfolio reallocation led to outflows in the financial account for the three quarters through March 2014.

Growth slowed in early 2014, but the outlook remains favorable given the positive external backdrop. Due to base effects, GDP is expected to grow by 5.4 percent and 4.6 percent in 2014 and 2015, respectively. The outlook for 2014 and 2015 will benefit from better conditions in advanced economies. Domestic demand faces headwinds: (1) subsidy cuts, tax hikes and public wage restraint in pursuit of fiscal consolidation; (2) likely higher interest rates as global monetary conditions normalize; and (3) the resulting pressures on household budgets. With foreign demand absorbing more than half of domestic value-added, a better external outlook outweighs domestic headwinds.

Investments and imports of capital goods will remain robust as large projects move forward. Improved global conditions and the approval of the Pengerang Integrated Complex will result in further growth in investments – as well as growth in capital goods imports. The latter will keep the current account surplus at modest levels (4.4-4.6 percent of GDP in 2014 and 2015) despite the lift in exports.

Medium-term fiscal consolidation remains on track, but gets harder. Helped by revenues from asset sales and large underspending of the capital budget, the Government bettered its deficit target of 4.0 percent of GDP despite overspending in subsidies and weak income tax collections. As a result, the debt-to-GDP ratio stabilized just below 55 percent. With domestic activity moderating and revenue growth constrained, spending measures towards further reducing the subsidy bill and capping emolument growth are needed for the Government to meet its 2014 deficit target of 3.5 percent of GDP.

The central bank has signaled that it may have to tighten policy to avoid the build-up of financial imbalances. So far BNM has been managing risks to macroeconomic stability primarily through macro-prudential regulations. Although such efforts have borne fruit (credit growth continued to decelerate), there is concern that household debt has continued to climb, reaching 86.5 percent in 2013, and that the real interest rate has become negative as inflation picked up to 3.7 percent in the first four months of 2014 largely on increases to administered prices.

Healthy labor markets provide respite for households. Higher employment levels (the employment-to-population ratio increased 3.0 percentage points in 2013), real wage gains in manufacturing (up 4.7 percent in 2013), and the full implementation of the minimum wage of RM900 in peninsular Malaysia and RM800 in Sabah and Sarawak suggest higher labor incomes in the economy. Labor force participation and employment came down from a peak, but settled at a higher level likely due to participation by women.

External risks to the outlook have receded, but not disappeared. The high share of Malaysia's debt held by foreigners means that volatility in international capital markets would be disruptive.

The delicate balancing act of tightening fiscal and monetary policies and Malaysia's ability to leverage the improved global environment are key domestic risks. While necessary to rebuild buffers, policy adjustments carry risks of inducing excessive retrenchment in household spending. Boosting exports to fully leverage on the improved external environment is thus critical for sustained growth.

BOOSTING TRADE COMPETITIVENESS

Following the review of near-term developments and outlook, the thematic chapter of this Economic Monitor analyzes structural trends in trade competitiveness. Trade competitiveness is measured as Malaysia's ability to grow its exports and the domestic value-added embodied within them, leveraging foreign demand and knowledge to support its transformation to a high income nation.

Nearly 60 percent of value-added produced in Malaysia was ultimately consumed by foreigners in 2009 – one of the highest shares in the world. The share of Malaysia's GDP consumed in foreign markets includes the value-added of exporting firms and also of suppliers to export-oriented industries. Thus the actual significance of external demand to the Malaysian economy is higher than it appears from net exports (22 percent of GDP) or the output from externally-oriented industries (38 percent of GDP).

The export engine appears to have been faltering since before the Global Financial Crisis. The share of exports of goods and services in Malaysia's GDP declined by nearly 30 percentage points between 2005 and 2013. Unlike Thailand, Vietnam and Korea, which saw market shares expand, Malaysia's share shrunk from 1.35 to 1.22 percent in that period. However, Malaysian exports have included a higher portion of domestic value-added, mitigating the impact of the decline in gross shares.

The decline in exports has been concentrated in Malaysia's core export product segment – E&E products. E&E exports as a share of GDP declined from about 38 percent between 2002 and 2004 to 18 percent in 2013, and Malaysia's market share in the period declined from 5.25 percent to 3.74 percent of global E&E exports. Meanwhile, exports of commodities, and commodity-related manufactures such as petrochemicals expanded, but not enough to compensate the decline in E&E exports.

The domestic value-added of Malaysian E&E exports is relatively low due to limited domestic linkages. Malaysia remains an integral part of the E&E global value chain, but at 44 percent the share of value-added in exports is relatively low. This is partly due to limited domestic linkages. Compared to other countries, the contribution from domestic intermediaries to the value-added of exports is only 7 percent in Malaysia compared to 31 percent in Korea. This finding is supported by analysis of enterprise survey data, which finds that multinationals in Malaysia source less than 40 percent of their inputs from domestic firms compared to 46 percent in Vietnam and 82 percent in China.

Exports of services have also lagged and remain an area of significant potential. Malaysia has few services-exporting firms and at 12 percent of GDP services exports are below what would be expected for a country at its level of income.

'Behind the borders' restrictions hinders export growth and limits linkages between domestic providers and export-oriented industries. Although the Government has recently embarked on a liberalization of services sectors, many are still relatively restrictive as measured by the World Bank's Services Trade Restrictiveness index and assessment of the burden of non-tariff measures. Professional and transport services are more restrictive on average than most countries in East Asia for example. A restrictive domestic environment reduces incentives for exporting, and for exporting firms to buy more domestic value-added. Barriers are not limited to ownership restrictions, but extend to licensing and regulations that limit domestic competition.

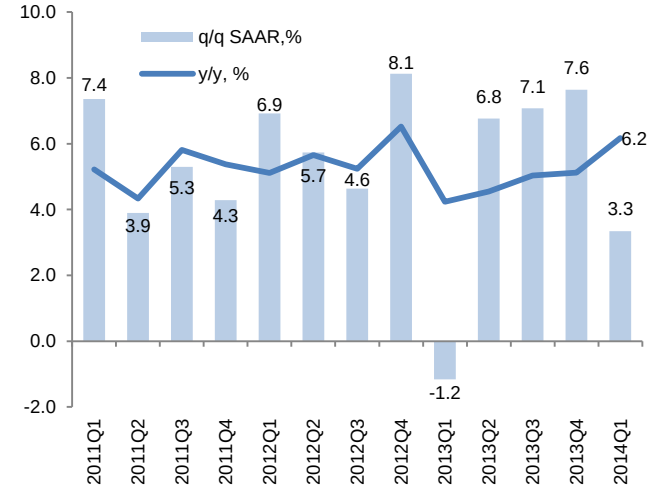
Engaging in higher value-added tasks in global value chains will also require addressing skills gaps. As energy prices have increased, so has the value of related assets. Thus it became relatively attractive for investors to come into the petrochemical sector. Meanwhile, as Malaysia grew, the availability of low-cost labor dwindled, especially in comparison with neighboring countries. At the same time, skills mismatches remain an obstacle for firms looking to scale up higher value-added activities.

Malaysia's upcoming chairmanship in ASEAN offers three concrete avenues to boost trade competitiveness. First, Malaysia can deepen its liberalization efforts in services by achieving a commitment of ASEAN members to classify and disclose their 'behind-the-border' restrictions on services trade; Malaysia could take the lead and implement such classification and disclosure as part of its own autonomous liberalization of services. **Second**, Malaysia can pursue mutual recognition agreements for professionals, both to create more competition but also to meet short-term skills gaps. **Third**, Malaysia can lead in streamlining non-tariff measures by reviewing domestic regulations such as licensing requirements affecting firms potentially linked to global value chains.

THE MALAYSIAN ECONOMY IN PICTURES

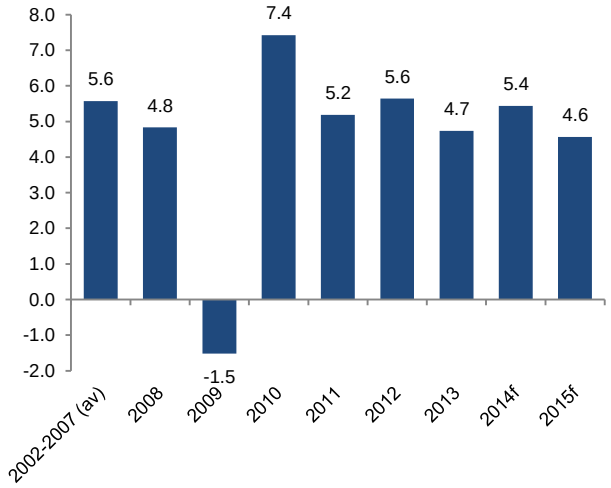
Quarterly growth decelerated in early 2014…

Real GDP, seasonally adjusted, annualized change from last quarter, percent



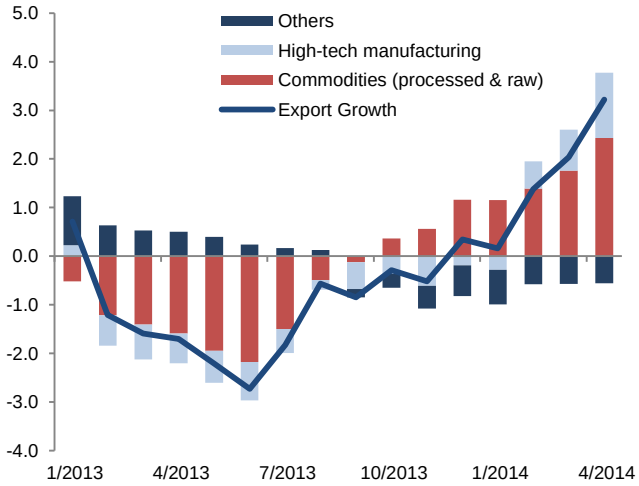
… but annual growth will pick up

Change from the previous year, percent



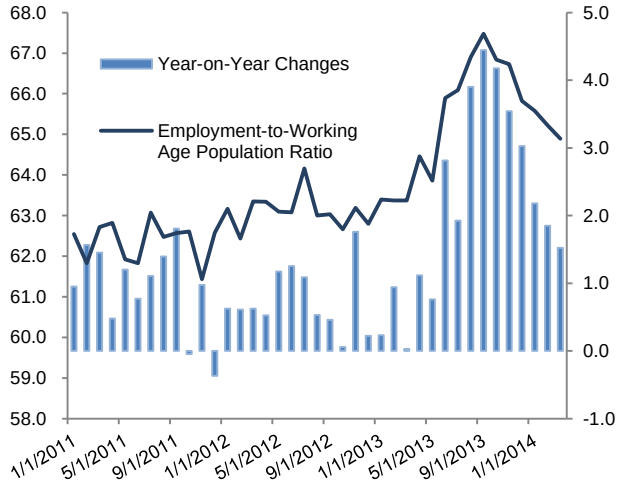
Exports recovered, helped a turnaround in high-tech

Change from the previous year, 12-month moving average, percent (line); contributions to growth, percentage points (bars)



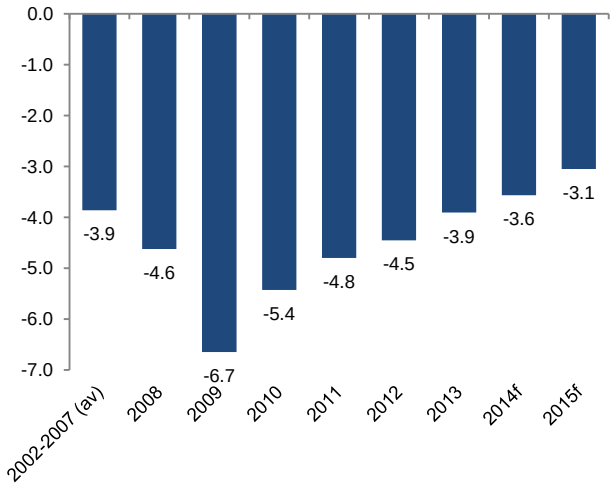
Employment grew strongly in 2013

Ratio of employment to working-age population, percent (LHS); changes from previous year, percentage points (RHS)



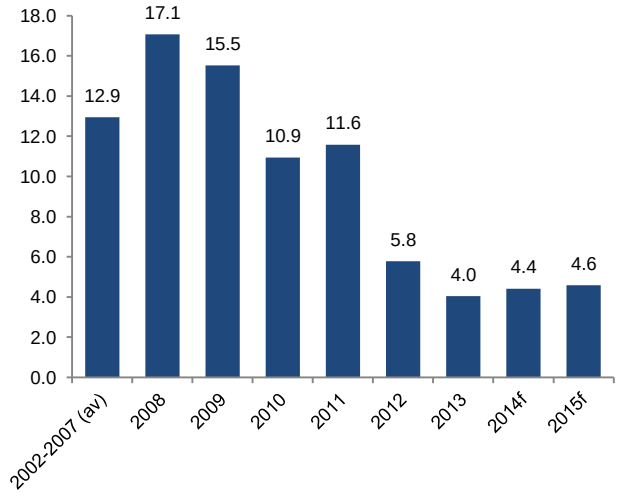
Fiscal consolidation continues

Federal Government balance, percent of GDP Balances, percent of GDP



The current account remains in a small surplus

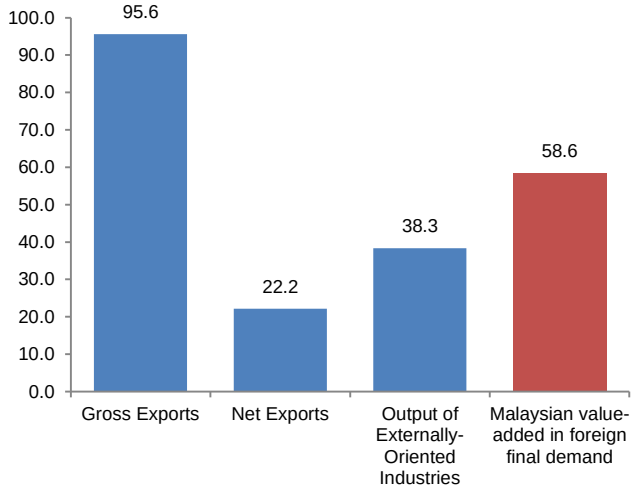
Percent of GDP



BOOSTING TRADE COMPETITIVENESS IN PICTURES

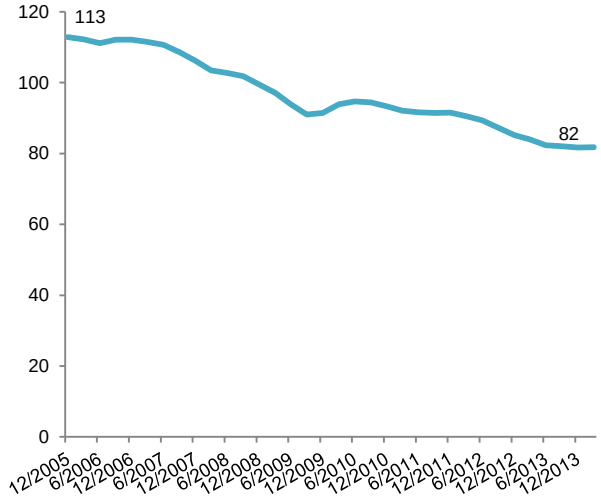
Trade drives more than half of Malaysia's economy

Measures of the importance of trade in the economy, percent of GDP



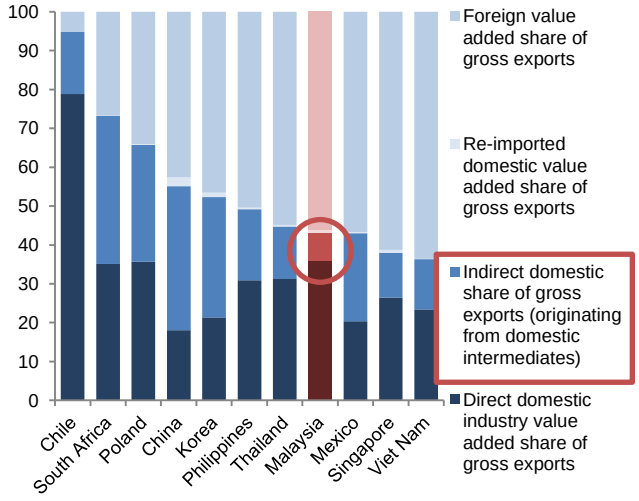
Trade as a share of GDP has declined sharply

Gross exports of goods and services, percent of GDP



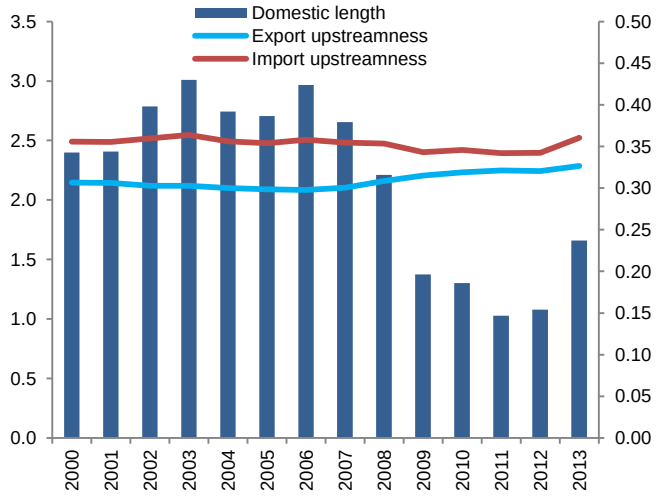
Limited linkages in E&E prevent higher value-addition

Components of gross exports in E&E, percent



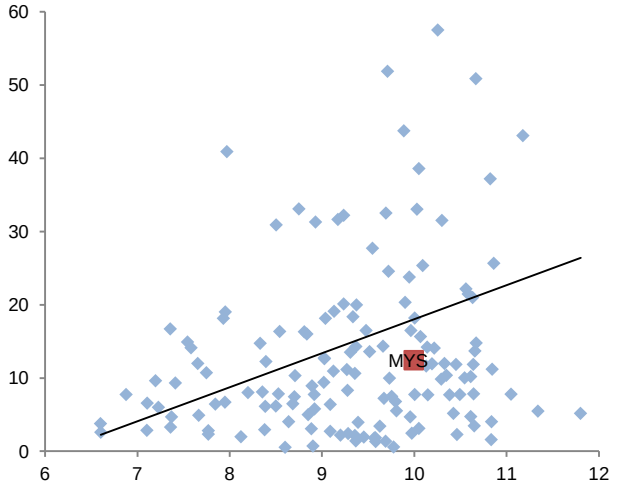
E&E exports moved upstream

Upstreamness indices (lines, LHS); Domestic length (bars, RHS)



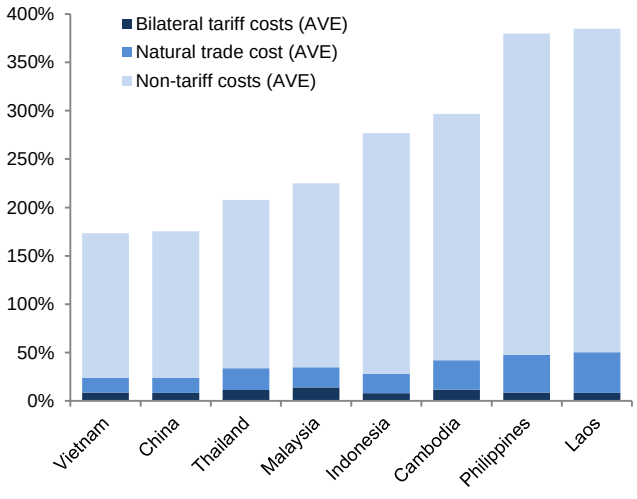
Services exports have not reached their potential

Service exports, % of GDP (y-axis); GDP per capita, PPP basis (logs; x-axis)



Non-tariff costs are high in ASEAN – including in Malaysia

Decomposition of total trade costs in ad valorem tariff-equivalent terms, %



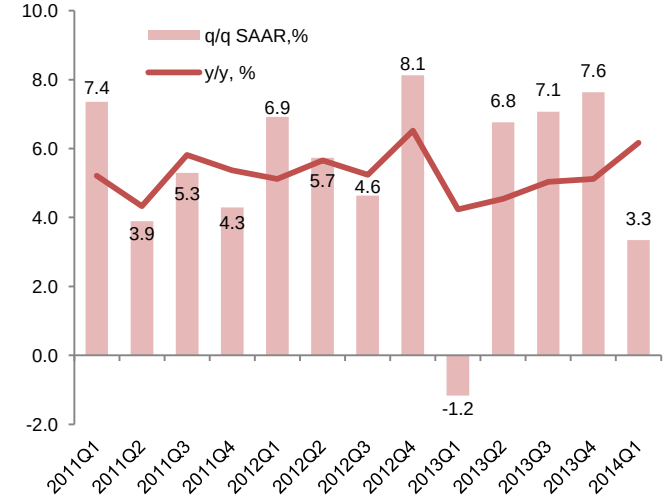
1. RECENT ECONOMIC DEVELOPMENTS AND OUTLOOK

Growth robust, with some moderation into 2014

1. After a solid performance in the last three quarters of 2013, growth moderated into 2014. In the fourth quarter of 2013, Malaysia's Gross Domestic Product (GDP) expanded by 7.6 percent (quarter-on-quarter, seasonally adjusted annualized rate – q/q saar), representing further acceleration of growth from the 6.8 and 7.1 percent rates recorded in the second and third quarters, respectively (Figure 1)[1]. This brought year-on-year (y/y) real GDP growth to 4.7 percent, slightly above the World Bank's previous forecast of 4.5 percent. Growth decelerated in the first quarter of 2014 as export growth cooled somewhat. Across East Asia, the performance of the Malaysian economy followed a pattern seen in most other regional economies where a slowdown in exports, possibly linked to the US weather-induced slowdown in the quarter, led to deceleration in early 2014 (see Figure 2).

Figure 1. Strong growth in the second half of 2013 was followed by deceleration in early 2014.

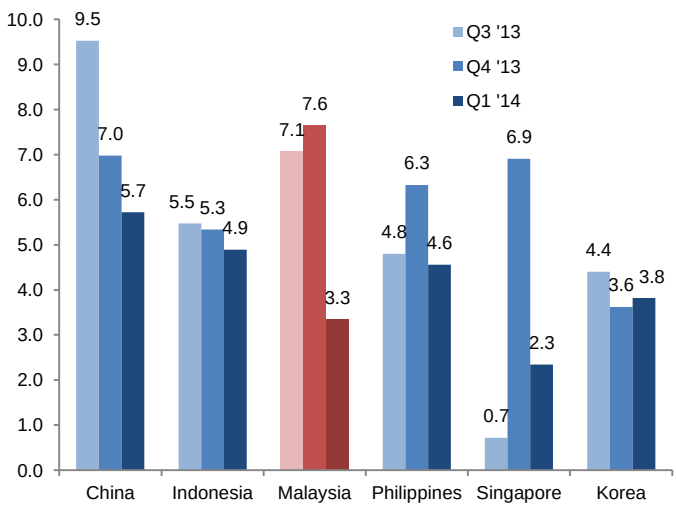
GDP adjusted for inflation and seasonal fluctuations, change from the previous quarter, annualized (bars), and from the previous year (line), percent



Source: CEIC, DOSM, World Bank staff calculations

Figure 2. Nearly all economies in East Asia slowed in the first quarter of 2014.

GDP adjusted for inflation and seasonal fluctuations, change from the previous quarter, annualized (percent)



Source: CEIC, DOSM, OECD, World Bank staff calculations

Export growth revives, lifting growth

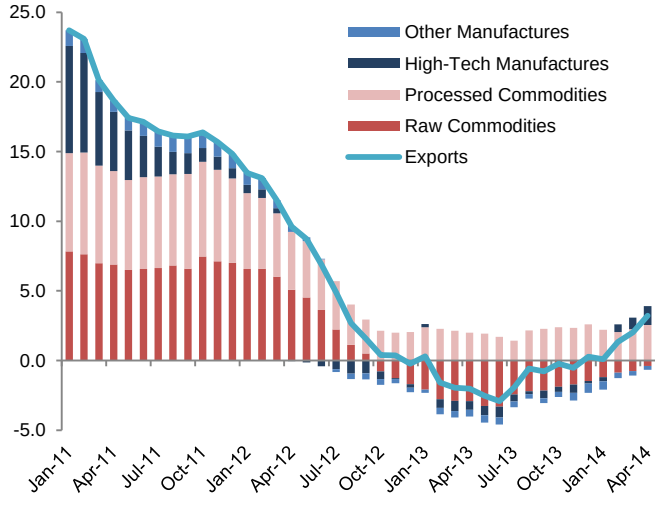
2. Revitalized exports of high-technology goods helped lift growth in recent quarters. A recovery in exports in the second half of the year supported GDP growth: the contribution of net exports was less negative at -1.1 pp in 2013 (2012: -4.0 pp). Of the 2.9 pp change, 2.4 pp came from better exports, which after several quarters as a drag on growth, has expanded sequentially since the third quarter of 2013. Export growth turned around from -3.9 percent in the first half of 2013 to 5.2 percent in the second half (y/y), partly due to higher shipments of high-technology products and partly due to a stabilization of commodity exports (Figure 3). Exports of E&E products expanded by 7.7 and 5.2 percent from the previous year in the last quarter of 2013 and first quarter of 2014, respectively (US dollar terms). This performance was driven by three main factors: most importantly, better growth prospects in advanced economies increased demand for Malaysian high-tech exports, which represent a higher share of trade to those regions; second, the political crisis in Thailand may have, at the margin, led MNCs with spare capacity in both countries to favor accelerating production in Malaysia; and finally, though growth in emerging markets slowed (especially in early 2014), commodity-related exports stabilized after declining through most of 2013.

[1] Unless stated otherwise, annualized quarter-on-quarter GDP figures are calculated based on the national account series seasonally adjusted by DOSM.

3. High-tech exports benefited from economic recovery in advanced economies. The recovery in high-income economies remains on track. The US economy expanded robustly in late 2013 and despite a bumpy start to 2014 due to weather-related factors, labor and housing markets continue to improve. Growth in the EU remains below pre-crisis levels, but has stabilized; in Japan, the economy has now expanded for six consecutive quarters. In all these economies, still-loose monetary policies, reduced drag from fiscal consolidation, improving labor market conditions, a steady release of pent-up demand and improved financial market conditions have supported growth. The improved demand environment in advanced economies led to a pick-up in exports of Malaysian high-tech products in the second half of 2013 (Figure 4). Despite the contraction in the US economy, exports to advanced economies continued to expand into the first quarter of 2014, with strong growth of high-tech exports to the EU and Japan. Commodity exports were weaker across high-income economies, especially the US, where weak commodity exports in 2013 likely reflect the expansion of domestic energy sources in the country.

Figure 3. Exports came out of negative territory, partly driven by a reversal in high-tech shipments

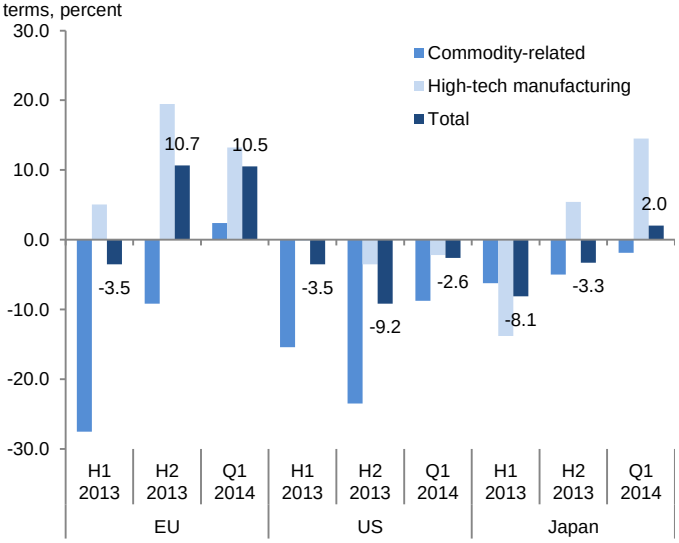
Change from the previous year, twelve-month moving average, percent (line); Contributions to growth, percentage points (bars), US dollar terms



Source: CEIC, DOSM, World Bank staff calculations
Notes: 1. Processed commodities include petroleum products, chemicals, processed agricultural commodities, and products from minerals
2. High-Tech Manufactures include machinery and transport equipment

Figure 4. Steady growth in advanced economies supported Malaysia's exports

Exports by destination and type, change from the previous year, US dollar terms, percent



Source: CEIC and World Bank staff calculations
Notes: 1. "Commodity-related" includes food and live animals; beverages and tobacco; inedible crude materials; mineral fuels; animal and vegetable fats and oils; and chemicals. High-tech is approximated by machinery and transport equipment
2. Exports to the EU approximated by exports to the U.K., France, Germany and Netherlands

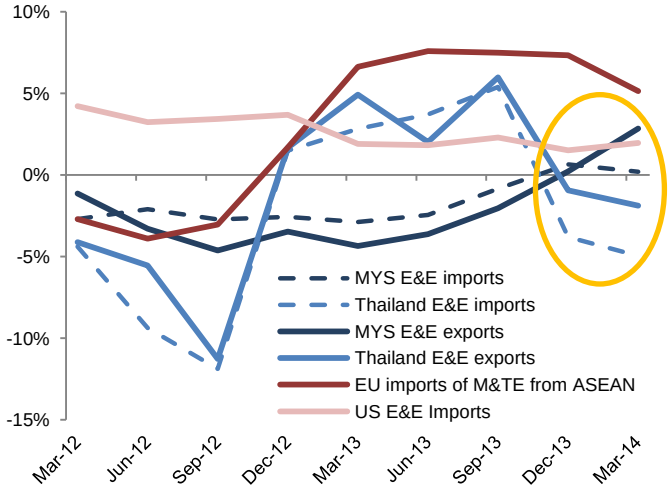
4. The political crisis in Thailand may, at the margin, have contributed to the pick-up in Malaysia's E&E exports. Many firms in the electronics global value chain have capacity to produce similar products in multiple countries for reasons of risk management and competition (intra-firm and inter-jurisdictional, with respect to tax incentives for example). According to JETRO (2013), 43 percent of Japanese companies in Thailand, and 48 percent of Japanese companies in Malaysia have alternative productive capacity in other countries. Such overlap between Thailand and Malaysia – and consequent potential for substitution – is unlikely to be extensive, as seen by the very modest pick-up in Malaysian E&E exports around the time of the Thai floods. Nevertheless, Figure 5 shows that the recovery of Malaysia's E&E exports does coincide with a sharp dip in Thai E&E exports following an earlier period of expansion.

5. Growth in emerging economies decelerated in early 2014, tempering somewhat Malaysia's export recovery. Growth in (gross) exports of goods and services, which averaged 12.1 percent (q/q saar) in the third and fourth quarters of 2013, slowed to 6.1 percent in the first quarter of 2014. This is partly due to slower growth in emerging economies, notably China. Chinese GDP expanded by 5.7 percent (q/q saar; see Figure 2) in the first quarter of 2014, the slowest pace in over two years. Although exports to China held up well due to large energy exports between December and February, the slowdown in emerging economies more broadly helps explain why Malaysia's exports

expanded more slowly in the first quarter despite improvements across G3 economies (Figure 6). Moreover, this slower growth is likely linked to weakness in commodity prices, which remain by and large below their 2012 levels (Figure 7).

Figure 5. E&E exports from Malaysia expanded while those from Thailand dipped

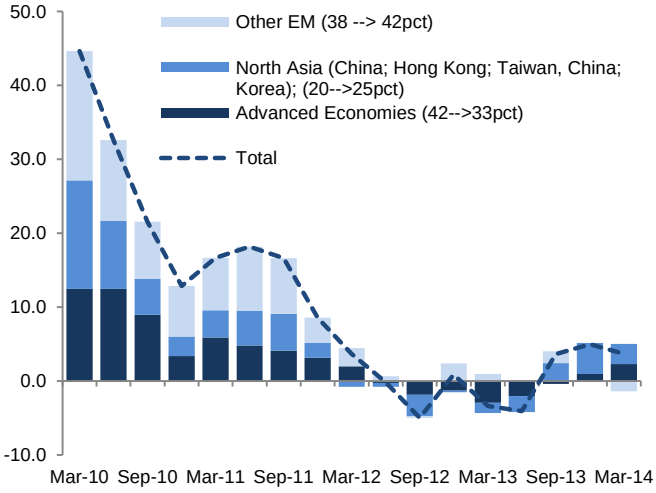
Growth from the previous year, four-quarter rolling sum, US dollar terms, percent



Source: CEIC, DOSM and World Bank staff calculations

Figure 6. Weaker growth in emerging markets led export growth to slow down in early 2014

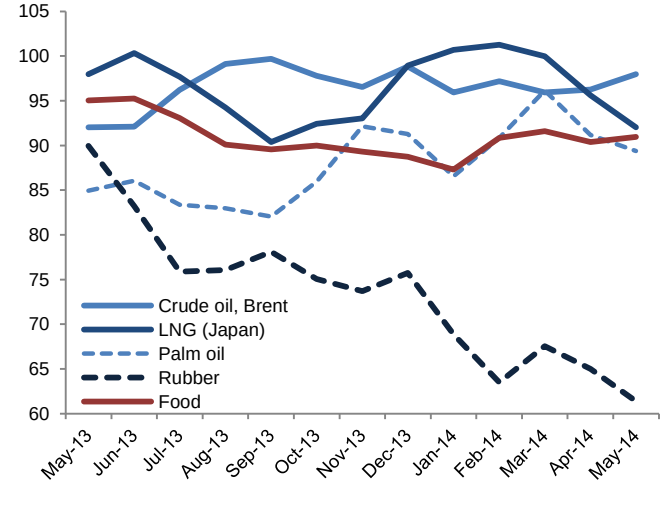
Change of US dollar value of exports from the previous year, percent; figures in legend represent export market shares in 2007 and latest four quarters



Source: CEIC, BNM and World Bank staff calculations
Note: M&TE – machinery and transport equipment

Figure 7. Commodity prices remain below 2012 levels, with rubber prices down almost 40 percent

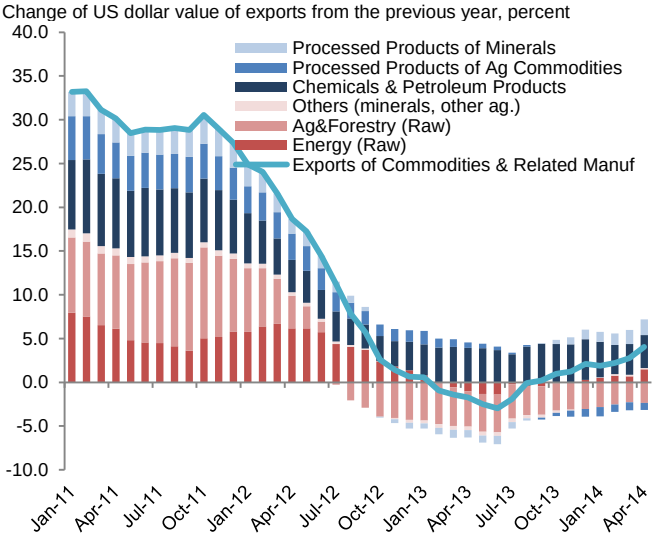
Index, 2012 average = 100



Source: World Bank DECPG

Figure 8. Exports of petroleum products have been growing steadily, while palm oil and rubber decline

Change of US dollar value of exports from the previous year, percent



Source: CEIC, DOSM, and World Bank staff calculations

6. Exports of petroleum-related products have been a steady contributor to export growth. Growth in exports of processed commodities has been largely due to chemicals and petroleum products (Figure 8). The value of exports from the petrochemical industry expanded by an average of 16 percent per year in US dollar terms over the past three years. Some of these exports reflect higher domestic production, but some reflect the construction of large storage facilities used for re-export: imports of petroleum products have grown by 27 percent per year on average in volume terms. Exports of crude petroleum and natural gas have expanded in 2014 after little growth the previous year, reflecting stable prices and output. The value of rubber and palm oil exports has declined over the past year. In the case of rubber, this is largely driven by a significant decline in prices (down by 17 percent in 2013 and a further 21

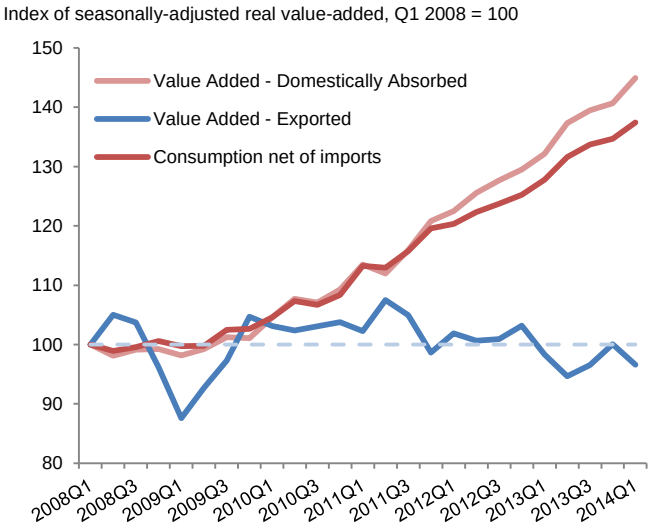
percent in 2014 through May see Figure 7). In the case of palm oil, prices declined in 2013 (by 14 percent) and volumes were flat. Prices recovered in 2014 but volumes came down, keeping growth in negative territory.

Domestic demand still expanding, but headwinds start to weigh

7. Domestic demand remained strong, especially in early 2014, when it was supported by expansion in private investment and government consumption. Domestic demand (GDP less net exports) contributed 5.8 percentage points to annual growth in 2013 (2012: 9.6 pp) and 4.9 percentage points in the first quarter of 2014 (but inventories subtracted 1.8 pp in 1Q 2014 vs. 0.9 pp in 2013). Government consumption surprised on the upside, rising by 23.2 percent (q/q saar) after two quarters of contraction; had government consumption been flat, quarterly GDP growth would have been nearly zero. The value-added produced in Malaysia and consumed domestically (World Bank estimate) expanded by 8.8 percent in 2013 (2012: 9.3 percent); this measure of domestic demand decelerated in the fourth quarter, but picked up again in 2014 thanks to a spike in government consumption and fixed investments (+12.4 percent q/q saar). The strength in domestic demand correlates with the continued acceleration in domestically-oriented sectors, especially services, which contributed more than half of total GDP growth for the quarter (3.5 pp, 2013: 3.1 pp), and construction, which expanded 53.5 percent (q/q saar) from the previous quarter and contributed 0.7 pp to year-on-year growth. Within services, the largest contributions to growth came from the retail sector (1.2 pp), government services (0.6 pp), and real estate and business services (0.5pp).

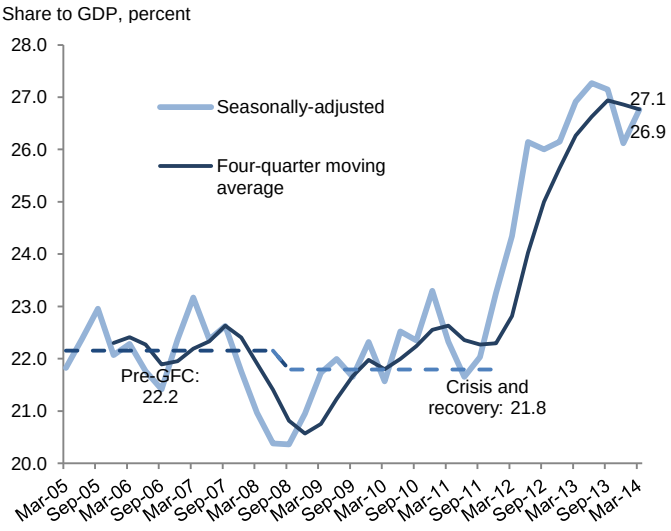
8. Household consumption kept expanding in the face of tighter credit and fiscal conditions. Softer commodities prices (and attendant implications for smallholder households), the fuel subsidy rationalization implemented in September 2013, lower bonuses to civil servants and macro-prudential measures aimed at moderating household credit growth tempered private consumption growth somewhat in 2013 (+7.2 percent vs. +8.2 percent in 2012, y/y), especially in the fourth quarter (-0.8 percent q/q saar). But private consumption picked up again in early 2014 (+6.8 percent q/q saar) as public consumption expanded, labor markets remained robust and credit growth, while somewhat slower, remained buoyant. Government consumption climbed 6.3 percent in 2013 despite contracting in the third and fourth quarters (-9.5 and -3.4 percent q/q saar), respectively, as the Government cut spending on bonuses for civil servants and supplies and services. Public consumption then spiked in early 2014 (+23.3 percent SAAR), however. Overall consumption remains a key driver of growth (Figure 9): consumption of domestic value-added (World Bank estimate) expanded by 7.4 percent in 2013 and by 7.5 percent (y/y) in the first quarter of 2014, contributing 4.0 percentage points to year-on-year growth rates in both periods.

Figure 9. Consumption has been a key driver of growth in domestic demand



Source: CEIC, DOSM and World Bank staff calculations
Note: See Box 1 of World Bank (2012) for an explanation of the estimates of value-added exported and absorbed domestically. Consumption net of imports of consumer goods

Figure 10. The investment-to-GDP ratio stabilized in late 2013 after rising sharply in 2012



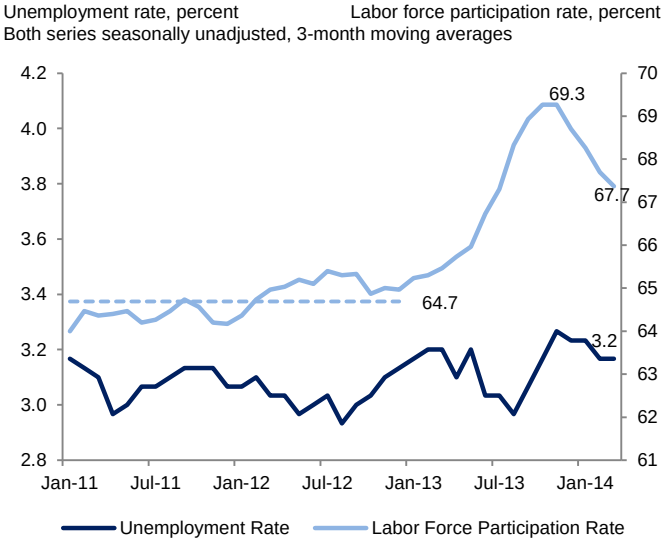
Source: CEIC, DOSM, World Bank staff calculations

9. The high pace of investment moderated as public investment slowed. Public investment grew by just 2.2 percent in 2013 (2012: 14.6 percent) and contracted in the previous two quarters (Q4 2013: -8.1 percent; Q1 2014: -4.0 percent, q/q saar, World Bank estimate) on slower investments by Non-Financial Public Enterprises (NFPEs) and sluggish disbursements of the capital budget. Since many NFPE projects are already underway and some have been completed (such as the LNG regasification terminal in Malacca), tapering of NFPE investment growth was expected. Private fixed investment also slowed, but still posted double-digit growth (+13.1 percent; 2012: +22.8 percent). Private fixed investments continued to decelerate in early 2014 (+6.9 percent q/q saar, World Bank estimate). Overall, gross fixed capital formation expanded by 8.5 percent in 2013 (2012: +19.2 percent) before slowing in early 2014. Growth was mainly supported by sustained momentum in the construction sector, which expanded by 10.9 percent from the previous year, a rate similar to construction investment (11.0 percent). The share of investment to GDP, which climbed quickly in 2012, stabilized at about 27 percent in late 2013 and early 2014, about 5 percentage points higher than the rate in the previous decade (Figure 10).

Strong labor markets support household consumption

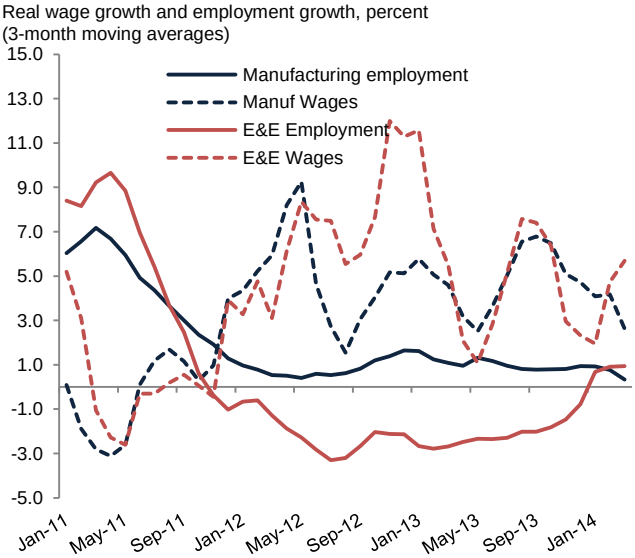
10. Labor markets have been volatile, but generally strong. The labor force participation rate surged by 4.5 percentage points from September 2012 to a peak of 69.6 percent in September 2013. Meanwhile, unemployment remained stable within a narrow range of 3.0 – 3.2 percent (Figure 11). Combined, these two developments reflect significant employment gains in 2013: the economy added 948,200 jobs between December 2012 and December 2013 and the ratio of employed persons to the working-age population climbed 3 percentage points to 67 percent. However, the economy shed 182,000 jobs in the first three months of 2014, as the labor force participation rate retreated[2]. The manufacturing sector made a small contribution, adding over 12,000 jobs in 2013 despite a small decline in E&E employment. E&E employment turned around in early 2014 along with the pick-up in activity of the E&E industry (Figure 12). While manufacturing wage growth slowed in early 2014, E&E wage growth accelerated as the industry offered higher salaries to attract workers; it added over 3,000 jobs (changes in average employment in the first quarter of 2014 compared to 2013) after several months retrenching.

Figure 11. The labor force participation rate declined after surging in 2013



Source: CEIC and World Bank staff calculations

Figure 12. Employment and wages in E&E grew as output expanded



Source: CEIC and World Bank staff calculations

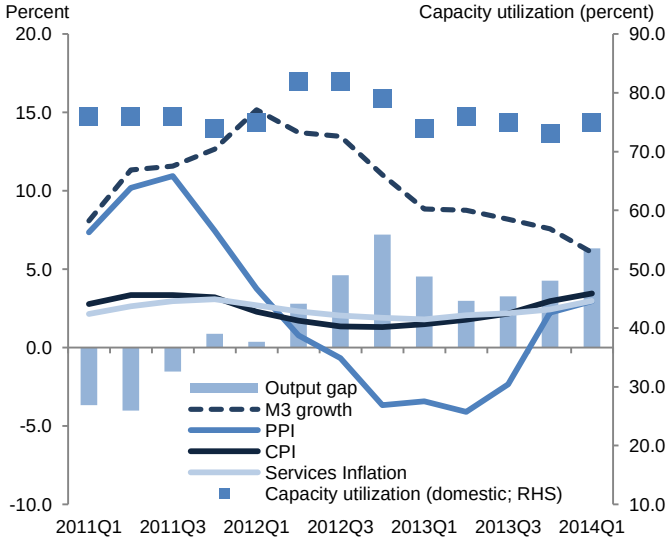
[2] It should be noted that the labor force participation rate (LFP) is also subject to seasonal fluctuations and therefore month-to-month comparisons may not be meaningful. Comparing March 2014 to March 2013 reveals that the LFP was still 1.4 percentage points higher than the previous year, though this represents a significantly lower increase in the LFP when comparing with the year-on-year increase registered in September 2013.

11. There are indications that real wages have increased. Real average manufacturing wages expanded by 4.9 percent in 2013, while real wages in wholesale, retail and repair of motor vehicles rose by 6.1 percent. These wage gains have exceeded real productivity growth. Real output per worker in manufacturing expanded by 4.1 percent, while that in wholesale, retail and motor vehicles expanded by 5.4 percent – in both cases, below the level of wage gains. This may be related to the introduction of a minimum wage, but also reflects tight labor markets in aggregate. Buoyant economic activity boosts labor demand, forcing firms to bid up wages, which in turn provide incentives for more workers to join the labor force. The result for the economy is one of higher household incomes as more household members are working, and on average earning more.

Inflation up on higher administered prices but few signs of second-round effects

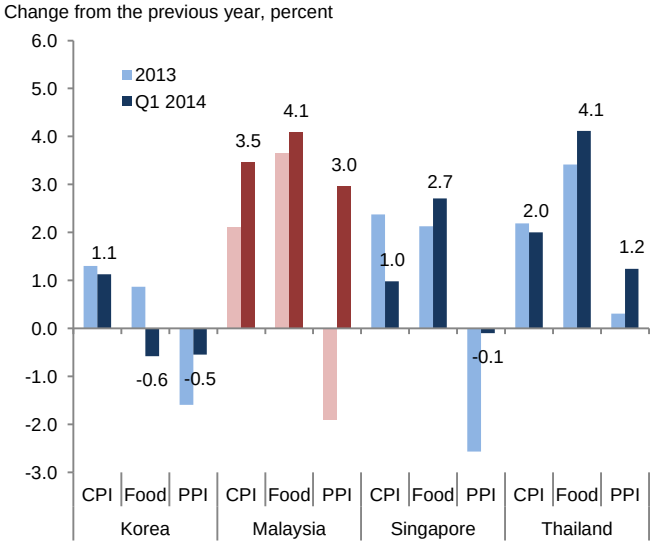
12. Considering the backdrop of tight labor markets, vigorous domestic demand, and higher energy and tobacco prices from subsidy cuts and tax hikes, inflation picked up only modestly in late 2013 and early 2014. Consumer price inflation accelerated from an average of 1.7 percent for the first eight months of 2013 to 2.8 percent in the last four months of 2013, climbing further to average 3.4 percent in the first five months of 2014. While the overall inflation rate is similar in Peninsular Malaysia and Sarawak, prices in Sabah have been rising more slowly, averaging only 2.3 percent in the first five months of 2014. Energy prices increased due to cuts to RON 95 and diesel fuel subsidies, which resulted in RM0.20 hikes in oil prices in September, as well as electricity price hikes between 15 and 17 percent effective in January, and higher natural gas prices to the non-power sector in the second quarter of 2014. Food inflation averaged 3.9 percent in the first five months of 2014 in tandem with a small increase in global food prices (see Figure 7). Excluding food, beverages and energy, "core" inflation increased by only 2.1 percent between January and May of 2014, a modest acceleration from the 1.1 percent average recorded in 2013. The producer price index, which had been negative for the past sixteen months finally turned positive in October likely due to the increase in diesel prices but levels remain moderate at 3.5 percent in April.

Figure 13. Softening demand-side pressures complemented benign supply conditions



Source: CEIC, DOSM, BNM and World Bank staff calculations
Note: Output gap and capacity utilization rates for domestic oriented sectors. Output gap calculated using the Hodrick-Prescott filter to estimate potential GDP

Figure 14. Producer prices have accelerated compared to 2013



Source: CEIC, DOSM and World Bank staff calculations
Note: 1. Red bars highlight Malaysia in cross-country charts
2. Simple averages of monthly rates

13. Inflationary pressures have been building but remain mild thanks to increased capacity. Concerns that higher administered prices may have second-round effects on inflation are intensified by pressure from demand-side factors (Figure 13). On the other hand, credit growth has decelerated and capacity utilization in domestic industries has come down despite the positive output gap, suggesting that the recent surge in investments may have increased domestic capacity and raised potential output. Services inflation – which may be expected to reflect labor market pressures on prices – has increased, but at 3.1 percent in May it remains moderate. Supply conditions have shifted from benign to neutral. On the one hand, oil prices have been stable (Figure 7), but global food prices have

increased in 2014 (though the year-on-year change is still negative), and producer prices across East Asia largely reversed their disinflationary trend due to higher energy prices (Figure 14).

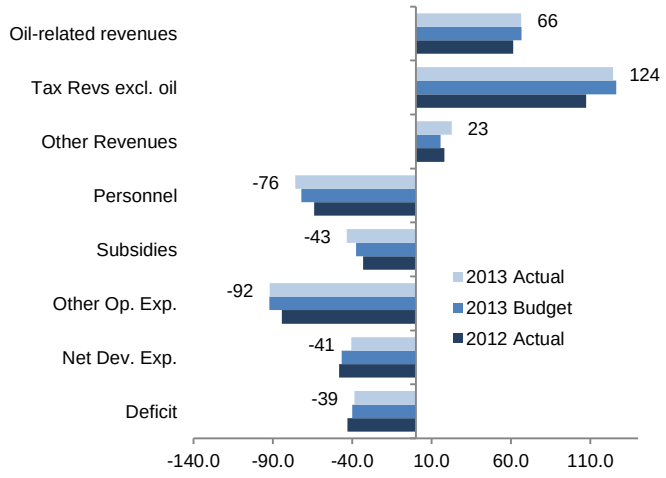
Fiscal and monetary policies gradually becoming less accommodative

14. The Government outperformed its deficit target for 2013 as additional non-tax collections offset higher expenditures on subsidies. Operating (current) expenditures exceeded their budgeted 2013 allocations by RM 9.4 billion (4.6 percent) and tax collections came in lower than budgeted by RM3.2 billion (2.0 percent). Nevertheless, the Government managed to slightly exceed its 2013 target for the overall federal government deficit (4.0 percent of GDP), posting a deficit of 3.9 percent for the year. This was achieved through lower-than-budgeted disbursements of development expenditures (RM 6.0 billion) and additional non-tax revenues (RM 7.9 billion; see Figure 15).

15. After several years exceeding targets, tax revenues came in lower than expected in 2013. This was primarily due to weakness in collection of personal income tax, which increased by just 0.3 percent in 2013 from the previous year (2012: +13.7 percent). Collection of indirect taxes also came in below target. Oil-related revenues came in line with expectations, with PETRONAS' dividend as budgeted, PITA and export duties somewhat lower, and petroleum royalties somewhat higher than originally expected. Oil-related revenues accounted for 31.2 percent of total revenue in 2013 compared to 33.7 percent in 2012. Corporate income taxes continued to demonstrate positive buoyancy[3], growing at a rate of 13.4 percent (2012: +9.4 percent) compared to 4.8 percent for nominal GDP. Despite the weak performance in personal income taxes in 2013, at 8.2 percent of GDP, personal and corporate income taxes continue to rise (2012: 7.9 percent) and are now closer to 2001-2002 levels of 8.6-9.0 percent of GDP.

Figure 15. Despite slower revenue collection, a contraction in development expenditures helped contain the deficit

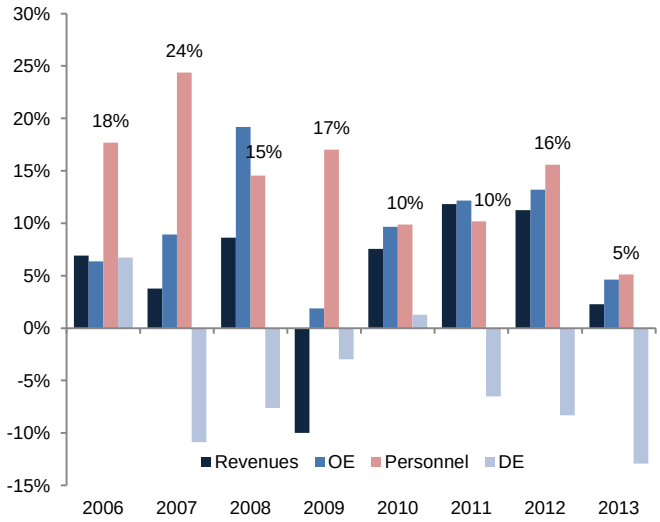
Federal Government finances, RM billions



Source CEIC, MOF, and World Bank staff calculations
Note: 'Personnel' includes emoluments, pensions and gratuities

Figure 16. Deviations from the budget are projected to come in at the lowest levels in recent years

Deviation of actual expenditures from budget, percent



Source: CEIC, MOF and World Bank staff calculations
Note: 'Personnel' includes emoluments, pensions and gratuities

16. A reduction in the growth of personnel spending partly offset significant slippages in subsidies, resulting in overall deceleration in operating expenditures. The expansion in current expenditures came in at a modest 2.8 percent in 2013 compared to 12.6 percent in 2012, with much of the change due to a sharp deceleration in personnel spending. After growing an average 12.6 percent per year between 2000 and 2012, emoluments rose by only 1.6 percent in 2013, the lowest annual growth rate in the past 10 years, supported also by lower bonuses given to civil servants. Expenditures on emoluments, gratuities and pensions continued to exceed original budget allocations, but this is expected to be at a more modest 5 percent in 2013 compared to an average of 10 percent between 2005 and 2012

[3] Growth rate of income taxes exceeds the growth rate of nominal GDP.

(Figure 16). These trends however, belay significant slippages in subsidies. Notwithstanding a slight decline in crude oil prices and the fuel subsidy rationalization in September, which is estimated to have saved the government RM1.1 billion, subsidies (including fuel subsidies and BR1M) are expected to exceed budget allocations by 15 percent.[4,]

17. Disbursements from the development budget shrank further. Development expenditures came in RM6.0 billion (11.6 percent) under budget, falling for the third consecutive year (2013: -8.2 percent; 2012: -2.2 percent). This likely was a major drag on public investment growth (+3.1 percent in 2013 in nominal terms) as investments by the 30 largest NFPEs were projected to increase by 50 percent in 2013. PETRONAS alone expanded investment (in nominal terms) by 25.7 percent to an estimated 5.7 percent of GDP in 2013, of which about 50-60 percent would be domestic investments. On the other hand, major investment projects such as the MRT as well as investments in independent power producers have been undertaken on a public-private partnership basis. Some of these projects are partially financed by government-guaranteed debt, which climbed to 15.9 percent of GDP at end-2013, from 15.2 percent in 2012 and 9.0 percent in 2008.

18. Monetary policy has remained supportive of growth. Bank Negara Malaysia (BNM) has kept its benchmark interest rate (the overnight policy rate, OPR) unchanged at 3.0 percent for over three years now, 50 bps lower than the rate that prevailed between 2006 and 2008. The holding pattern has been driven by counter-balancing forces. On the one hand, domestic demand growth has been robust over the past three years, the output gap has closed, wages seem to be rising, administered prices have started to increase and credit growth remains robust. Against these incipient demand-side forces, global interest rates remain low, the global environment has been weak until very recently, justifying domestic stimulus, and credit growth has been responding to macro-prudential measures. Importantly, inflation has been low and even recent pressures from hikes of administered prices have been mild.

Financial sector performance suggests stabilization in domestic demand

19. Credit growth to businesses moderated and financing from capital markets declined. Loans outstanding grew by 9.9 percent as at end-April 2014 compared to 11.6 percent a year earlier (12-month moving average; Figure 17). Outstanding household loans grew at a stable pace, but the growth of outstanding business loans moderated. Total financing extended through the banking system and private debt securities market to the business sector expanded by 5.1 percent as at end-2013 compared to 10.2 percent as at end-2012. Banking system loans to businesses similarly decelerated, growing 7.5 percent as of end-April 2014 (compared to 11.3 percent a year earlier). Working capital loans, which had been growing relatively slowly picked up, reflecting solid prospects for the economy. New issuances of private debt securities amounted to RM 83.9 billion in 2013, down from RM 121.1 billion in 2012, when several large issues were placed. New issuances amounted to RM 27.9 billion in the first four months of 2014 (Jan-Apr 2013: RM 26.7 billion). Following a record year in 2012, financing via the equity market in 2013 stood at RM16.0 billion.

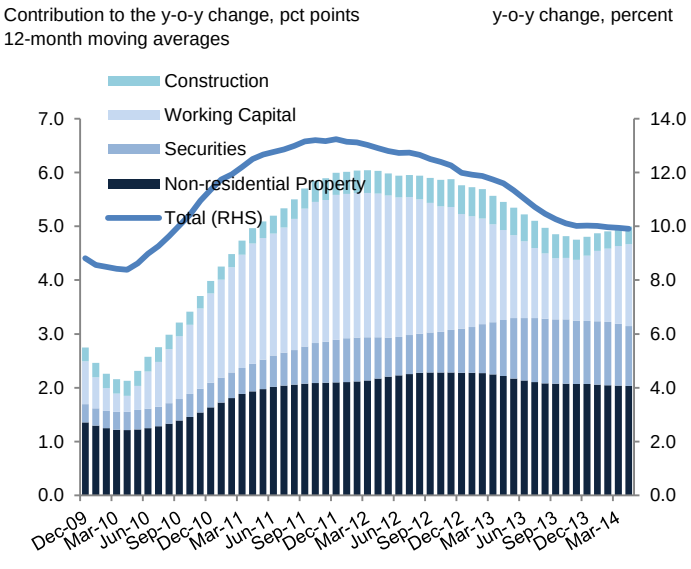
20. Households continued to borrow, especially to buy cars and residential property. Outstanding household loan growth from the banking system moderated marginally to 11.6 percent (y/y, as at end-April 2014), compared to 12.2 percent a year earlier. Despite the moderation in the growth of loans for personal use, credit cards, and, more recently, cars, the overall growth of household loans has been stable due to slightly higher growth in loans for the purchase of residential property, which is the largest category of loans (Figure 18). These patterns in loan growth combined with moderating but continued growth in lending by non-bank financial institutions (NBFIs) have kept household debt relatively high[5]. However, the asset position of households also improved as loans were increasingly taken for asset acquisition, and less for consumption. Since interest rates on mortgage loans are generally tied indirectly to the policy rate, the increase in the stock of mortgage debt held by households (35 percent of GDP as of April 2014 compared to 26 percent of GDP as of April 2008) poses additional challenges for monetary policy, as rate hikes are likely to have a relatively larger impact on household budgets than in the past.

[4] Brent crude oil prices declined by 2.8 percent on average between 2012 and 2013.

[5] According to BNM, as of December 2013, annual growth in outstanding NBFI lending to household sector (including lending by development financial institutions) halved to 9.6 percent (2012: + 22.1 percent). A similar trend was also evident between April 2014 and April 2013.

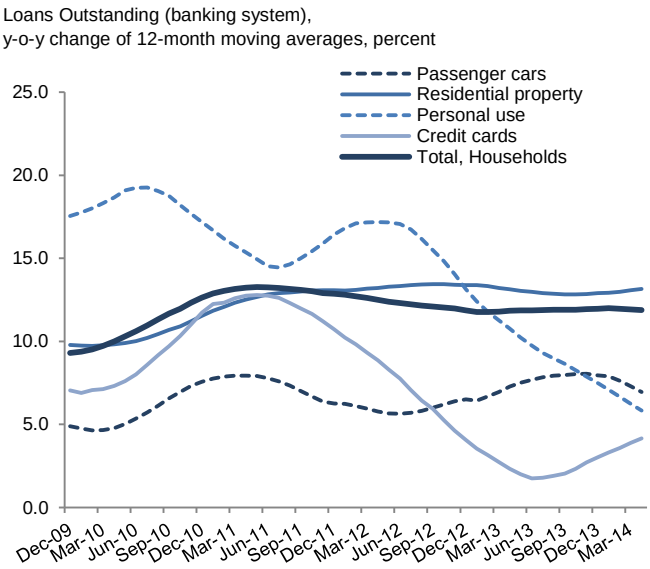
21. Impaired loans remain low, and banks are well-capitalized, mitigating the risk from buoyant credit growth. As of end-April 2014, the Malaysian banking sector remained well capitalized, with the Tier 1 capital ratio at 13.0 percent and total capital ratio at 14.7 percent, above levels required by national authorities and Basel III standards. Tier 1 capital comprised 88.4 percent of total capital. Asset quality was stable with the ratio of non-performing loans holding steady at 1.3 percent as of April 2014, similar to the ratio at end-April 2013. The volume of impaired loans actually contracted by 0.5 percent in April from the previous year, suggesting an improvement in the quality of assets in the banking sector.

Figure 17. Growth in working capital loans picked up again in 2014



Source: BNM and World Bank staff calculations

Figure 18. Household loan growth held steady along with credit for housing and auto purchases



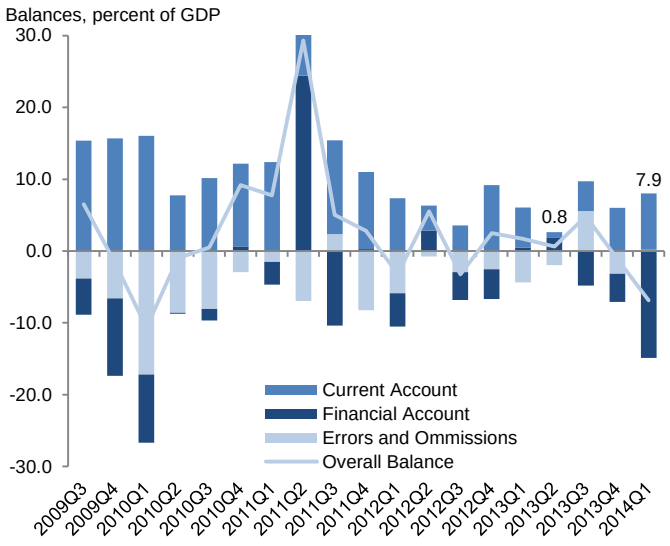
Source: BNM and World Bank staff calculations

A higher current account surplus only partially offsets portfolio outflows

22. Better export performance led to an improvement in Malaysia's current account. Malaysia's current account surplus declined from 15.5 percent of GDP in 2009 to 0.8 percent of GDP in the second quarter of 2013 (Figure 19). For 2013 as a whole, the current account posted a surplus of 4.0 percent of GDP, the lowest level in 15 years. This trend is linked both to the strength in productive domestic investments, which led to a surge in imports of capital goods, construction services and minerals for storage, but also to the weakness in exports of both goods and services. Accordingly, the improved export performance in the previous three quarters helped lift the current account to 7.9 percent of GDP for the first quarter of 2014. Figure 20 points to two proximate causes of this performance: first, the non-commodity balance recently improved thanks to a recovery in E&E exports and lower investment growth; and second, the decline in the commodity balance moderated on higher exports of crude oil in recent months.

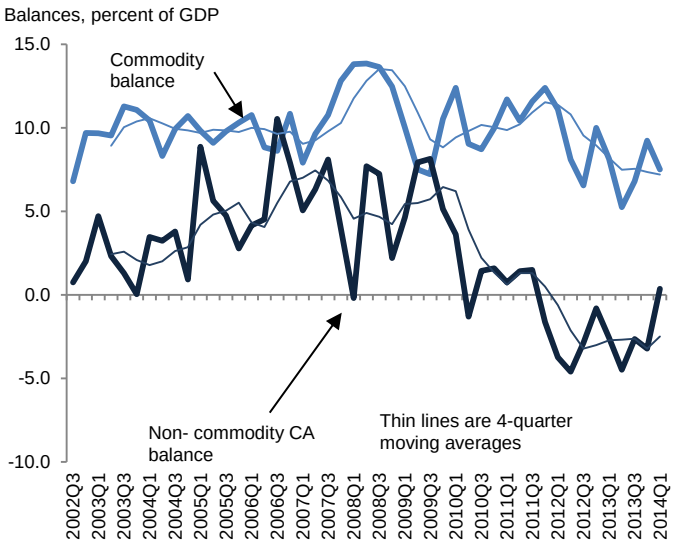
23. Portfolio outflows led to a negative balance in the financial account. Portfolio flows turned negative following signals from the US Federal Reserve in mid-2013 that it was getting ready to gradually reduce monetary accommodation. Foreign investors, who held 29 percent of Malaysian government securities as of March 2013, reduced their holdings as they rebalanced their portfolios (September 2013: 26 percent; March 2014: 27 percent). Outflows were also seen in equity markets, and were most pronounced in the third quarter of 2013 and first quarter of 2014; flows turned positive again in the second quarter of 2014 (Figure 21). Foreign direct investment (FDI) in Malaysia has averaged 3.7 percent of GDP in the past four quarters, slightly above the pre-crisis (2002-2007) average of 3.5 percent of GDP. Direct investment abroad contracted by 17.5 percent in 2013 (y/y) due to a lumpy investment in late 2012 (PETRONAS' USD 6 billion investment in Progress Energy in Canada). As a result, net FDI turned slightly positive (0.8 percent of GDP) in the past three quarters. Given increasing outflows in the three quarters through March 2014 the financial account posted a deficit of RM15.8 billion in 2013 (1.6 percent of yearly GDP, of which 21.4 billion in the second half) and RM 37.6 billion (14.9 percent of quarterly GDP) in the first quarter of 2014 (Figure 22).

Figure 19. A recovery in the current account surplus…



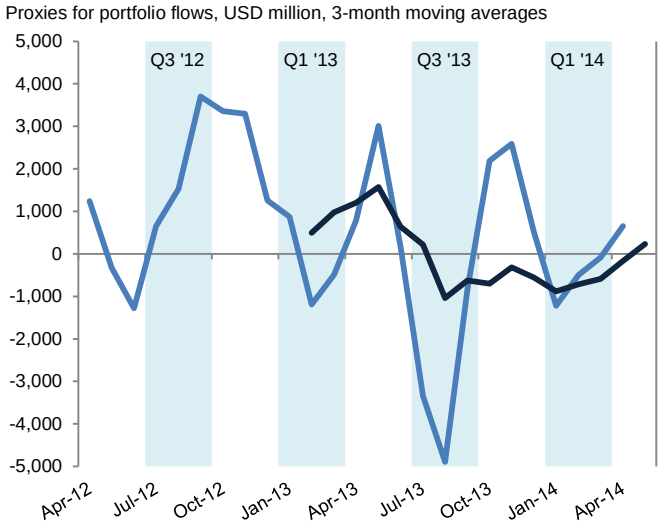
Source: CEIC and World Bank staff calculations

Figure 20. …was helped by improvements in the non-commodity current account balance.



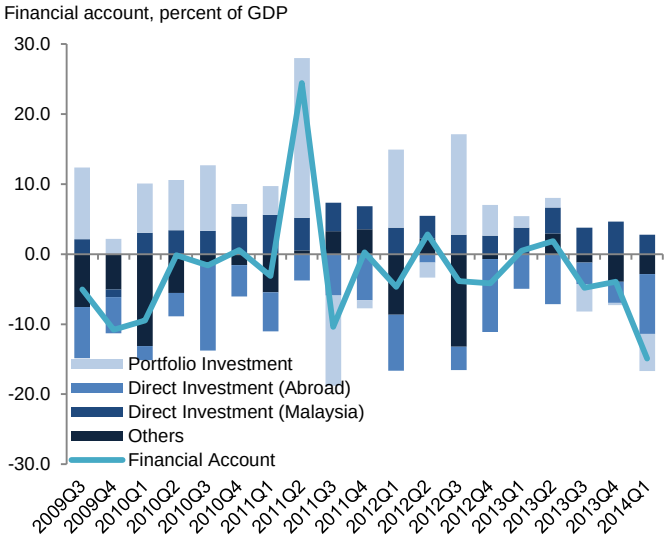
Source: CEIC and World Bank staff calculations
Notes: Commodity-related exports include food, beverages & tobacco; mineral fuels & lubricants; chemicals; animal and vegetable oils and fats

Figure 21. "Tapering" talk led to sales of Malaysian debt and equities by foreigners



Source: CEIC, MIDF and World Bank staff calculations

Figure 22. The financial account posted a deficit in the third quarter due to portfolio outflows



Source: CEIC and World Bank staff calculations

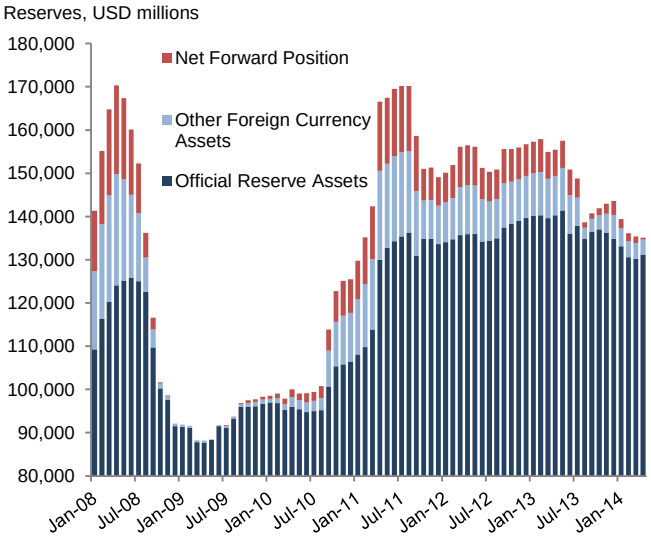
24. Net capital flows were negative in the previous two quarters, implying a decline in international reserves. The improvement in the current account only partly compensated for outflows in the financial account and errors and omissions, leading to overall capital outflows. As in previous episodes of volatility, BNM accommodated outflows first out of reductions in the net forward position and other foreign currency assets[6] before drawing on official reserve assets (Figure 23). Net official international reserves stand at USD 130.9 billion as of May 30, 2014. This level of reserves is sufficient to finance over 9.1 months of retained imports[7] and is 1.3 times the short-term external debt. Given

[6] Other foreign currency assets not included in official reserves, mostly BNM foreign currency deposits with residents.

[7] Retained imports are gross imports less re-exports.

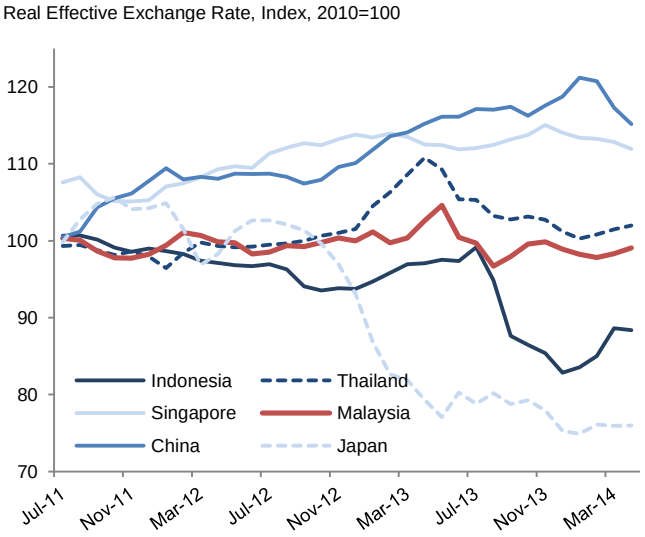
Malaysia's flexible exchange rate regime, outflows led to a nominal depreciation of the Ringgit in mid-2013 (Figure 24), which helped limit the extent of reserve depletion (reserves in fact remained steady in local currency terms).

Figure 23. Reserves are declining, but remain above the levels prior to the Eurozone crisis



Source: IMF
Note: Net Forward Position represents aggregate short and long positions in forwards and futures in foreign currencies vis-à-vis the domestic currency (incl. the forward leg of currency swaps)

Figure 24. The Ringgit depreciated between May and August 2013



Source: Bank for International Settlements

External demand will support growth in the near term

25. Malaysia's economic performance in 2014 and 2015 is projected to reflect a relative switch from domestic to external sources of growth. The outlook for the Malaysian economy is underpinned by two opposing trends: (i) a continued improvement in the external environment as the recovery in advanced economies takes hold and generates demand for emerging market exports, and (ii) tighter domestic conditions as policy makers at home and abroad respond to improvements by gradually withdrawing fiscal and monetary policy support. Tightening fiscal and monetary policie in the course of 2014 and 2015 are likely to dampen household consumption and investments. The combined contribution of fixed investments and consumption is expected to decline from 6.8 percentage points in 2013 to 5.7pp in 2014 and 5.3pp in 2015. On the other hand, as the global recovery continues to build momentum, net exports become less of a drag on growth. In 2014, the low base, higher export growth and the rebuilding of inventories that were depleted in 2013 leads growth to accelerate to 5.4 percent. The high base of 2014 leads to a slowdown in 2015, although quarterly growth is expected to accelerate from an average of 3.8 percent (q/q saar) in 2014 to 5.4 percent in 2015. Growth is expected to normalize by 2016 with higher contributions from final consumption. Table 1 and Table 2 present a summary of the forecasts.

Global recovery to remain on firm footing despite slowing growth in China

26. The 'old normal' of narrower growth differentials between advanced and emerging economies looks set to return in 2014 – 2016. Purchasing Managers' Indices (PMIs) in the advanced economies have been generally in growth territory since mid-2013, and remained there into 2014, although at a declining pace. In the Euro area, GDP is expected to grow by 1.1 percent in 2014 and 1.7 percent in 2015 (2013: -0.4 percent).[8] Meanwhile, the outlook is also favorable for the US (+2.1 percent in 2014 and +3.0 percent in 2015 vs. 1.9 percent in 2013) and Japan (+1.3 percent for 2014 and 2015 vs. +0.5 percent average for 2002-2007). Growth in emerging economies, especially China, is expected to moderate from recent peaks. China's PMI has diverged from the PMIs in G3 economies (Figure 25), and despite recently-enacted supportive measures, growth is expected to slow down to 7.6 percent in 2014 and 7.5

[8] Unless noted otherwise, all GDP forecasts are from the June 2014 Global Economic Prospects (World Bank 2014).

percent in 2015 (+11.6 percent in 2003-07). Prospects in the large ASEAN economies are also not bright and as a result, the difference in average growth rate between developing and advanced economies is expected to narrow to 2.9 percentage points (pp) in 2014 and 3.0 pp in 2015, compared to 4.3 pp in 2011. Given the relative size of advanced economies, these developments are likely to provide a net boost to global import demand and present opportunities for an export-oriented economy like Malaysia (see Box 1 for more details).

Table 1. GDP growth is expected to be maintained in 2014 and beyond…

Year-on-Year Growth Rates, percent

	2013	2014f	2015f	2016f
GDP	4.7	5.4	4.6	5.0
Domestic demand	6.4	6.3	5.7	6.3
Final consumption	7.0	5.7	5.1	6.3
Private sector	7.2	6.5	5.6	6.6
Public sector	6.3	2.6	3.0	5.2
GFCF	8.5	7.4	7.0	6.4
External demand	-12.6	-6.0	-12.3	-19.3
Exports of G&S	0.6	6.3	6.2	5.9
Imports of G&S	2.0	7.3	7.6	7.4

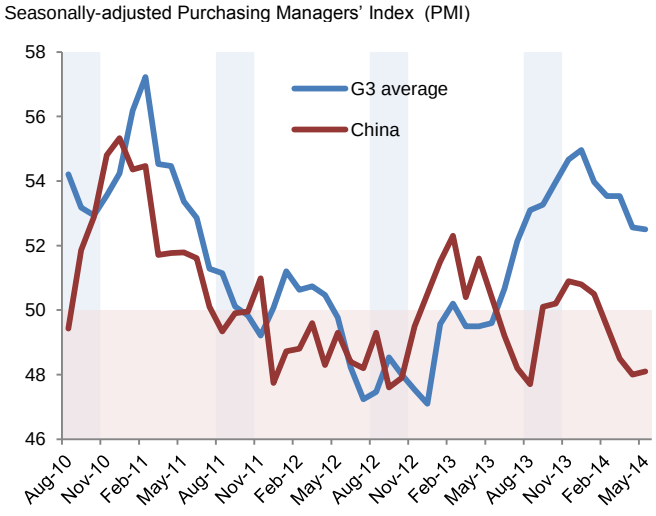
Table 2. …as exports compensate for weaker domestic demand in the near term

Contributions to GDP Growth, percentage points

	2013	2014f	2015f	2016f
GDP	4.7	5.4	4.6	5.0
Domestic demand	5.8	5.8	5.3	6.0
Final consumption	4.5	3.7	3.3	4.2
Private sector	3.6	3.4	3.0	3.5
Public sector	0.8	0.4	0.4	0.7
GFCF	2.3	2.0	2.0	1.8
Change in Stocks	-0.9	0.1	0.0	0.0
External demand	-1.1	-0.4	-0.8	-1.0
Exports of G&S	0.6	5.6	5.6	5.4
Imports of G&S	-1.7	-6.0	-6.3	-6.4

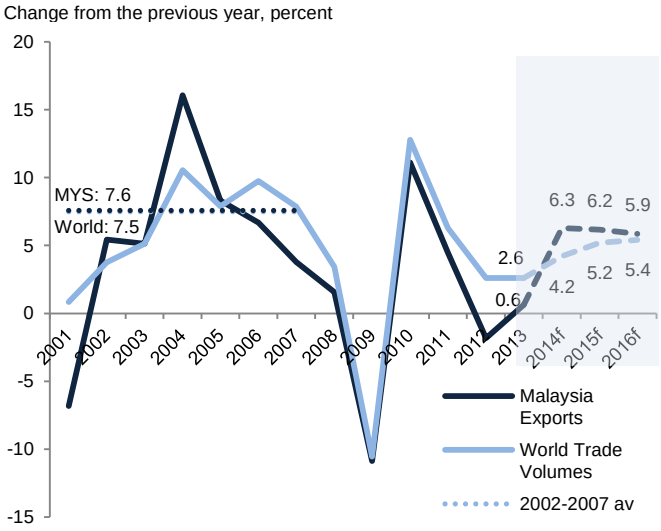
Source: CEIC, DOSM, World Bank staff calculations and projections; f=forecast.

Figure 25. The PMIs of China and the G3 decoupled in late 2013



Source: Bloomberg (Japan, Euro area), HSBC (China), CEIC (US)
Note: Simple average of PMIs for US. Euro area and Japan

Figure 26. World trade volumes are not expected to return to pre-crisis levels in the medium-term



Source: CEIC, World Bank Development Prospects Group and World Bank staff calculations
Note: World Bank forecasts as of June 2013

27. Export growth is expected to pick up momentum into 2014 and 2015. Export growth will be driven by higher energy commodity and petrochemical production, as new investments start to come online. A continued pick-up in E&E demand, as suggested by the Singapore electronics PMI (which remains on an expansionary mode, albeit weakly) and the recent response of Malaysia's E&E sector to improved demand conditions (perhaps aided by continued political uncertainty in Thailand) will make a substantial contribution. Based on a relatively favorable outlook for the global economy and gradual pick up in the output of energy commodities and E&E, Malaysia's exports are projected to expand by 6.3 percent in real terms 2014 and 6.2 percent in 2015. These rates are below Malaysia's pre-crisis averages of 7.6 percent export growth but above expected growth in global trade volumes, especially in 2014

due to the low base in 2013 (Figure 26). The negative contribution from net exports will continue in 2014-2016 but will narrow considerably (-0.4, -0.8 and -1.0 percentage points respectively).

Box 1. Slower growth in China vs. faster growth in high-income economies: are there effects on growth in East Asia?

Slower growth in China as it deleverages and rebalances its economy has raised concerns that developing countries (especially commodity exporters like Malaysia) will see current accounts balances deteriorate and growth slow, due to weaker import demand from China.

While certainly a valid concern, the slowing of Chinese growth unfolds against a backdrop of stronger growth in the high income world that, depending on the degree of trade dependence on China and type of trade, will offset the trade headwinds coming from China. Indeed, strengthening high-income demand partly explained the surge in developing country merchandise exports which rose at a 19 percent annualized pace in the final quarter of 2013, bolstering end-year GDP growth in a number of economies, including Malaysia. Momentum has eased since then, reflecting weakness in China and weather disruptions in the US, but should recover as these economies re-accelerate — to the benefit of developing economies with close trade linkages to the US and Euro Area.

On balance, rising high income demand should more than compensate for slowing Chinese import demand. Model simulations indicate that in response to a 1 percentage point increase in high income growth and a corresponding slowdown in China, growth rises by 0.24 percentage points in developing countries (excluding China), 0.22 percentage points in East Asia (ex-China) and 0.29 percentage points in Latin America and the Caribbean region.

Commodity exporters, notably metals exporters, benefit somewhat less due to China's large demand share in global metals markets. More generally, fears of Chinese growth's influence on developing country growth may be overblown. Slower growth in China in the post-crisis period had a negligible impact on the rest of East Asia, despite China being a major client for the region's commodities, and its intermediate and final goods. Although average Chinese growth fell from 11.6 percent in the period 2003-07 to 9.7 percent in the post-crisis period, growth in the rest of the region remained broadly stable and robust at around 5.5 percent.

Firms in the region have been able to leverage their underlying competitiveness and expanding supply potential to find other markets to offset the slower demand growth coming from China — in much the same way as growth in developing countries accelerated between 1995 and 2007 — even as growth in high-income countries was slowing (World Bank, 2012a).

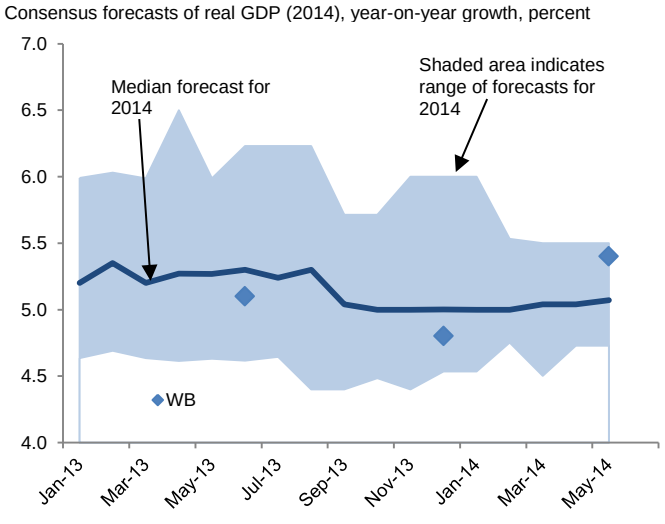
Source: Excerpted from World Bank (2014).

Headwinds on domestic demand to pick up

28. Several factors will create a drag on domestic demand and private consumption in particular. First, fiscal consolidation is expected to continue in earnest in 2014. Second, while tapering may be linked to a boost to the external sector (which in turn may spill-over to domestic sectors), the direct impact of higher interest rates or a weaker currency on both consumption and investment would be negative. Third, commodity prices are unlikely to make significant gains for a third year, impacting spending by agricultural households. Finally, households will be pressed to maintain the spending growth of recent years in the face of higher debt servicing costs and hikes in administered prices. Notwithstanding the headwinds, labor market conditions remain strong, and the Government is expected continue to provide cash transfers in lieu of subsidies, which would partially offset the impact of subsidy cuts on consumption. Consumption is expected to moderate accordingly and growth is expected to moderate from 7.2 percent in 2013 to 6.5 percent in 2014 (2015: +5.6 percent; 2016: 6.6 percent), before picking up to 7.2 percent in 2015. Growth in government consumption is expected to moderate significantly due to fiscal consolidation, from 6.3 percent in 2013 to 2.9 percent in 2014 and 3.0 percent in 2015 (2016: +5.2 percent).

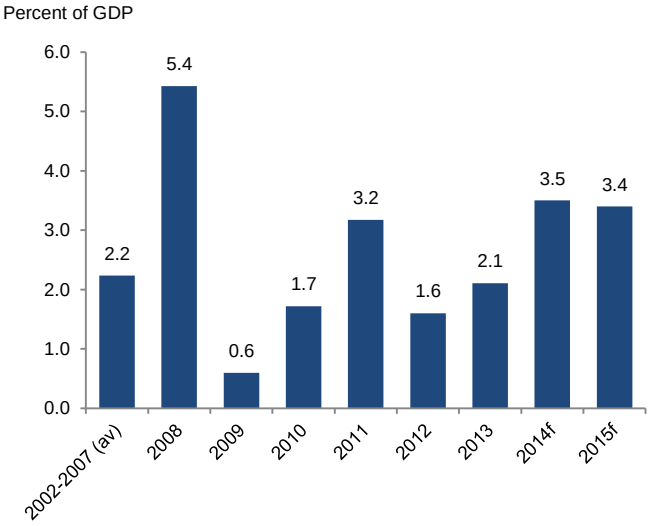
29. Gross fixed capital formation (GFCF) will continue to grow faster than GDP, but at a slowing rate. Given expectations of improvement in the global environment in 2014 as well as the significant pipeline of investment projects led by PETRONAS' Pengerang Integrated Complex (PIC) in Southern Johor, GFCF should continue to make an important contribution to growth[9]. Nevertheless, some dampening of the momentum is expected given the high base effect as well as the impact of tapering, higher global interest rates, and fiscal consolidation, which may also revive talks of sequencing certain investments with high import content. Real gross fixed capital formation is expected to decelerate from 8.5 percent in 2013 to 7.4 percent in 2014 (2015: +7.0 percent; 2016: +6.4 percent). As GFCF growth is expected to remain above GDP growth in the medium term, the share of investments in GDP is expected to climb further from 27.7 percent in 2013 to 29.2 percent of GDP in 2016.

Figure 27. Forecasts for 2014 growth have remained stable…



Source: Consensus Economics, World Bank staff calculations and projections

Figure 28. Inflation is expected to pick up modestly in 2014 and 2015



Source: CEIC, DOSM, World Bank staff projections

30. Overall, on a year-on-year basis Malaysia is expected to register real GDP growth of 5.4 percent in 2014, decelerating due to base effects to 4.6 percent in 2015 before normalizing to 5.0 percent in 2016. The contribution of domestic demand will decline as exports pick up. Domestic demand as defined in the national accounts (total consumption and investment) is expected to contribute 5.8 and 5.3 percentage points to GDP growth in 2014 and 2015, down from 9.8 percentage points in 2012 (Table 1). The World Bank's forecast for 2014 lies 0.3 percentage point above the median consensus forecast (as of June; Figure 27) and that for 2015 somewhat below the median consensus estimate. On a quarter-on-quarter basis, the forecast assumes a 3.8 percent average annualized growth in 2014. Headline GDP growth projections have been increased for 2014 compared to those in the December 2013 Malaysia Economic Monitor due to economic expansion surprising on the upside in the first quarter of 2014 and the further improvement in external conditions.

31. Changes in administered prices and the introduction of the GST will lead to a modest pick-up in inflation in 2014 and 2015. Malaysia's headline inflation rate is projected to come at around 3.5 percent in 2014 (2013: 2.1 percent), moderating to 3.4 percent in 2015 (Figure 28). The forecast for 2014-2015 is higher than the average rate observed during the 2002-2007 period (2.2 percent) due to the low base in 2013, strength in domestic demand, hikes in fuel prices, electricity tariffs and tobacco taxes, and finally the broader implementation of the minimum wage. These factors are tempered by the continuation of benign supply conditions, as indicated by the expectation of stable

[9] The proposed PIC comprises a world scale Refinery and Petrochemical Integrated Development (RAPID) and other associated facilities. RAPID is estimated to cost about US$16 billion while the associated facilities will involve an investment of about US$11 billion. The project is expected to start in 2014 and be completed by 2019.

commodity prices. Inflation is expected to come at 3.0 percent in 2016, as the base effects from fiscal consolidation in 2014 wane.

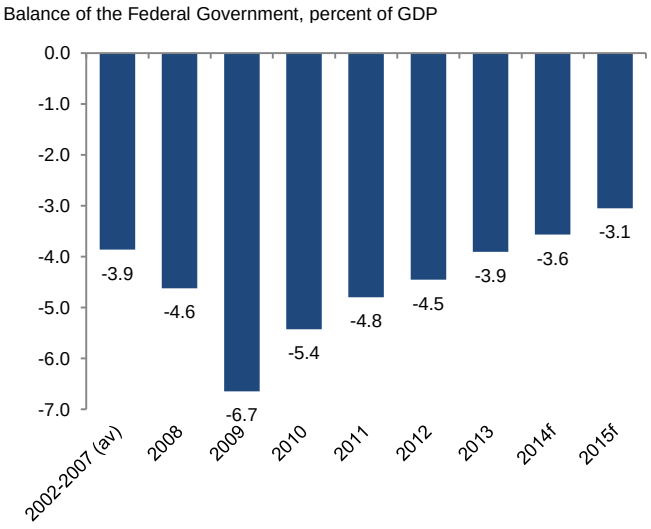
Fiscal and monetary accommodation to be reduced in 2014 and 2015

32. Fiscal consolidation will have to take place primarily through spending restraint rather than revenue gains. The Government reaffirmed its commitment to achieving a budget deficit of 3.5 percent of GDP in 2014 and 3.0 percent in 2015. The 2014 targets are premised on realistic projections for moderate revenue growth including a further reduction in oil-related revenues. The revenue-to-GDP ratio is in fact projected to decline to 21.2 percent of GDP in 2014 from 22.1 percent in 2012. Although the GST is likely to provide additional revenues starting in 2015, there is limited immediate potential for significant upside, especially with additional tax breaks that are coming online with the introduction of GST as well as pressure at that time to delay further adjustments to administered prices. Therefore, the reduction in the deficit will need to be achieved through expenditure restraint.

33. Slower growth in emoluments and a reduction in subsidies will be the drivers of consolidation. Spending on personnel (wages, pensions and gratuities) is projected to expand by a modest 4.5 percent in 2014. Ensuring that spending on emoluments consistently comes close to budgeted allocations, as was the case in 2013, will be critical to the consolidation effort and also to build the credibility of the budget. The bulk of the consolidation effort targets subsidies. The Government abolished the sugar subsidy, which is expected to save RM 500-600 million in 2014 compared to 2013. However, most of the contraction in the subsidy bill comes from fuel subsidies. The Government has recently announced plans to reduce the volume of subsidized fuel through better targeting of fuel subsidies. Further details are required to assess whether to meet the Government's ambitious targets these measures are sufficient without further reductions in the quantum of subsidies.[10]

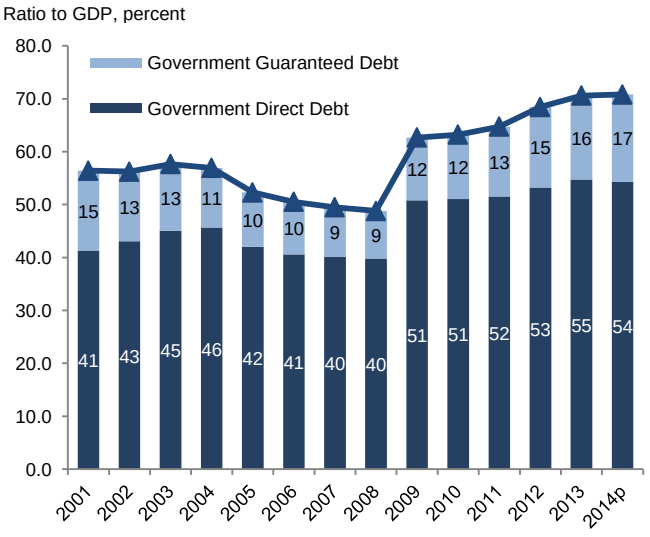
34. The introduction of the GST will support consolidation efforts in the medium-term. The main fiscal policy reform introduced in the 2014 budget was the announcement that a Goods and Services Tax (GST) would be implemented in April 2015 at a rate of 6 percent, with cash transfers expanded to mitigate the impact both of the GST and subsidy cuts on lower-income households. GST is expected to eventually broaden the tax base and diversify it from oil-revenues, ensuring greater buoyancy of revenues in the medium-term.

Figure 29. Despite higher expenditures, the federal balance is expected to improve



Source: CEIC, MOF, and World Bank staff calculations and projections

Figure 30. Debt levels are expected to stabilize in 2014



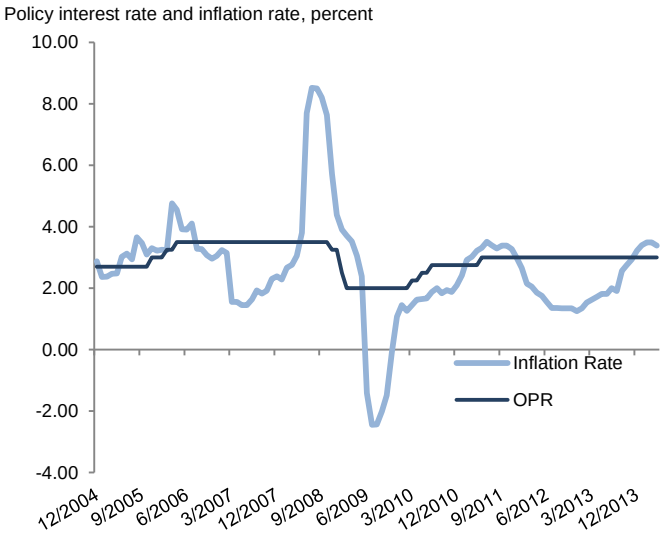
Source: CEIC, MOF, World Bank staff projections

[10] The allocation for fuel subsidies has been reduced by 23 percent, but the allocation for BR1M, which is included in the same line as fuel subsidies, has been increased by 12 percent on account of the expansion of the program. Therefore, the 'actual' spending on fuel subsidies needs to contract by RM7.1 billion or 28.6 percent in 2014 in order for the target to be met.

35. As a result of consolidation, debt levels are expected to decline. To signal its commitment to fiscal prudence, the Government will continue to make a significant effort to meet its deficit targets. Given continued momentum for fiscal consolidation in 2014 and 2015, the deficit is projected to remain on a downward trajectory, though challenges in fully implementing subsidy reforms in 2014 and reduced headroom to increase revenues mean that the headline deficit could be narrowly missed (Figure 29). Declining deficit levels are expected to lead to a reduction in the ratio of federal government debt to GDP from 54.8 to 54.3 percent, while contingent liabilities are expected to continue to increase (Figure 30). Long-term fiscal sustainability will require continuing on the path of consolidation, while carefully monitoring and managing contingent liabilities and other sources of fiscal risk.[11]

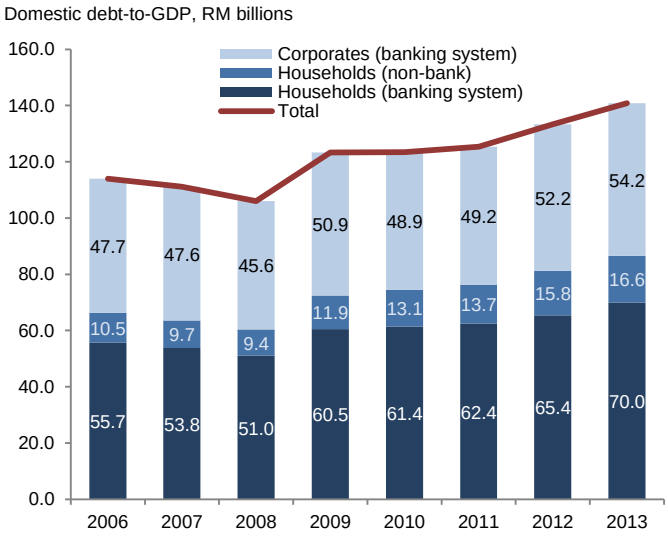
36. Bank Negara has signaled that it may have to tighten policy to avoid the build-up of financial imbalances. So far BNM has been managing risks of financial imbalances primarily through macro-prudential regulations. In 2012 and 2013, BNM issued guidelines that require financial institutions to assess borrowers based on net rather than gross income and, among other things, established a maximum loan tenure of 10 years for personal financing and a maximum of 35 years for financing granted for the purchase of residential and non-residential properties, as well as the prohibition of pre-approved personal financing products. Although such efforts have borne fruit (credit growth continued to decelerate, albeit slowly, in 2013), there is concern that the real interest rate has become negative (Figure 31), and that household debt has continued to climb, reaching 86.5 percent in 2013 from 81.3 percent in 2012 (Figure 32). BNM accordingly noted that "the current monetary and financial conditions could lead to a broader build up in economic and financial imbalances. Going forward, the degree of monetary accommodation may need to be adjusted to ensure that the risks arising from the accumulation of these imbalances would not undermine the growth prospects of the Malaysian economy." To ensure that future changes in monetary policy stance is adequately transmitted to borrowers, BNM has also reformed the interest rate framework, effective January 2015.

Figure 31. Real policy rates turned negative in early 2014



Source: CEIC, DOSM, BNM
Note: Calculated subtracting current inflation from the policy rate

Figure 32. Household debt continued to build in 2013, even as corporate leverage was stable



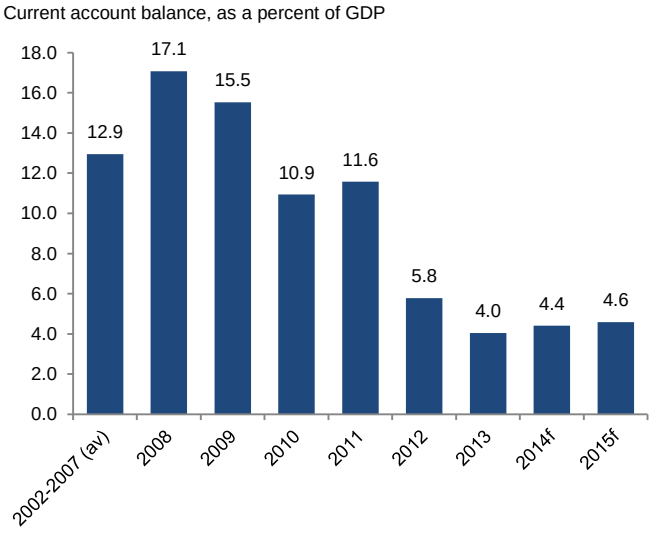
Source: CEIC, BNM, IMF and World Bank staff calculations
Note: Corporates (banking system) corresponds to other depository corporation claims on private sector less banking system loans to households. Excludes private debt securities, which are estimated at 29.8 percent of GDP in 2013

[11] Contingent liabilities include contingent commitments under PPPs and government guarantees, among others. Non-debt liabilities include unfunded pension liabilities and non-contingent commitments under PPPs such as capital leases.

The current account should stabilize at a modest surplus

37. The current account surplus is expected to stabilize above 4 percent of GDP. A recovery in exports accompanied by a dampening of domestic demand would lead the current account surplus to stabilize as a percentage of GDP at 4.4 percent in 2014 and 4.6 percent in 2016 (Figure 33). The current account surpluses in 2014 and 2015 increase only slightly despite more moderate investment growth and higher in exports due to lower commodity prices, the projection of a positive contribution from inventory investments (much of which are imported parts), and the high import content of E&E exports, which are expected to pick up as part of the export recovery.

Figure 33. The current account is expected to remain in surplus, albeit a narrowing one



Source: CEIC, DOSM, and World Bank staff projections

Risks now more evenly external and domestic

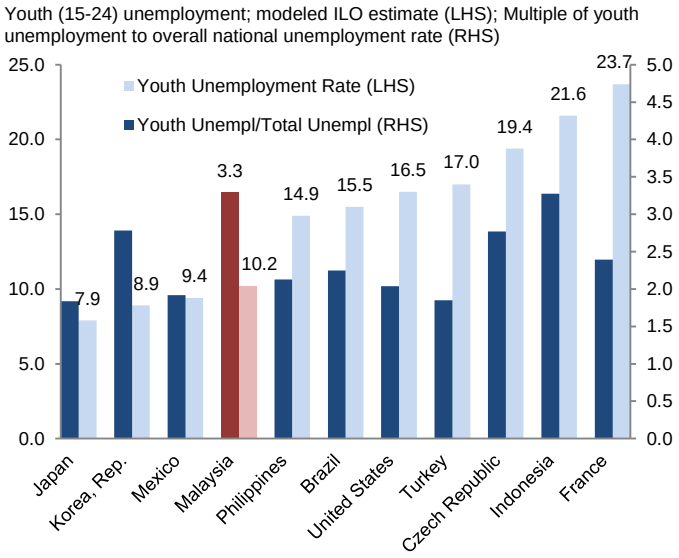
38. The uncertainty about the favorable outlook for the global economy has receded, but the balance of risks remains on the downside. Risks have not changed materially in the past six months and include a disorderly exit from quantitative easing in advanced economies, substantially slower growth in China and a sharp decline in commodity prices. Although the US has started normalizing monetary policy, the EU has recently come up with further monetary stimulus to fight deflation, providing at short-term support to global liquidity as well. In addition, Chinese policy makers have levers to prevent growth from crossing a lower-bound threshold (which also contributes to stable commodity prices). Therefore, while these risks cannot be written off, they appear to have receded for the near term. Domestic risks are perhaps more salient and include larger than expected spillovers from fiscal and credit tightening on domestic demand as households deleverage, and a failure of export-oriented industries to fully capitalize on improved demand conditions due to supply constraints. While Malaysia's export performance in the past five months provides some reassurance with respect to the latter risk, the full impact of fiscal and monetary tightening is yet to be seen.

A. Matching Talent to Jobs

Fallow talent amidst a talent shortage?

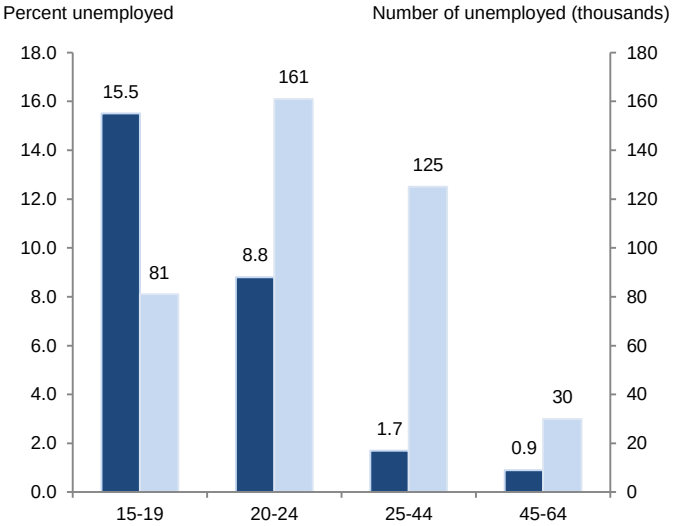
39. Youth unemployment in Malaysia presents a puzzle: if the economy requires increasing numbers of talented workers, why does a relatively large share of better-educated youth have trouble finding a job? At 10.2 percent (2012), the unemployment rate among 15-24 year-olds in Malaysia is not particularly high when compared to other economies (Figure 34). Youth unemployment is also typically higher than the overall unemployment rate (all darker bars in Figure 34 are above 1). But in Malaysia the ratio of youth unemployment to overall unemployment appears high at 3.3 times and 60 percent of all unemployed workers in Malaysia are between 15 and 24 (Figure 35). Of special concern is the concentration of the unemployed among 20-24 year-olds, as this cohort of workers is relatively well-educated. The number of workers with a tertiary education rose by 46 percent between 2007 and 2012, largely due to new entrants likely to be in the 20-24 age group in 2012 and many of whom fresh graduates. According to the MoHE (2013), in 2012, a quarter of all graduates had not secured employment at graduation, and World Bank (2013) finds that nearly one in five degree holders under the age of 25 were unemployed in 2012.

Figure 34. The youth unemployment rate in Malaysia is not atypical



Source: WDI, ILO
Note: Figures are for reference year 2012

Figure 35. Unemployment is concentrated among the youth in Malaysia



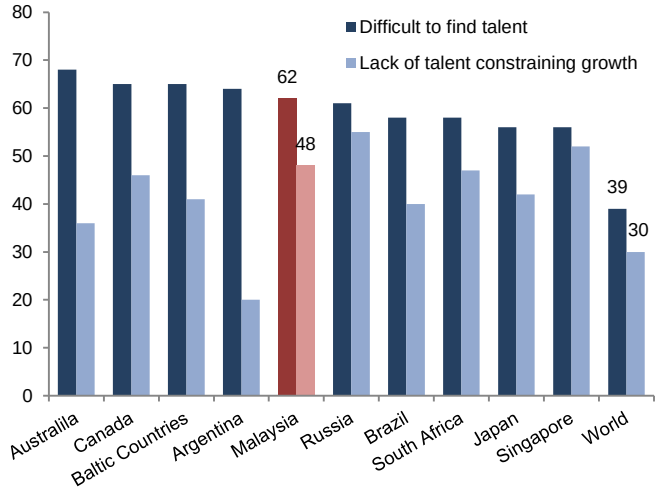
Source: DOSM (Labor Force Statistics Time Series), 2012 and World Bank staff calculations

40. On the other hand, firms regularly cite talent as one of their top business challenges. A recent survey conducted by global consultancy Grant Thornton (2013) finds that 62 percent of Malaysian firms have difficulty finding skilled workers, and 48 percent identify lack of talent as a constraint for future growth (Figure 36). These are similar to findings of 2007 Productivity and Investment Climate Survey, where 40 percent of Malaysian firms reported not being able to fill their vacancies due to shortages of skilled production workers. The demand for skilled talent is only set to increase further; across all National Key Economic Areas (NKEAs), most firms already demand basic Mathematics and communication skills, even for mid-tier positions (Figure 37).

41. To enhance the employability of its youth, Malaysia needs to address the mismatch in skills formation and build a functioning feedback mechanism between educational institutions and the industry. This note probes into some of the causes of the skills mismatch with evidence from a survey conducted by TalentCorp and the World Bank (see Box 2 for details), and suggests policy options to address the potential causes.

Figure 36. Firms say they cannot find fresh graduates with the necessary skills

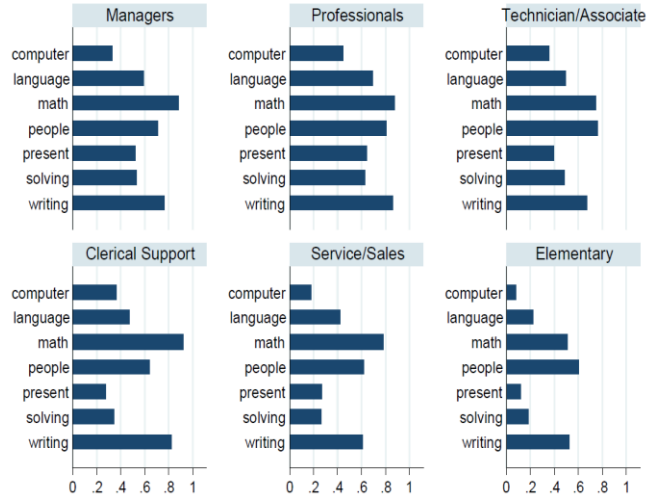
Share of respondents agreeing, percent



Source: Grant-Thornton International Business Report 2013

Figure 37. Most NKEA firms require Math and writing skills even for mid-level jobs

Share of NKEA firms requiring the skill for a given occupation, percent



Source: World Bank 2013

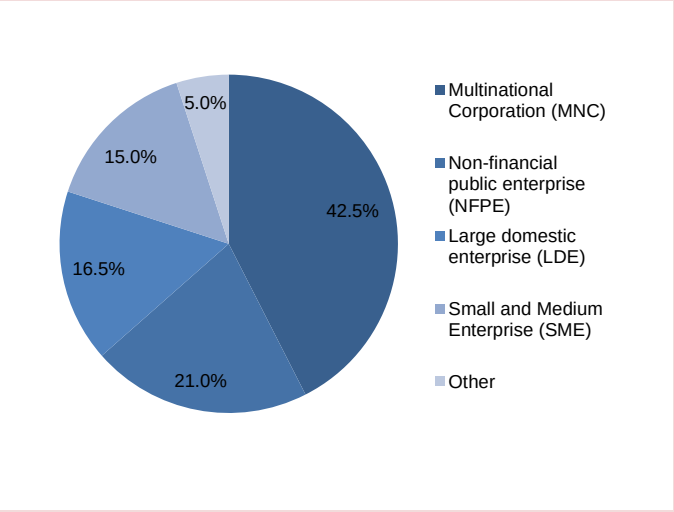
Box 2. The World Bank-TalentCorp Survey on Graduate Employability

In 2014, TalentCorp, in collaboration with the World Bank, conducted a graduate employability survey to learn more about trends in graduate employability in Malaysia, the perceived quality of Malaysian graduates by top employers, as well as the efficacy of career services in universities and Government-funded graduate employability programs. The survey was conducted from March 28 to April 18 2014 on line, via telephone and in person

The survey covered 200 companies that employ around 245,000 workers and represent a wide cross-section of National Key Economic Areas (NKEAs). Most respondents were foreign multinationals (43 percent), followed by non-financial public enterprises (including government-linked companies), large domestic enterprises (both listed and unlisted) and SMEs (Figure 38). Other institutions comprised of several government/not-for-profit bodies. With respect to sectors of activity, respondents represented over 14 NKEAs, notably education (18 percent), manufacturing (15 percent) and agriculture (13 percent); see Figure 39.

Figure 38. Surveyed companies by type

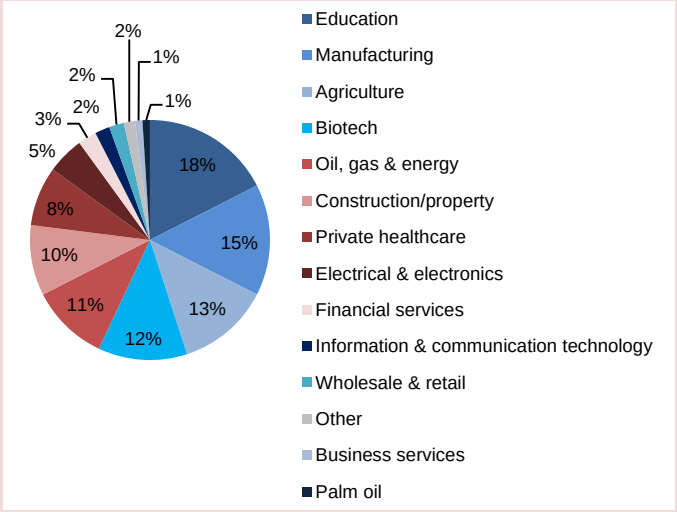
Percent



Source: World Bank / TalentCorp 2014

Figure 39. Surveyed companies by industry

Percent



Source: World Bank / TalentCorp 2014

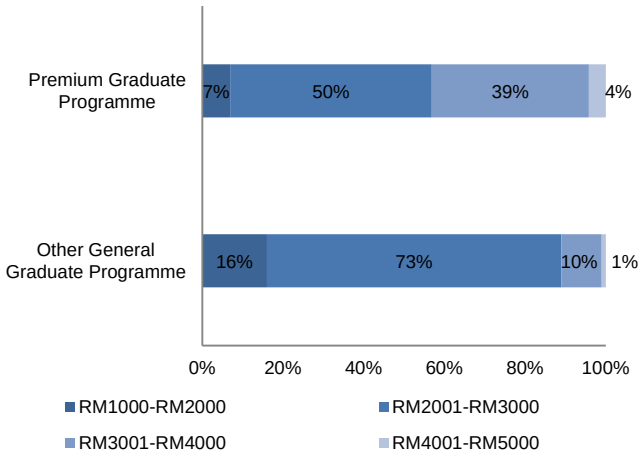
Source: Authors

Companies seem to be willing to pay for talent – when they find it

42. Graduate unemployment is not necessarily linked to inadequate salary incentives for skilled graduates. One possible explanation for the relatively high rate of graduate unemployment could be employers' unwillingness to offer the level of compensation needed to meet the expectations of recent graduates and attract the required talent. In a 2011 Jobstreet survey, employers claimed many graduates have "unrealistic" salary expectations. Hays (2014, p. 29) shows that a graduate accountant makes about 2.5 times more in Singapore compared to Malaysia despite similar qualifications; this may influence the salary expectations of Malaysian graduates and their willingness to take up available positions. While pay levels could be relevant in specific sectors, many companies say they do pay premium wages for graduates with the right skills. About 75 percent companies responded that they have introduced premium graduate programs to recruit their top entry-level talent (including management trainee programs), in addition to their existing general graduate programs. According to the survey, 43 percent of companies interviewed paid these 'premium' entry-level graduates between RM3,000 – RM5,000 a month (Figure 40). By contrast, only 11 percent of respondents paid general entry-level graduates the same salary.

Figure 40. Employers are willing to pay a premium for soft skills.

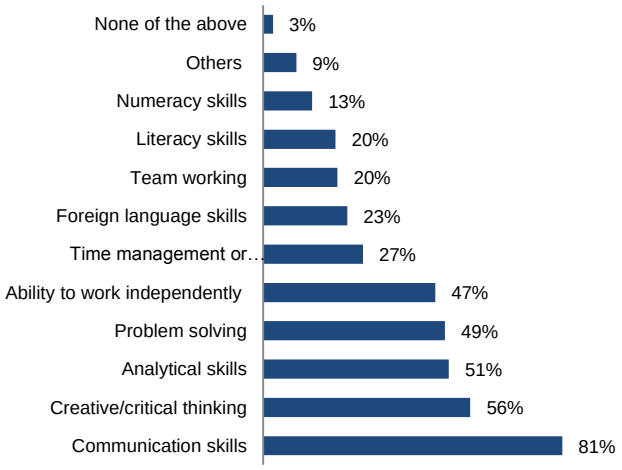
Share of respondents according to salary range, percent



Source: TalentCorp/World Bank 2014

Figure 41. Fresh graduates from local universities lack soft skills

Share of respondents citing skill deficits in fresh graduates, percent



Source: TalentCorp/World Bank 2014

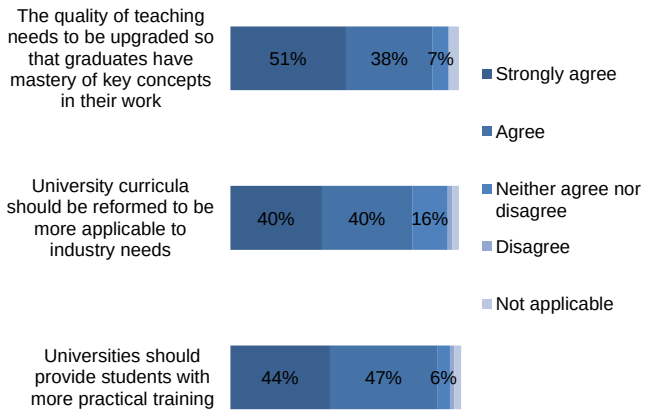
43. A main driver of graduate unemployment according to survey respondents are skills mismatches between recent graduates and employers' demands. Employers increasingly view soft skills – such as the ability to think critically and creatively, and to communicate and work independently – as a key factor in hiring entry-level graduates, but graduates from Malaysian universities seem to be lacking in these areas. According to the survey, 81 percent of all respondents identify communication skills as the major deficit, followed by creative/critical thinking, analytical and problem-solving competencies (Figure 41). For 65 percent of firms answering this question, the overall lack of skills is the main difficulty in recruiting local graduates.

44. The skills mismatch is primarily linked to deficiencies in the post-secondary education system, which has not evolved in tandem with industry needs. Companies overwhelmingly agree that the content and quality of local university education do not adequately prepare students for the workforce. 90 percent of all companies surveyed think that universities should provide students with more practical training, while 80 percent think that universities should consider reforming university curricula to reflect the current realities of the labor market (Figure 42). The majority of companies also think that universities need to improve the quality of teaching, given that many fresh graduates do not demonstrate mastery of key concepts related to their job scope. Consistent with these views, firms rank foreign universities well above domestic institutes, especially with respect to soft skills. Interestingly, private higher

education institutions (IPTS) rank higher among employers across all skills areas, but again particularly with respect to soft skills, strongly suggesting this to be a major area of deficit (Figure 43).[12]

Figure 42. Firms do not think that universities prepare students for the workplace

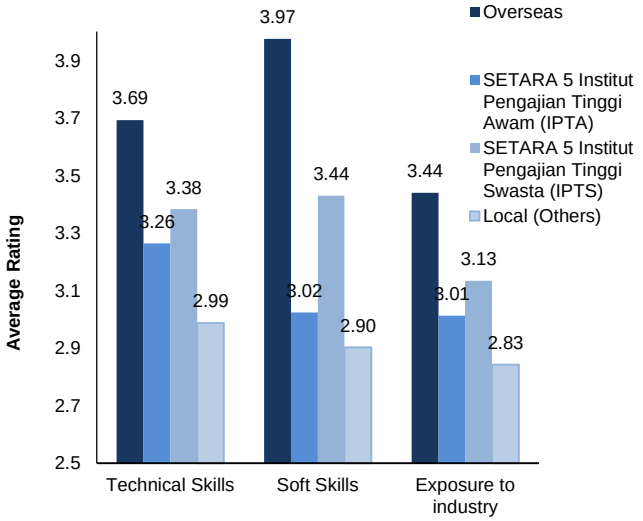
Share of respondents who agree/disagree, percentage



Source: TalentCorp/World Bank 2014

Figure 43. Graduates from foreign universities are more favorably ranked, especially for soft skills

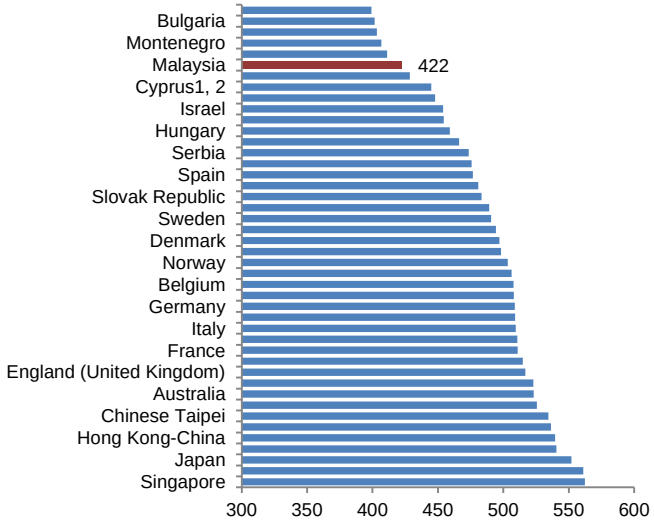
Average skill rating by university type



Source: TalentCorp/World Bank 2014

Figure 44. Malaysian students rank in the bottom quintile in an international test of creative problem solving

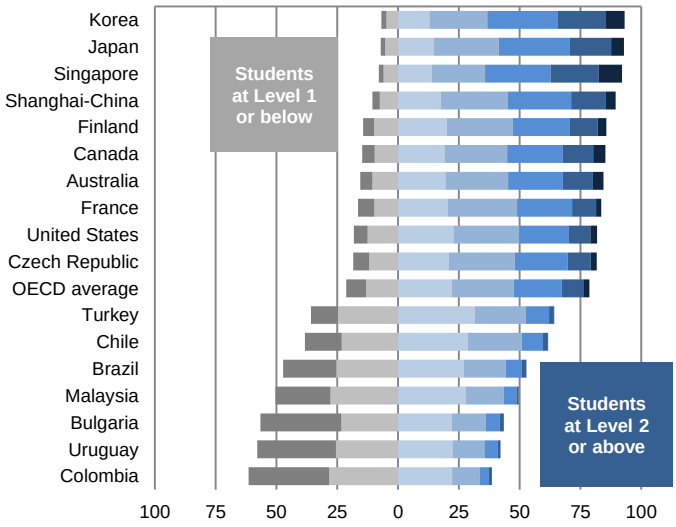
Score in PISA problem-solving assessment



Source: OECD 2014

Figure 45. Only half of Malaysian students can solve unfamiliar problems

Percentage of students at the different levels of problem-solving proficiency



Source: OECD 2014

Note: Level 1 students can partially explore familiar problem scenarios and only solve straightforward problems. Level 2 students can explore and partially understand unfamiliar problem scenarios, test a simple hypothesis and solve problems with a single, specific constraint.

45. At one level, the identified weaknesses in producing graduates with adequate soft skills can be traced back to basic education. While the onus is on universities to produce the required skills for the labor market, addressing shortcomings in basic education are critical. Consider problem-solving skills, which half of the respondents said was

[12] Nevertheless, the tracer study conducted in 2013 by MoE recorded graduate unemployment for IPTA at 24.5 percent compared to 26.6 percent for IPTS.

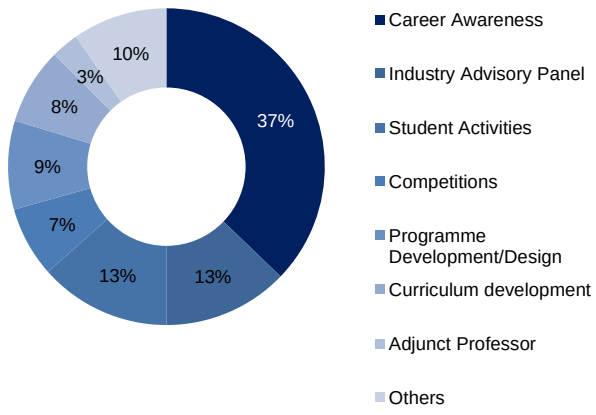
lacking in Malaysian graduates (Figure 41). In the most recent PISA assessment of creative problem solving conducted in 2012 (OECD, 2014), 15 year-old students performed relatively poorly, with about half of students unable to understand even a small part of an unfamiliar problem (Figure 44 and Figure 45). Students carry these deficiencies up to the tertiary level, where the emphasis shifts to developing in-depth technical knowledge of a subject as opposed to improving these skills, which are nonetheless highly prized in labor markets.

Limited interaction between employers and institutions of higher education

46. The skills mismatch is exacerbated by the lack of communication between universities and firms on how to develop employable graduates. Universities cannot produce graduates who are ready for the workforce unless they develop a clear, accurate understanding of what firms are looking for in entry-level employees and incorporate these requirements into the course curricula, teaching and assessment methods, or other means. Unfortunately, most companies do not currently engage with local universities on such a strategic level, nor communicate their views of what or how students should be learning in order to boost their employability. Less than 10 percent of companies who responded to the survey have had experience in developing curricula or joint programs with universities (Figure 46). The representation of industry professionals in the teaching faculty of universities is also meagre, with only 3 percent of respondents having participated in the classroom as adjunct professors.

Figure 46. Companies largely do not cooperate with universities to inculcate students with the right skills…

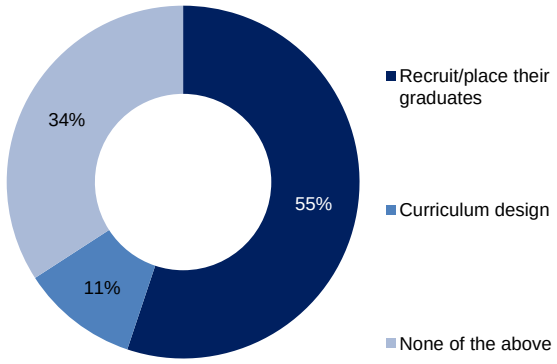
Share of respondents, percent



Source: TalentCorp/World Bank 2014

Figure 47. … nor do they always collaborate to recruit/place graduates into the workforce.

Share of respondents, percent



Source: TalentCorp/World Bank 2014

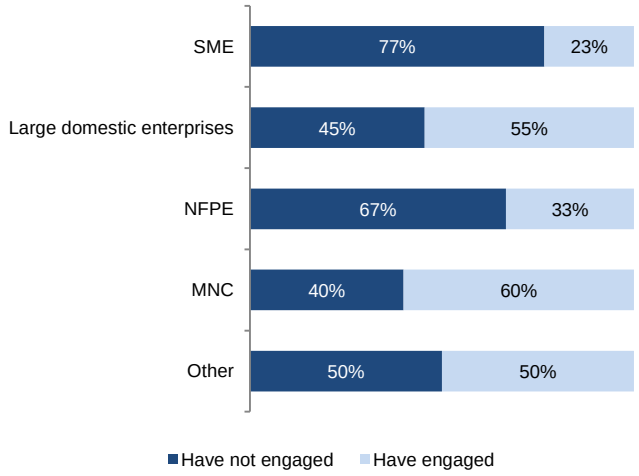
47. Even at the recruitment stage, companies and universities do not always cooperate in matching graduating students with entry-level opportunities. Through industry awareness, networking or recruitment events, universities provide first-time job seekers with important opportunities to interact with potential employers and understand the specific qualifications/skills they are looking for. In turn, these events should help firms identify and recruit high-performing students. Although this appears to be the case for the majority of respondents in the survey, cooperation between local universities and firms in this regard is far from ideal. 34 percent of firms have never approached universities to recruit candidates, nor been approached by universities to place their graduates into entry-level positions (Figure 47). If graduating students do not have access to potential employers through other means, they may not be aware of the full range of opportunities available to them, or fully understand the requirements of entry-level positions in their fields to position themselves competitively in the application process.

48. Career services centers are underutilized and do not fully understand companies' needs. Universities' career services centers should be the primary link between students and the labor market, matching students with the appropriate types of professional opportunities, providing career counselling and other types of support during the job search process. In Malaysia, they are somewhat under-utilized: 53 percent of survey respondents said that they do not work with these centers. Engagement with career services centers is lowest among SMEs at 23 percent, followed

by NFPEs at 33 percent (Figure 48). Even companies that have engaged with such services are largely ambivalent on their effectiveness; 43 percent of survey respondents opted to remain neutral on the question of whether career services centers are effective in matching students with the firm's needs (Figure 49). While firms' perceptions of career services may vary according to industry, the findings reinforce the overall absence of a functioning mechanism for feedback and cooperation between universities and firms to address the skills mismatch.

Figure 48. With the exception of MNCs, half of all companies do not engage with career services centers…

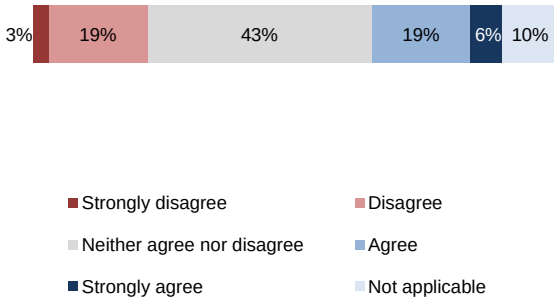
Share of respondents who have/have not engaged with university career services, percentage, percent



Source: TalentCorp/World Bank 2014

Figure 49. …and those who have are ambivalent about their effectiveness.

Share of respondents who agree/disagree with the statement that university career services are effective at matching employers' needs, percent



Source: TalentCorp/World Bank 2014

Preventive measures to address the root causes of the skills mismatch among recent graduates

49. Malaysia has made efforts to help unemployed graduates enter the workforce, but more attention and resources must be given to deficiencies in the education system that lead a relatively large share of graduates to become unemployed in the first place. Many existing programs to address graduate employability are targeted at those who already have degrees, and/or been unemployed for six months or more. Greater emphasis may be given to preventative measures that focus on boosting students' employability before they graduate from university and enable graduates to find employment without relying on government resources.

50. In order to align the skills imparted in universities with those required by employers, there must be greater collaboration between universities and firms to improve the quality and content of university education. Post-secondary education can take into account labor market needs to ensure that students graduate with relevant skill sets. At a minimum, industry experts could be involved in efforts to improve and develop university curricula to ensure that students develop the necessary soft and technical skills required for a particular field. For example, the City College of Chicago conducted interviews with employers and partnered with firms to narrow the skills gap among its graduates in key sectors of the local economy (see Box 3 for details). Apart from improving content, industry experts may also be invited to teach short courses at universities, support final year projects or participate as board members of higher education institutions. In addition, the Ministry of Higher Education may consider establishing permanent mechanisms for ongoing dialogue between universities and firms on how to improve graduates' employability. One benchmark for such efforts is New Zealand, where the Tertiary Education Commission funded "experts in residence" from industries to increase the relevance of curricula and developed a Business Links Fund to formalize industry input into curricular design (OECD, 2008). Strengthening collaborations with firms will also enhance the responsiveness of universities to the changes in industry demand, enhancing their ability to produce graduates with the relevant skills sets.

Box 3. Solving the Skills Mismatch – City College of Chicago's "Reinvention Campaign"

The City College of Chicago (CCC) is one of the largest community college systems in the United States, with more than 115,000 students in 2012. In 2010, a review of CCC found that programming was not related to employer needs, with courses either misaligned with or insufficient for the current skills demands of employers. In particular, there was a mismatch between fields in which well-paying jobs were growing and enrollment in and completion of related CCC courses.

The CCC subsequently launched a reinvention initiative to ensure that more students receive credentials with more economic value. For example, recognizing the importance of the local manufacturing sector to Chicago's economy, CCC mapped out five career levels in the local manufacturing sector, from low-skilled employment (materials handler) to high-skilled employment (manager). From interviews with industry employers and experts, they found that entry-level students were viewed as underprepared and that a more highly specialized core curriculum was needed. CCC then partnered with employers such as Caterpillar and Kraft to develop their curriculum and programming to fit these needs.

Source: Authors

51. Greater involvement of the private sector in training and producing high-quality graduates is likely to have significant payoffs. According to the TalentCorp/World Bank survey, only half of the companies that responded to this question offer structured internship programs, which can help expose university students to a variety of career paths and help them develop the requisite soft skills for any position. More companies must be incentivized to provide apprenticeship opportunities to students across a variety of sectors and functions. Although a positive relationship between internships/apprenticeships and employment can be observed over time, the impact of these opportunities on students largely depend on the quality of the experience. Therefore, companies would benefit from ensuring that these opportunities are structured to help students develop professional, communication and personal skills that are relevant to the job, while providing interns with mentorship and guidance. In Malaysia, benchmarks such as the Human Resource Development Fund's Industrial Training Scheme (ITS), Multimedia Development Corporation's (MDeC) MSC Malaysia Undergraduate Apprenticeship and Development Programme (UGRAD) and TalentCorp's Structured Internship Program (see Box 4) may be utilized to promote higher quality industry exposure for students. The more progressive graduate employers in Malaysia have also been known to promote industry exposure through supporting final year projects, running business competitions and hosting career awareness programs.

Box 4. Increasing Industry Exposure – TalentCorp's Structured Internship Program

TalentCorp, in collaboration with the Ministry of Higher Education, initiated the Structured Internship Program (SIP) in 2011 to tackle the talent shortage and help produce employable fresh graduates. Under the SIP, companies offer internships for a minimum duration of 10 weeks with focused learning outcomes that develop students' technical, personal and business competence. Participating companies must also offer interns a monthly allowance of not less than RM500. To ensure that companies focus on developing local talent, only Malaysian undergraduates from local universities are eligible to apply.

In 2013, more than 10,000 students were placed as interns in over 1,000 companies in the country. Undergraduates gain relevant experience and exposure to priority sectors of the economy, while participating companies gain a platform to assess and select interns with the potential to become full-time hires, as well as tax deductions on internship training-related expenses of up to an average of RM5,000 per intern for each assessment year.

Source: Authors

52. The capacity and effectiveness of career services offices can be significantly improved to prepare students for the job search process. Universities' career services centers are often the primary link between students and employers, providing students with information on careers and firms with a qualified pool of candidates from which to tap into. However, the survey results suggest that there is vast room for improvement for career services in Malaysian higher education. An unpublished study by the Boston Consulting Group suggests that career services centers can play expanded roles to enhance graduate employability by hiring staff with the expertise to fulfil three main roles: a) provide professional advice to students on career paths, resume-writing and the interview process; b) improve student marketability to employers and c) develop partnerships with external firms for industry visits and to recruit candidates.

53. Universities and the government can help increase students' awareness of career options and access to information regarding the labor market. One possible reason for the skills mismatch is that students often do not have adequate information to select higher education courses that match labor market demands, and end up with non-marketable degrees for their areas of interest (Ministry of Higher Education, 2012). To address this issue, the Government could encourage students to explore a variety of careers even before they enter university by disseminating comprehensive, accurate information on career options and their academic requirements. Although Malaysia already has online portals such as Ready4Work.my and IWANT2B, it can learn from countries such as Chile and Italy, which have developed interactive labor market portals that support students and graduates seeking employment (Box 5). In addition, the Government can take steps to augment the ILMIA workforce dashboard to raise greater awareness of careers in high demand. Another option to improve coordination among young job-seekers, labor market demands and education institutions could be to develop a list of occupations and skills that are currently in shortage. In the United Kingdom, the Migration Advisory Committee's skills shortage list is regularly updated and used as a policy tool to influence workforce planning and to guide curriculum development and student intake by higher education institutions (Box 6).

Box 5. Preparing students for the job search: interactive online portals in Italy and Chile

Managed by a consortium of universities together with the Ministry of Education, University and Research, Italy's ***AlmaLaurea*** program caters to students, graduates, employers and universities. Among its main offerings are online publishing of resumes, free resume writing services, current job postings, employers' profiles, and other job search tools. Regular reports on graduates' employability are also published.

Chile's ***Mi Futuro*** portal, also supported by the Ministry of Education, provides comprehensive information of a hundred different professional and technical careers. Students can look for a program by level, area, or career, be redirected to external websites containing information on career and work in other countries, and access an online library of information on the employability of technical and professional graduates.

The Ministry of Education's **Graduados Colombia** provides detailed information on the profiles of workers in different occupations, such as their education levels, salaries and average time taken to find their first job. In addition, updated information on the demand and supply of workers in the Colombian labor market is provided. They also direct graduates to online job vacancies and provide resume writing services.

Source: Authors

Box 6. The Skills Shortage List in the UK

Established in 2007, the Migration Advisory Committee (MAC) is a public body that provides evidence-based advice to the UK Government on its immigration system. In recent years, MAC was asked to develop an occupational shortage list to guide the UK Government on the professions that could qualify as part of the skilled stream of its immigration program (Tier 2 – jobs that cannot be filled by settled workers). See Table 3 for an example.

MAC developed the list using: 1) top-down analysis based on national-level datasets to identify shortages at the occupational level and 2) bottom-up analysis based on consultations with sector experts to identify individual job titles not identifiable through national data analysis.

To assess skill-shortages, MAC uses national data and considers twelve indicators falling in four broad categories: 1) employer-based indicators (e.g. reports of shortage), 2) price-based indicators (e.g. earnings growth), 3) volume-based indicators (e.g. employment or unemployment) and 4) indicators of imbalance based on administrative data (e.g. vacancy duration or unemployment ratios). In order to be considered in shortage, an occupation needs to be above a given threshold in at least 6 of the available indicators (green-light approach).

A key feature of the list developed by MAC is its dynamism. Each indicator is updated as soon as new data is available. The list is provided to training institutions so that they can focus on forming these skills.

Table 3. Example of the Skills Shortages List

Job title	SOC 2000 Occupation		SOC 2010 Occupation	
Geophysicist specialist	2113	Physicists, geologists and meteorologists	2113	Physical scientists
Geophysicist				
Geoscientist				
Hydro-geologist				
Geo-mechanical engineer	2121	Civil engineers	2121	Civil engineers
Geotechnical specialist				
Engineer – petroleum				
Engineer – reservoir, panel				
Engineer, rock mechanics				
Engineer, soil mechanics				

Source: Adapted from the Skilled Shortage Sensible 2013, Migration Advisory Committee, United Kingdom

Corrective measures to help unemployed graduates could be enhanced

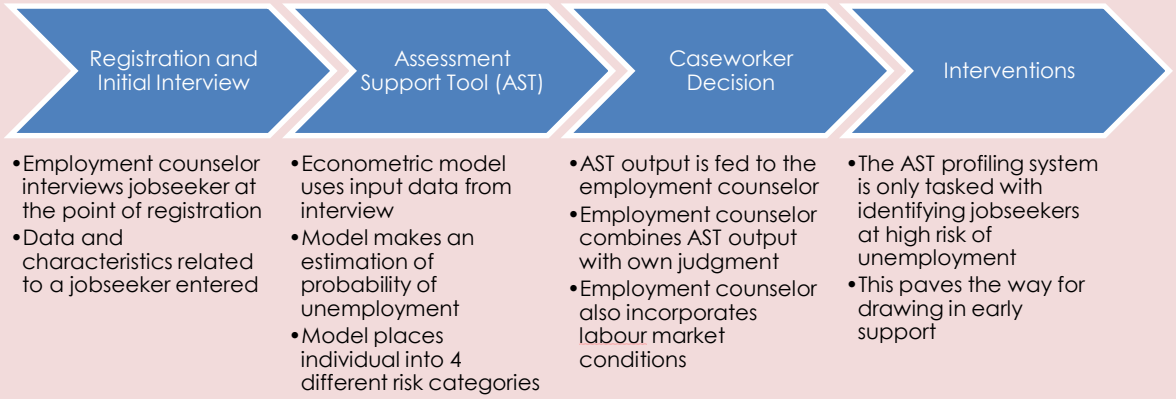
54. Malaysia has a number of programs to support recent graduates who cannot find a job. Following the National Graduate Employability Blueprint 2012 – 2017, the Government has implemented several training programs for unemployed graduates to boost their chances of finding employment, with some success. For example, the Graduate Employment Management Scheme (GEMS) has placed 12,000 unemployed graduates into the workforce since its inception in 2009 by training them in soft and sector-specific skills (TalentCorp, 2014).

55. Government-funded training programs to boost the productivity of unemployed graduates and unskilled workers could be reviewed to ensure their relevance to firms' needs. Feedback from employers on programs to meet the skills shortage among workers and recent graduates suggests that these programs could be improved. While 72 percent of respondents of the Graduate Employability Survey are aware of at least one government-funded training program, only 28 percent of companies view participation in such programs as an important factor affecting their hiring decisions. Moreover, despite the evidence from the National Employment Return survey (2011) showing that training has a positive impact of firms' productivity, only 24 percent of companies report having a partnership with a training provider.

56. Addressing the skills gap among unemployed graduates requires a thorough understanding of who is unemployed, and why. Given the relatively high number of unemployed graduates in the country and various government agencies with programs for unemployed graduates, the Government needs to differentiate between the various types of unemployed graduates, the reasons why they are unable to find work, and the interventions that must be taken to help them find employment. Profiling (see Box 7) could help policymakers to: 1) assess the likely duration of unemployment for jobless graduates, 2) differentiate between easy- and difficult-to-place jobseekers, 3) define the intensity of services offered and identify the type of support that could successfully place the person into the workforce. Better profiling of unemployed graduates will not only make it easier for government agencies to identify the appropriate type of intervention and prioritize the highest-need groups, but also ensure that public resources are used efficiently to enhance graduate employability.

Box 7. Profiling unemployed workers in Sweden

Sweden uses profiling to ensure that its programs to help people find employment are effective and efficient. It uses a mix of caseworker discretion, screening and statistical profiling to help match those individuals most at-risk of long-term unemployment with adequate government resources.



Source: Advanced Profiling of Jobseekers in Public Employment Services, World Bank

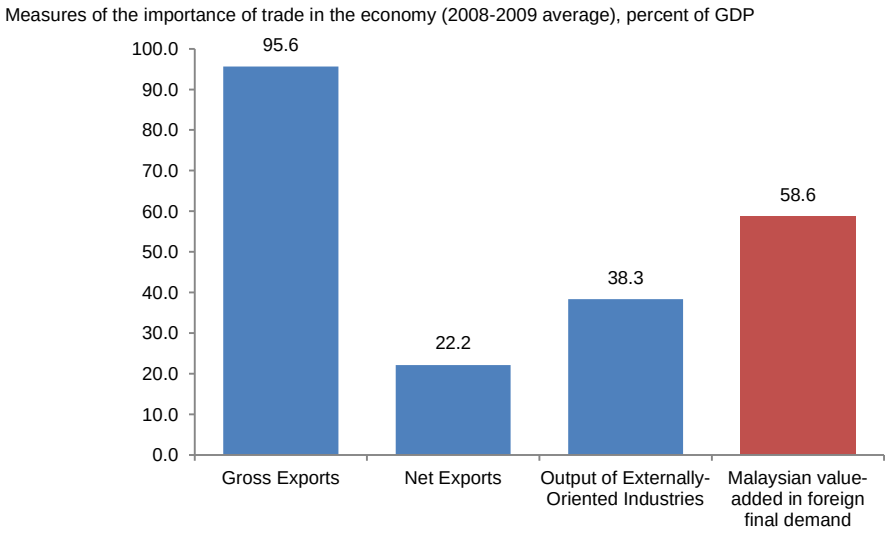
3. BOOSTING TRADE COMPETITIVENESS

57. Malaysia's past economic success has been associated with open international trade, and its move to a sustainable and inclusive high-income nation will require further boosting trade competitiveness. In the first chapter of this Economic Monitor, we noted that a lift in exports has supported Malaysia's economic growth in the past two quarters. The recovery of the global economy suggests that cyclical factors will continue to lift Malaysia's trade performance in the next few quarters as well, as reflected in the healthy outlook forecast earlier for the export sector. This part of the report takes a structural and longer-term view of Malaysia's trade competitiveness and asks the question of how Malaysia can continue to take advantage of international trade to complete its transition to high-income status.

Trade is an engine of growth towards high-income status

58. As small and open economy, Malaysia's path to high-income status is tied to its trade performance. Over the decades, trade has been a catalyst of growth and development for Asia's emerging economies, contributing to the region's favorable performance. Indeed, several empirical studies, including Frankel & Romer (1999), Dollar and Kraay (2004) and Romalis (2007) have presented evidence of a positive correlation between a country's trade performance and its long-run economic growth. There are three main channels through which trade contributes to growth: first, trade represents a significant source of demand for Malaysia's goods and services, and has allowed Malaysia to take advantage of economies of scale that would not otherwise be possible in a small economy. Second, open international trade is important to inject competition into the economy; exposing domestic firms to the rigors of international markets and providing them with incentives to become more efficient and productive. Finally, under the right conditions, trade can generate learning and innovation spillovers by providing firms with access to foreign inputs, investment and know-how.

Figure 50. Foreigners consume 59 percent of Malaysia's value-added



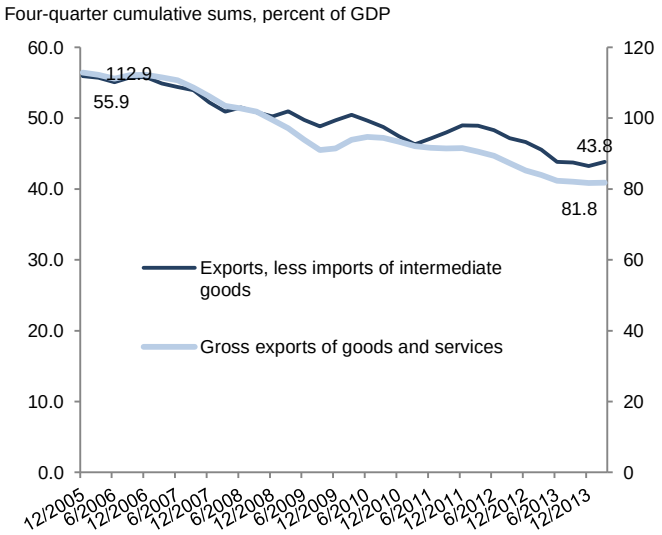
Source: OECD TiVA database, CEIC, and World Bank staff calculations
Note: Export-oriented industries include palm oil, rubber, petrochemicals, mining and quarrying, electrical and electronics manufacturing, accommodation, and transport & storage.

59. Nearly 60 percent of value-added generated in the Malaysian economy is ultimately consumed by foreigners. Net exports represented 22 percent of GDP in 2008/2009, and this figure has declined since then. The value-added of externally-oriented industries was higher at 38 percent, a figure similar to the estimates of value-added exported that have been used in Chapter 1. This chapter uses a new database that identifies how much of the value-added in Malaysia is consumed domestically or in foreign markets. The value-added consumed in foreign markets includes not

only that produced by exporting firms, but also the value-added by firms that cater to export-oriented industries, including in services. As Figure 50 reveals, through the linkages between domestic- and externally-oriented industries, it turns out that nearly 60 percent of the demand for Malaysian value-added actually comes from overseas. This suggests that the true importance of foreign demand to the Malaysian economy is much higher than what would appear from net exports or even the contribution from externally-oriented industries.

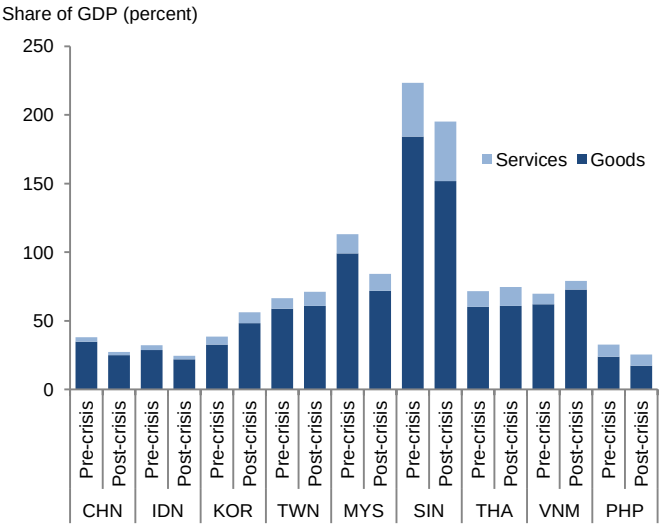
60. Although export performance has recovered in recent quarters, the trend over the past 10 years has been one of stagnation and indeed relative decline, especially outside the commodity space. Figure 51 shows that both gross exports of goods and services and exports less imports of intermediate goods (a crude proxy of the value-added embodied in exports with more frequent data) declined steadily over the past 10 years despite a significant increase in commodity prices (crude oil prices increased by 58 percent during this period). In part, this is a reflection of strength of domestic demand during a period of weak external demand since the global financial crisis, which caused global trade volumes to shrink. In Malaysia, between 2007 and 2013, consumption and investment gained 8 and 4 percentage points in terms of share to GDP, respectively. Indeed, many Asian economies experienced a similar decline in the share of exports to GDP since the crisis and a gain in domestic demand. Nevertheless, the decline in Malaysia's export share (30 percentage points in gross terms or 12 percentage points in 'value-added' terms) stands out (Figure 52), suggesting that lower competitiveness in export sectors may have played a role.

Figure 51. The share of gross exports in GDP has declined significantly…



Source: DOSM, BNM, World Bank calculation

Figure 52. …a decline that was more pronounced than other countries in Asia.



Source: CEIC, Haver, World Bank staff calculations

61. The underlying causes of the decline in trade competitiveness reflect a shift in the abundance of assets in Malaysia relative to its competitors. As oil prices have increased, the value of Malaysia's energy assets increased and it became more attractive for investors to come into the sector. Because the energy and petrochemical sectors have a relatively long lag between investments and production, output has yet to pick up more decisively. Meanwhile, as Malaysia grew, the availability of low-cost labor dwindled in comparison with neighboring countries. Although unskilled foreign workers remain available, the Government has given repeated signals that it intends to reduce the economy's reliance on such workers. On the other hand, as noted in Special Issue Note A, skills mismatches remain an issue that makes Malaysia relatively less attractive for firms looking to undertake higher value-added activities. The result has been a shift in exports that rely on low-cost labor, especially assembly-based E&E, towards energy-based exports, which can be expected to pick up further in the future as new productive capacity comes online.

62. New approaches will be needed to boost trade competitiveness. Malaysia needs to capture a greater slice of knowledge-intensive activities in the production process, integrate its domestic firms deeper into GVCs, and to expand trade in services. This will involve using trade policy as human capital and institutional transformation policies. While these efforts need to be supplemented by broader reforms, possible policy options in the trade arena include: promoting exports from knowledge-intensive parts of the value chain that are connected to parts located in

Malaysia – in both electronics and petrochemicals; promoting exports of knowledge-intensive services, including through a more open domestic environment in services; reviewing and streamlining non-tariff measures; and using trade agreements strategically with a view of supporting domestic reforms.

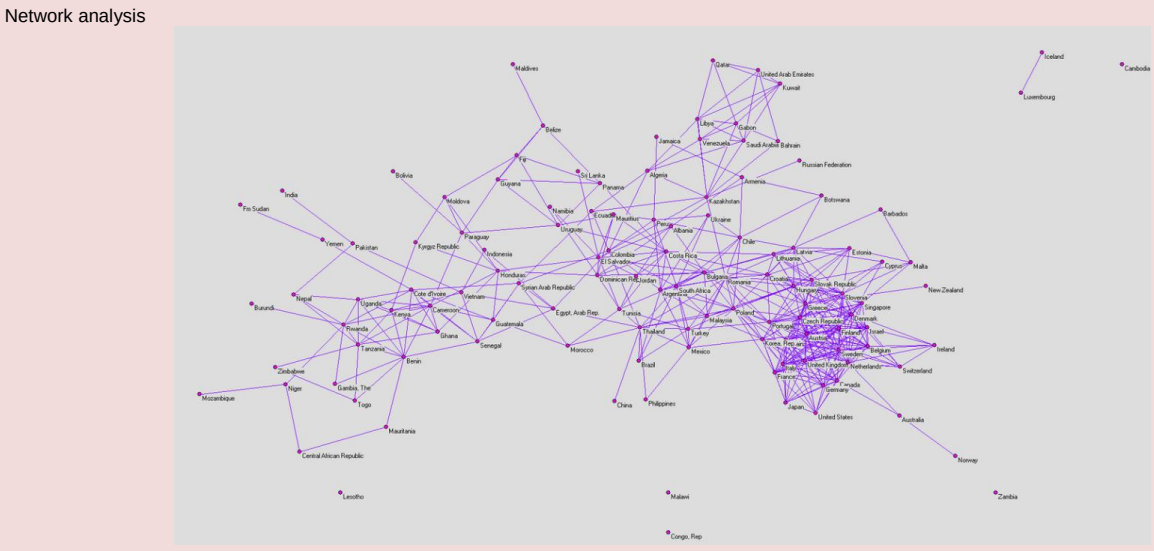
63. This chapter is organized along five main sections: the first establishes stylized facts about Malaysia's trade competitiveness, attempting to diagnose and disaggregate Malaysia's relative trade performance in recent years. **The second part focuses on global value chains**, with a focus on the key GVCs in E&E and petrochemicals, and looking at the changes in Malaysia's position in GVCs and linkages between domestic and foreign firms. The **third part looks at the potential to improve services exports**, identifying constraints to services export growth, while the **fourth part looks at how trade costs** can be further reduced. **The final part concludes with recommendations for policy options** with a focus on how Malaysia can boost competitiveness to better position itself for the transition to high-income status. Throughout, Malaysia's performance is compared to comparator countries selected using a methodology described in Box 8.

Box 8. Choice of Comparator Countries

We benchmark Malaysia against international comparators, including: China, Poland, Mexico, Chile, Singapore, Vietnam, Thailand, South Africa, Korea, and the Philippines.

International comparisons set a country's competitiveness into context. Our selection is based on a data-driven methodology, which was then informed by the judgment of country experts. The methodology aims at identifying countries that are similar in economic development and/or size, competitors with a similar position of the export basket or "neighboring" countries within the region. Specifically, we are able to provide benchmarks for 121 countries worldwide in a 5-dimensional space, using the following indicators as coordinates: export basket composition; GDP per capita; population; human capital; and physical capital. Countries in the list are ranked by degree of similarity, with similarity decreasing from top to bottom of the list. The network of countries is reported in (Figure 53).

Figure 53. Countries' positioning in the global economic space



Source: World Bank staff calculations, using Comtrade data.

Trade is more important to Malaysia than net exports would suggest

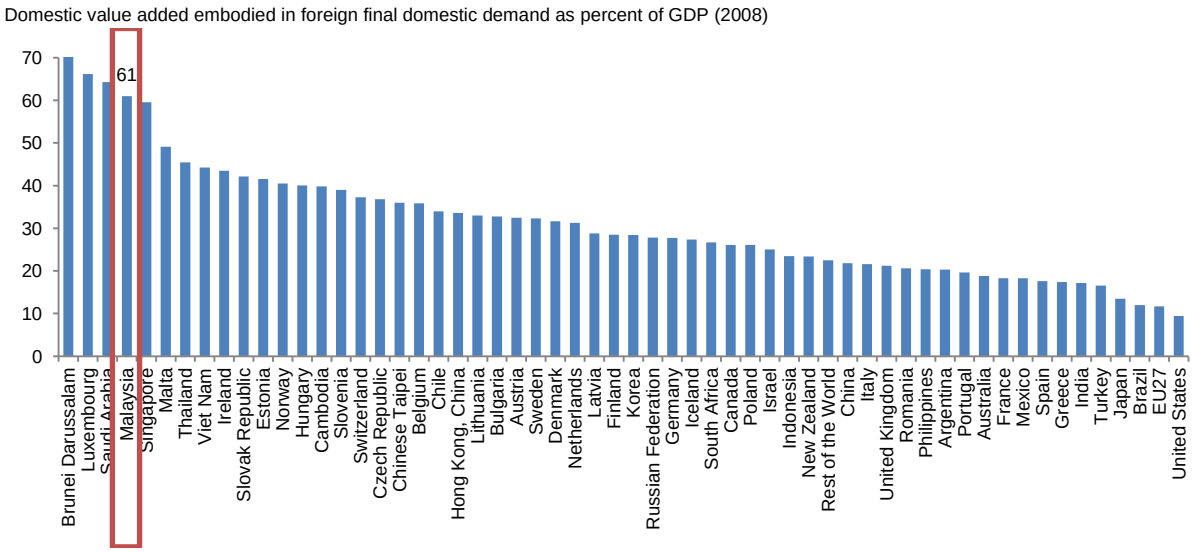
64. Trade is more important for Malaysia than suggested by net export figures. The decline in trade competitiveness described above is important only to the extent that trade drives economic growth. Since the Global Financial Crisis,

domestic demand, as defined in the national accounts, has grown to 91 percent of GDP as of 2013, with consumption gaining 8 percentage points of GDP and investment four. But these figures may be misleading as indicators of the relative importance of domestic vs. external final demand for the value-added produced in Malaysia (another word for GDP, which is the variable of ultimate concern). This is for two reasons. First, domestic final demand includes demand for foreign value-added in the form of imported consumer and investment goods that are absorbed by domestic consumption and investment. Second, many sectors that appear domestically-oriented and have no direct exports nonetheless provide intermediate inputs to other sectors that are producing for foreign demand. These "intermediate" sectors would not produce the same output (or perhaps not even exist at all) if not for the existence of foreign demand.

65. Estimates based on a new dataset suggest that final foreign demand absorbs about 60 percent of Malaysia's value-added. The recent release of two new datasets, the OECD-WTO Trade in Value Added (TiVA) database and the consortium's World Input-Output Database (WIOD), have allowed the development of a set of indicators that focuses on the share of value added produced in a country that makes its way into final demand in foreign countries. This concept – domestic value added embodied in foreign final domestic demand as a share of GDP – is useful to understand how much of a country's GDP is actually being driven by domestic vs. external demand, with high shares indicating a high reliance on exports. Intuitively, these indicators explore the information about linkages between industries, both domestically and across countries, to estimate how much value-added produced in Malaysia ultimately ends up in the final demand of foreign countries.

66. The value added in foreign final demand is very high in Malaysia, compared to countries of similar size. The domestic value added embodied in foreign final domestic demand as percentage of a country's GDP tends to be largest in small open economies, such as Brunei Darussalam, Luxembourg, Singapore or Malta, while it is small in large countries such as the United States or Japan (Figure 54). It is also large in countries that are highly integrated in global value chains, and whose inputs are exported to other countries, including countries in South-East Asia or Eastern Europe. The value added in foreign final demand is higher in Malaysia than in most countries in the database.

Figure 54. Over 60 percent of Malaysia's GDP is driven by external demand



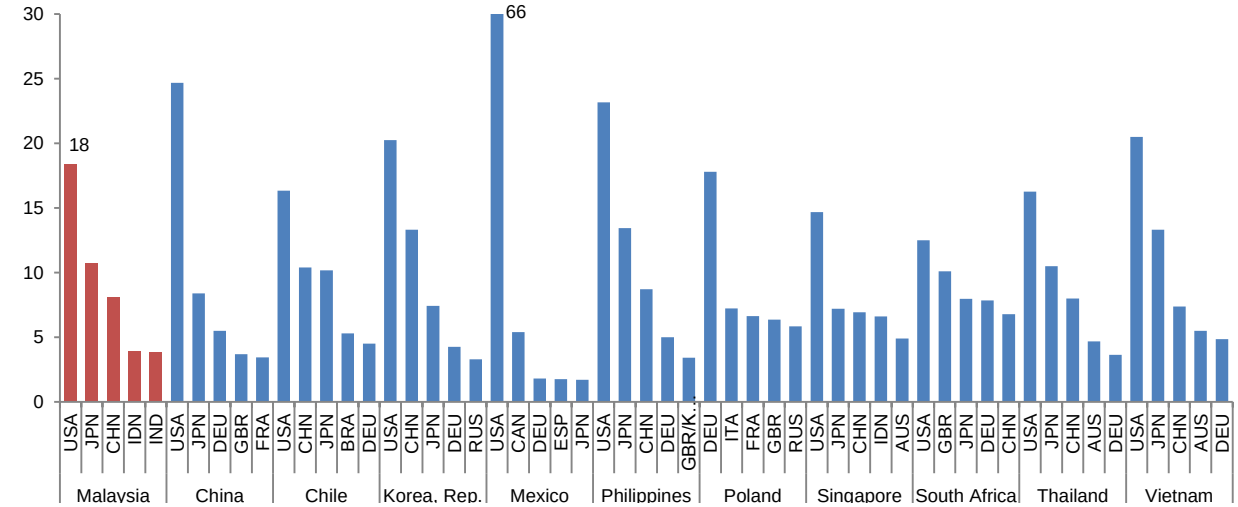
Source: OECD-WTO TiVA Database, World Bank staff calculations

67. While China is the largest trade partner in gross exports, most Malaysian value-added is finally consumed in the United States. Malaysia's exports to China mostly end up in the United States, which is responsible for the final demand of 18 percent of Malaysia's exports of domestic value added (Figure 55). The Chinese, Korean, Mexican, Philippine, and Vietnamese markets rely even more heavily on the United States for final demand of its value added exports, with Mexico being a clear outlier (66 percent). Japan (11 percent) and China (8 percent) are also important final consumers for Malaysia's domestic value added in exports. For Poland, four of the top five consumers of the country's value added exports are EU markets. This trend is different than that observed above when considering gross exports,

where the importance of the United States for Malaysia' overall exports was less pronounced. For gross exports, the United States accounted for 9 percent of total exports, the 4th most important export partner behind Singapore (14 percent), China (13 percent) and Japan (12 percent).

Figure 55. The United States demand the most of Malaysia's value added

Top 5 final consumers of Malaysia's and comparators' value added exports, share of value-added in final foreign demand



Source: OECD-WTO TiVA Database, World Bank staff calculations

Malaysia's export market share languished due to declines in high-tech good shipments

68. Trade competitiveness reflects the ability of a country to maintain or expand its share of world exports. Competitiveness is reflected in changes in market shares, both in aggregate and in specific industries. It should be measured ideally in terms of the domestic value-added embodied in exports, and also includes a number of additional qualitative dimensions, including the extent that trade is promoting knowledge transfers and creating demand for knowledge professionals, and Malaysia's position within different segments of global value chains. Trade competitiveness is driven by domestic costs, which are linked to the relative cost of domestic assets (based on their relative abundance), as well as trade costs.

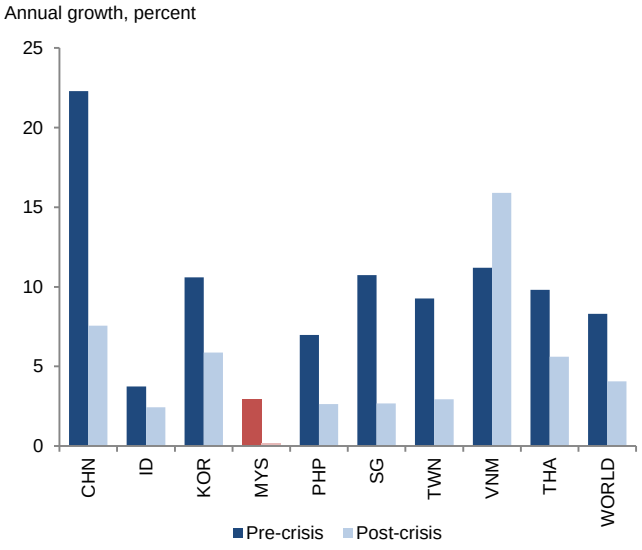
69. Malaysia's export growth has been slowing since before the global financial crisis, suggesting structural rather than cyclical factors at play. The post-crisis global economy has been defined by slower global trade, which has grown at an annual rate of 4 percent in the post-crisis period in contrast with average pre-crisis growth of 8.3 percent. Reflecting the slower growth of global trade, the average growth in gross export volume in most Asian economies declined significantly in the post-crisis period, with the exception of Vietnam (Figure 56). While the slowdown in the volume of Malaysia's export growth was not as sharp as that experienced by other economies in the region, this was mainly because Malaysia's pre-crisis export performance had less room to decline post-crisis.

70. As a consequence of weak growth, Malaysia's share of world exports has fallen slightly in the past decade, suggesting a relative decline in overall trade competitiveness. Between 2000 and 2013, Malaysia's share of global trade declined from 1.5 percent to 1.2 percent (Figure 57). Most of this declined occurred between 2000 and 2006. Between 2006 and 2010 Malaysia's market share was generally stable, but it contracted again between 2010-Q4 and 2014-Q1 at an annual rate of 0.4 percent. Therefore, at least through the global financial crisis, there was evidence of reduced competitiveness in Malaysia's exports.

71. Supply-side factors contributed to the post-crisis decline in market shares. Table 4 decomposes the changes in market share growth by demand (geographical/market, and sector/ product) and supply factors (the country

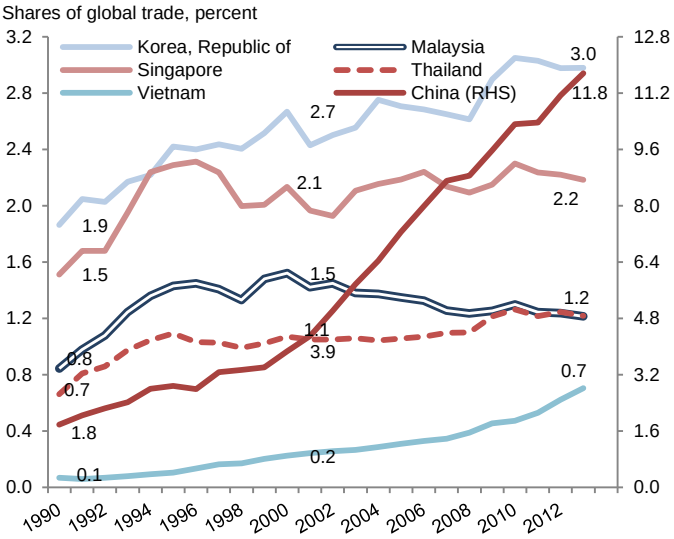
effect); this latter effect is further decomposed into price and volume factors[13]. Over the post-crisis period, positive geographical and price factors (namely the expansion of exports to faster-growing China and rising commodity prices), contributing 1.5 and 0.8 percent, respectively, were dominated by losses in supply side factors (the country effect) in volumes, which contributed -3.2 pp. The contribution from sectoral factors was negative in recent years.

Figure 56. Growth in trade volumes have declined (nearly) everywhere in Asia in the post-crisis period…



Source: IMF (WEO, April 2014).

Figure 57. … but Malaysia's lower pre-crisis growth led to a decline in export market shares.



Source: WTO and World Bank staff calculations

Table 4: Export market share growth decomposition across different periods

	Export market share growth	Export composition factors, of which:		Export push factors (export market share growth without export composition factors), of which:		
		Market factors	Sectoral factors	Overall factors	Price factors	Volume factors
2006q1-2008q2	0.2%	-0.9%	1.4%	-0.3%	-0.6%	0.3%
2010q4-2014q1	-0.4%	1.5%	-0.2%	-2.4%	0.8%	-3.2%

Source: World Bank Export Competitiveness Database
Note: Indicators are expressed in log-difference form, which allows additivity across indicators.

72. Malaysia's declining export market share after the crisis was typical of other ASEAN countries, except Vietnam (Table 5). ASEAN export performance lags that of North Asia, especially China. The exception in ASEAN has been Vietnam, whose strong export market share growth performance was mainly driven by a positive dynamics of the adjusted export market share in volume terms (namely, increase in capacity from investments for example from Samsung). Interestingly, all South-East Asian peer countries—and especially Singapore and Thailand—showed a negative push from the supply side, which was also mainly driven by negative volume factors. Meanwhile price effects were heterogeneous. Market factors showed a positive growth contribution in all South East Asian countries, reflecting increasing trade with China and emerging markets more broadly within the region.

73. The negative contribution from sectoral factors was concentrated in high-tech sectors, primarily E&E. The 1990s to 2000s saw a generalized shift towards greater technology embodied in Malaysia's export basket (Figure 58). Partly as a result of the commodity boom and partly due to declining E&E output, this trend was somewhat reversed in the more recent period up to 2013. E&E exports declined from 62 percent of the export basket in 2000 to 37 percent in 2013 while exports of raw commodities climbed from 13 to 22 percent (Figure 59). The demand for Malaysian high-

[13] Market and sectoral factors are essentially demand-side factors that describe whether Malaysia is export structure is changing towards exporting to faster or slower-growing destinations (geographical/market factors) and sectors (sectoral factors). The country effect is an adjusted market share change, i.e. the market share changes that the country would have observed net of market and sector specialization. As such it can be considered a proxy of supply side dynamics affecting the export market share.

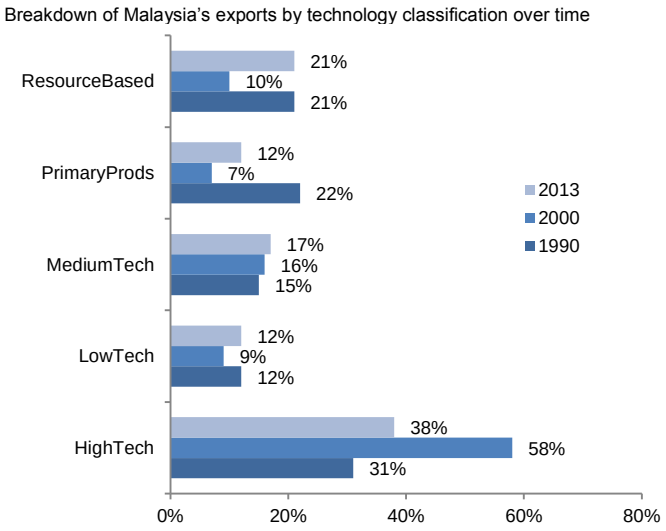
tech exports declined further since 2010 by 1.3 percent and 0.2 percent, in price and volume terms respectively (Figure 60), driven by declines in electrical and machinery equipment (Figure 61). Meanwhile, the export growth contribution of resource based manufactures was positive both in volume and price terms, reflecting the increased role of commodities in the export basket.

Table 5. Export market share growth decomposition across different countries, pre-crisis vs. post-crisis

	Export market share growth	Export composition factors, of which:		Country/supply side effect (adjusted export market share), of which:		
		Market factors	Sectoral factors	Total	Price factors	Volume factors
2006q1-2008q2						
China	4.7%	-1.7%	-6.1%	12.4%	1.2%	11.2%
Korea	0.3%	0.5%	-1.1%	0.9%	-1.6%	2.4%
Malaysia	**0.2%**	**-0.9%**	**1.4%**	**-0.3%**	**-0.6%**	**0.3%**
Philippines	6.0%	-0.6%	7.5%	-0.9%	6.3%	-7.2%
Singapore	0.4%	0.5%	4.3%	-4.4%	0.3%	-4.7%
Viet Nam	5.4%	-2.3%	-3.2%	10.8%	-0.7%	11.5%
Thailand	0.7%	-1.1%	-2.4%	4.3%	-0.9%	5.1%
2010q3-2014q1						
China	3.6%	0.7%	-3.1%	6.0%	2.2%	3.6%
Korea	0.6%	2.4%	-1.8%	0.0%	1.9%	-1.6%
Malaysia	**-0.4%**	**1.5%**	**-0.2%**	**-2.4%**	**0.8%**	**-3.2%**
Philippines	-4.9%	1.4%	-2.8%	-3.5%	-4.1%	0.6%
Singapore	-0.3%	2.7%	1.1%	-4.2%	0.7%	-4.6%
Viet Nam	13.8%	0.2%	-1.1%	14.7%	3.4%	10.5%
Thailand	-1.5%	1.9%	-1.1%	-2.3%	-0.6%	-1.6%

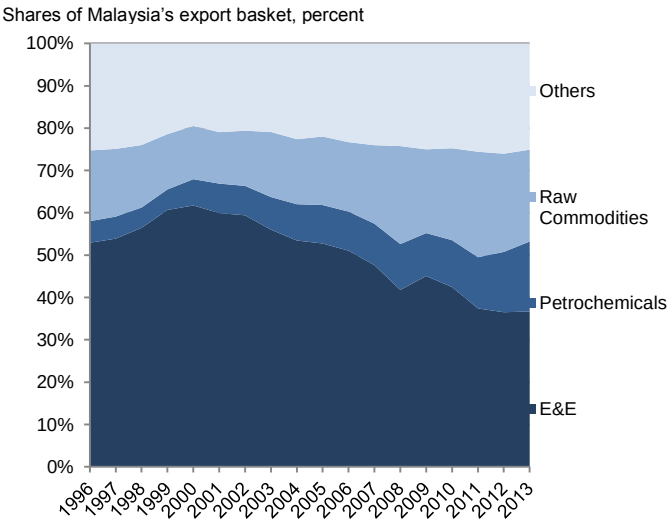
Source: World Bank Export Competitiveness Database
Note: Indicators are expressed in log-difference form, which allows additivity across indicators.

Figure 58. Malaysia's exports of high-tech goods have declined as a share of exports…



Source: World Bank WITS

Figure 59. …as the share of E&E in the export basket came down



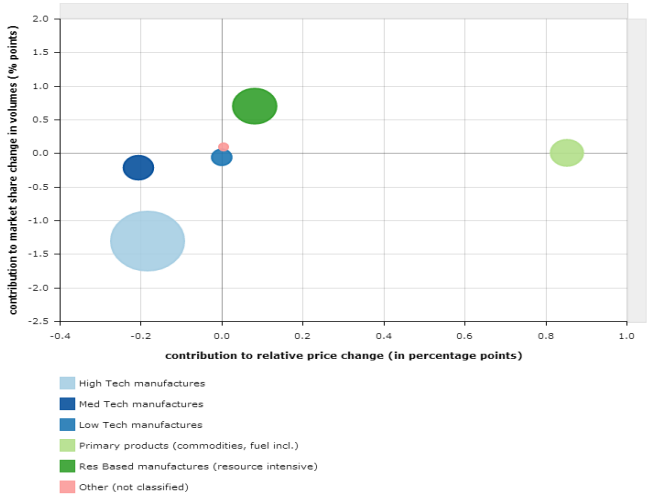
Source: CEIC, World Bank staff calculations
Note: E&E and Petrochemicals (petroleum products, chemicals and chemical products) as defined by BNM

74. Nevertheless, E&E remains the largest category of exports by value. E&E products comprise 21 out of the top 50 export products, measured at the HS-6 digit level of detail (Table 6).[14] In line with with the rise in commodity-linked exports seen especially since the crisis, derivatives of the petroleum and chemicals sector have more recently emerged as a key sector, climbing to 17 percent of total exports from 6 percent in 2000 and 10 percent in 2007, and accounting for an additional 10 of the top 50 export products.

[14] Measured at the HS-6 digit level of detail. The top-50 exports covered 64 percent of total export value in 2012.

Figure 60. Demand for Malaysian high-tech exports contracted…

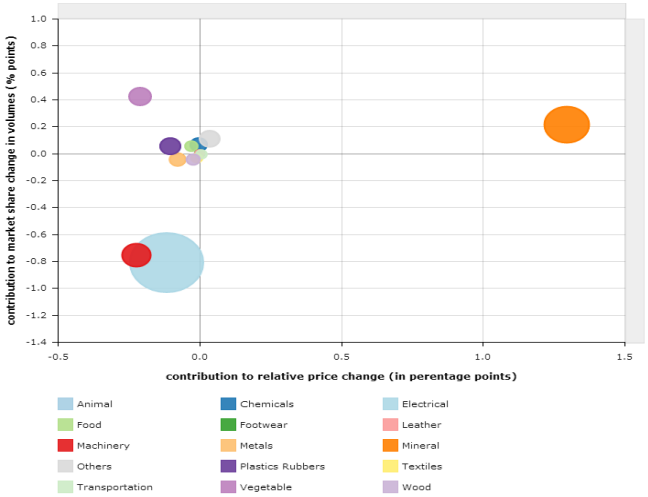
Sectors, by technological intensity



Source: World Bank-Banque de France Export Competitiveness Database; Gaulier et al. (2013)

Figure 61. … driven by Electrical and Machinery exports

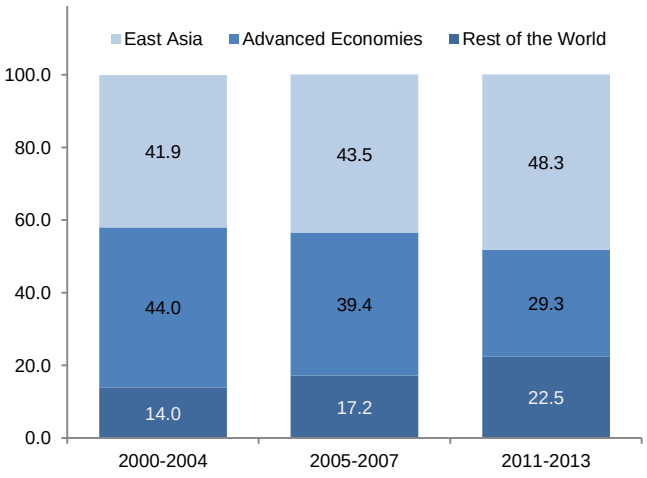
Product mix and sectoral specialization



Source: World Bank-Banque de France Export Competitiveness Database; Gaulier et al. (2013)

Figure 62. Malaysia's export structure has shifted away from advanced economies…

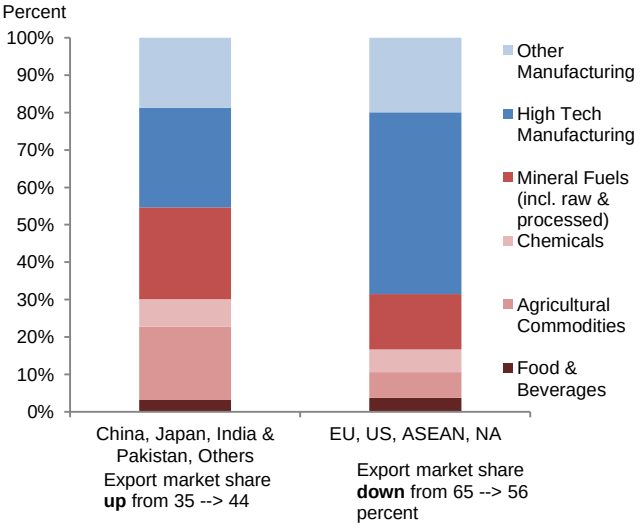
Percentage shares, selected time periods



Source: OECD, WDI

Figure 63. This shift in destinations is linked to the change in the composition of exports

Percent



Source: CEIC and World Bank staff calculations

75. The changing composition of exports is closely linked to the shift in destinations – in other words, sectoral and market effects are linked. The share of exports to East Asia has grown incrementally over the last 15 years from 41.9 percent in 2000-04 to 48.3 percent in 2011-13 (Figure 62). During the same period, the share of exports going to advanced economies has declined from 44 percent in 2000-04 to 29.3 percent in 2011-13. Much of this change has occurred as the nature of trade in Malaysia's key manufacturing industries, particularly E&E, has evolved from the production and trade in finished products to greater trade in inputs in the value chain distributed across a wider range of locations. However, this shift is also related to the shift in the product composition of Malaysia's export basket towards commodities. This can be seen in Figure 63: only about a quarter of exports to fast-growing markets are high-tech manufacturing, compared to almost 50 percent to the mature markets of the US, EU and North Asia.

Table 6. Malaysia's top 50 exports, 2012

rank_exp	hs96	hs96_description	export_value	exp_share
1	854230	Other monolithic integrated circuits	23,846,665	10.5%
2	271111	Liquefied :-- Natural gas	17,974,365	7.9%
3	271000	Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included	15,419,273	6.8%
4	151190	Other	10,935,036	4.8%
5	270900	Petroleum oils and oils obtained from bituminous minerals, crude.	10,440,086	4.6%
6	847170	Storage units	5,881,013	2.6%
7	847330	Parts and accessories of the machines of heading No. 84.71	5,331,637	2.3%
8	151110	Crude oil	4,504,723	2.0%
9	852812	Reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus :--	3,214,780	1.4%
10	401519	Gloves :-- Other	3,072,135	1.4%
11	854140	Photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light emitting diodes	2,491,291	1.1%
12	400122	Natural rubber in other forms :-- Technically specified natural rubber (TSNR)	2,382,671	1.0%
13	151620	Vegetable fats and oils and their fractions	2,348,416	1.0%
14	854290	Parts	2,248,361	1.0%
15	847180	Other units of automatic data processing machines	2,057,050	0.9%
16	853710	For a voltage not exceeding 1,000 V	1,981,275	0.9%
17	711319	Of precious metal whether or not plated or clad with precious metal :-- Of other precious metal, whether or not plated or clad with precious metal	1,876,044	0.8%
18	854129	Transistors, other than photosensitive transistors :-- Other	1,743,263	0.8%
19	400599	Other	1,666,362	0.7%
20	853400	Printed circuits.	1,417,904	0.6%
21	853690	Other apparatus	1,361,028	0.6%
22	903090	Parts and accessories	1,352,642	0.6%
23	441213	Plywood consisting solely of sheets of wood, each ply not exceeding 6 mm thickness :-- With at least one outer ply of tropical wood	1,305,017	0.6%
24	852520	Transmission apparatus incorporating reception apparatus	1,262,680	0.6%
25	999999		1,241,447	0.5%
26	852990	Other	1,126,296	0.5%
27	854190	Parts	1,049,935	0.5%
28	851780	Other apparatus	926,542	0.4%
29	271129	In gaseous state :-- Other	925,991	0.4%
30	844359	Other printing machinery :-- Other	910,630	0.4%
31	841510	Window or wall types, self-contained	900,525	0.4%
32	382319	Industrial monocarboxylic fatty acids; acid oils from refining :-- Other	840,678	0.4%
33	940360	Other wooden furniture	793,101	0.3%
34	800110	Tin, not alloyed	780,070	0.3%
35	854110	Diodes, other than photosensitive or light emitting diodes	778,835	0.3%
36	903040	Other instruments and apparatus, specially designed for telecommunications (for example, cross-talk meters, gain measuring instruments)	772,792	0.3%
37	852320	Magnetic discs	764,608	0.3%
38	382490	Other	712,140	0.3%
39	852540	Still image video cameras and other video camera recorders	691,899	0.3%
40	850910	Vacuum cleaners	654,134	0.3%
41	847990	Parts	599,320	0.3%
42	851790	Parts	596,025	0.3%
43	390110	Polyethylene having a specific gravity of less than 0.94	587,103	0.3%
44	392690	Other	585,215	0.3%
45	940350	Wooden furniture of a kind used in the bedroom	583,510	0.3%
46	382370	Industrial fatty alcohols	581,726	0.3%
47	880330	Other parts of aeroplanes or helicopters	572,487	0.3%
48	903082	Other instruments and apparatus :-- For measuring or checking semiconductor wafers or devices	569,050	0.3%
49	151329	Palm kernel or babassu oil and fractions thereof :-- Other	564,780	0.2%
50	844390	Parts	559,765	0.2%
		Top 50 Products	145,782,321	64.1%

Source: Authors' calculations using data from UN Comtrade.
Note: Products from the E&E sector are color-coded in blue, whereas those from the petrochemical sector are color-coded in orange, and products from all other sectors in grey. Intermediates, parts and components are identified with bold characters and final goods with normal characters. The rank indicates the share of total exports covered by a single product.

Moving up the global value chain in manufacturing exports

76. Global value chains (GVCs) have profoundly changed international trade paradigms. Global value (or supply) chains involve the manufacture of a single good in multiple countries simultaneously by division of tasks and linking the steps of production through international trade. This process, variously called production fragmentation, vertical specialization, trade in tasks, or "slicing up the value chain" has changed the nature of trade in important ways. First, participation in GVCs requires looking at trade in an integrated manner. The ease of importing becomes critical given the significant use of imported intermediate goods in exports. Second, the high share of imported inputs and trade in parts and components requires different tools to assess domestic value-added that is ultimately embodied in exports, as well as the ultimate sources of supply and demand for a country's value-added. Finally, comparative advantage applies increasingly to tasks and is reflected in a country's position within the value chain, rather than products. Accordingly, this section considers Malaysia's integration within GVCs, the extent of Malaysian value-added in exports and Malaysia's position in the value chain.

Malaysia is a key player in GVCs, but value-added is relatively low

Malaysia remains a key player in global value chains

77. In a GVC world, imports are critical for export competitiveness. A country's ability to participate in GVCs depends as much on its capacity to efficiently source world-class inputs as on its capacity to export. One cannot become a major exporter within GVCs without first becoming a successful importer of intermediate imports. This section is aimed at identifying the extent to which Malaysia and its peers source domestically or internationally the intermediate goods they use to export. This will provide a first indication of their participation in GVCs and provides a building block to later assess the domestic value added embodied in these countries' exports, and how the latter has shifted over time.

Table 7. Malaysia's top 50 imports, 2012

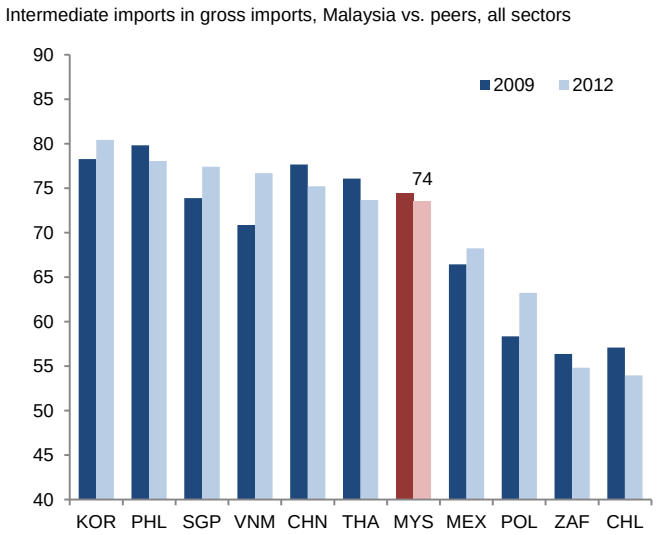
rank_imp	hs96	hs96_description	import_value	imp_share
1	271000	Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included	15,596,099	7.9%
2	854230	Other monolithic integrated circuits	15,193,085	7.7%
3	854290	Parts	10,704,458	5.4%
4	270900	Petroleum oils and oils obtained from bituminous minerals, crude.	8,963,271	4.6%
5	847330	Parts and accessories of the machines of heading No. 84.71	3,672,195	1.9%
6	880240	Aeroplanes and other aircraft, of an unladen weight exceeding 15,000 kg	3,246,371	1.7%
7	852520	Transmission apparatus incorporating reception apparatus	2,168,024	1.1%
8	270119	Coal, whether or not pulverised, but not agglomerated :-- Other coal	2,103,913	1.1%
9	852990	Other	2,061,850	1.0%
10	853400	Printed circuits.	1,961,253	1.0%
11	870323	Other vehicles, with spark-ignition internal combustion reciprocating piston engine :-- Of a cylinder capacity exceeding 1,500 cc but not exceeding 3,000 cc	1,880,437	1.0%
12	740311	Refined copper :-- Cathodes and sections of cathodes	1,674,219	0.9%
13	710813	Non-monetary :-- Other semi-manufactured forms	1,534,985	0.8%
14	853120	Indicator panels incorporating liquid crystal devices (LCD) or light emitting diodes (LED)	1,438,878	0.7%
15	854190	Parts	1,267,170	0.6%
16	847130	Portable digital automatic data processing machines, weighing not more than 10 kg, consisting of at least a central processing unit, a keyboard and a display	1,156,743	0.6%
17	400110	Natural rubber latex, whether or not pre-vulcanised	1,134,514	0.6%
18	710812	Non-monetary :-- Other unwrought forms	1,116,523	0.6%
19	711590	Other	1,041,547	0.5%
20	999999	Other	1,017,398	0.5%
21	847170	Storage units	1,010,919	0.5%
22	170111	Raw sugar not containing added flavouring or colouring matter :-- Cane sugar	973,042	0.5%
23	847989	Other machines and mechanical appliances :-- Other	940,269	0.5%
24	853690	Other apparatus	921,485	0.5%
25	151190	Other	908,447	0.5%
26	400122	Natural rubber in other forms :-- Technically specified natural rubber (TSNR)	898,192	0.5%
27	180100	Cocoa beans, whole or broken, raw or roasted.	877,533	0.4%
28	151110	Crude oil	796,517	0.4%
29	870421	Other, with compression-ignition internal combustion piston engine (diesel or semi-diesel) :-- g.v.w. not exceeding 5 tonnes	782,424	0.4%
30	300490	Other	775,336	0.4%
31	880330	Other parts of aeroplanes or helicopters	717,258	0.4%
32	392690	Other	707,399	0.4%
33	847990	Parts	703,534	0.4%
34	851780	Other apparatus	689,394	0.4%
35	853710	For a voltage not exceeding 1,000 V	657,043	0.3%
36	870829	Other parts and accessories of bodies (including cabs) :-- Other	653,313	0.3%
37	901380	Other devices, appliances and instruments	624,489	0.3%
38	310420	Potassium chloride	624,451	0.3%
39	903090	Parts and accessories	616,256	0.3%
40	230400	Oil-cake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of soyabean oil.	611,933	0.3%
41	760110	Aluminium, not alloyed	609,133	0.3%
42	100630	Semi-milled or wholly milled rice, whether or not polished or glazed	599,986	0.3%
43	210690	Other	596,375	0.3%
44	730511	Line pipe of a kind used for oil or gas pipelines :-- Longitudinally submerged arc welded	587,927	0.3%
45	870322	Other vehicles, with spark-ignition internal combustion reciprocating piston engine :-- Of a cylinder capacity exceeding 1,000 cc but not exceeding 1,500 cc	572,274	0.3%
46	850440	Static converters	561,011	0.3%
47	520100	Cotton, not carded or combed.	546,293	0.3%
48	844390	Parts	542,525	0.3%
49	100590	Other	535,904	0.3%
50	854129	Transistors, other than photosensitive transistors :-- Other	481,679	0.2%
		Top 50 products	100,055,274	50.9%

Source: Authors' calculations using data from UN Comtrade
Note: Products from the E&E sector are color-coded in blue, whereas those from the petrochemical sector are color-coded in orange, and products from all other sectors in grey.

78. A high and stable share of intermediate imports suggests Malaysia, similar to her neighbors, remains well integrated in GVCs. Intermediate goods (parts and components, identified following the methodology discussed in

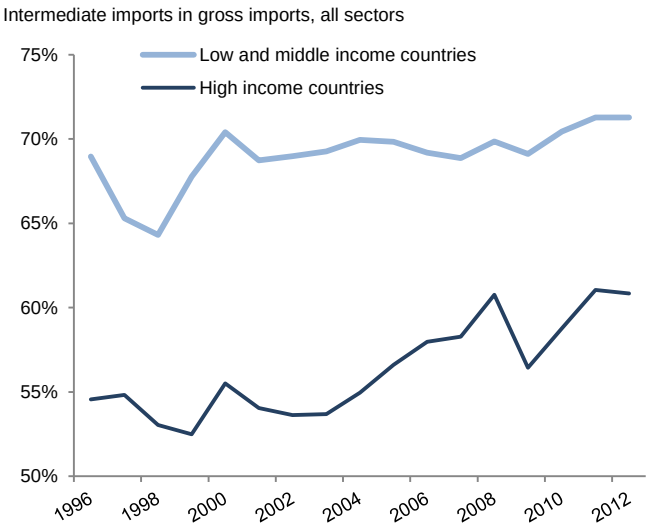
Box 9) represent 74 percent of total imports in Malaysia. Among the top 50 exports, 32 are intermediate goods (Table 7). Figure 64 shows that this is typical in East Asia. In recent years, the share of intermediate goods in gross imports has been stable or slightly declining in EAP MICs, while the share is up in lower- (Vietnam) and higher-income (Korea, Singapore) countries. Figure 65 shows the share of intermediate goods in gross imports has increased over the past one and a half decades, but more so in high income countries, reflecting the greater intensity of intra-GVC trade. Moreover, the share is substantially higher for low and middle income countries, reaching 71 percent in 2012 as opposed to 61 percent in high income countries. This is likely linked to the fact that low and middle income countries specialize in processing such intermediates for subsequent export, while a larger share of imports by high income countries are final goods.

Figure 64. Malaysia is integrated in GVCs on the sourcing side



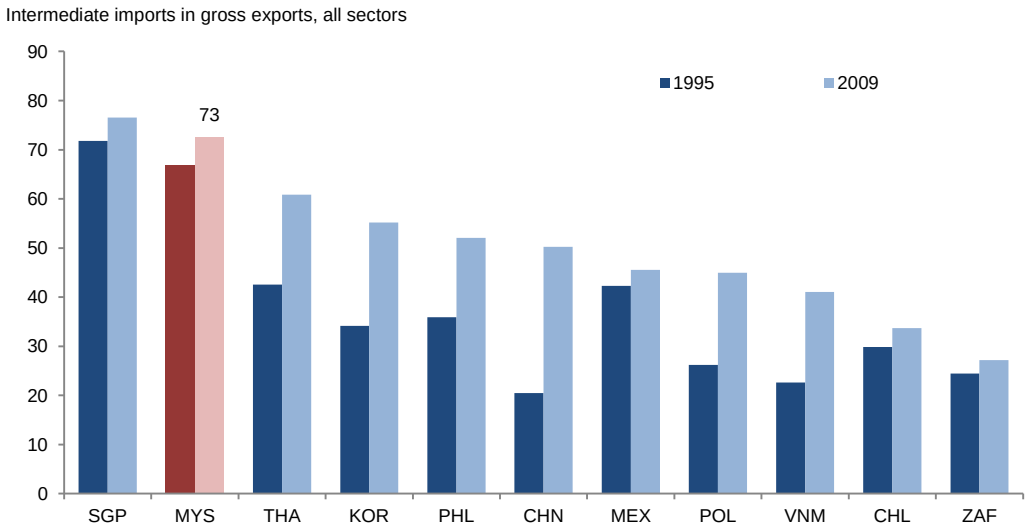
Source: Authors' calculations using data from UN Comtrade.

Figure 65. Low and middle income countries import more intermediates



Source: Authors' calculations using data from UN Comtrade.

Figure 66. Most imported intermediate inputs are used for producing exports



Source: OECD-WTO TiVA database.

79. The high share of intermediate imports embodied in exports indicates that Malaysia's imports are mostly used for downstream exports. The above measures of shares of intermediate goods in total imports do not reveal the use of the imported intermediates, i.e. whether they are for final domestic consumption or for export. To quantify the role of imports used for exports, we look at the buyer's intermediate imports embodied in its gross exports as a percentage of

the buyer's total intermediate imports[15]. This reflects the share of intermediate imports that is used (directly and indirectly) in producing goods and services for export, as a share of total intermediate imports (by import category). The indicator therefore provides a measure of Malaysia's integration in GVCs as a buyer. About 73 percent of all intermediate imports were embodied in exports in 2009, a figure similar to that of 1995 (Figure 66). Partly because Malaysia's share was already high, it changed little compared to those of China (+30 pp), Korea (+21 pp) and Vietnam (+18 pp), which improved their ability to import to export and became more integrated into GVCs.

Box 9. Classification of intermediate inputs by Broad Economic Category

The above figures report the share of intermediates in country imports and exports by selected industries: all sectors, petrochemicals and electronics. The classification is based on BEC. Trade data are from ITC – all the trade flows are converted in HS 1996 6 digits.

<u>All Sectors</u>
We consider as intermediate the following BEC categories:
- *111: Food and beverages – Primary – Mainly for industry*
- *121: Food and beverages – Processed – Mainly for industry*
- *21: Industrial supplies not elsewhere specified – Primary*
- *22: Industrial supplies not elsewhere specified – Processed*
- *31: Fuels and lubricants – Primary*
- *32: Fuels and lubricants – Processed*
- *42: Capital goods – Parts and accessories (except transport equipment)*
- *53: Transport equipment – Parts and accessories*

<u>Petrochemicals and Electrical and Electronics Products</u>
In order to identify the intermediate trade within the selected sectors we create a concordance between the HS1996 classification and the ISIC rev 3 classification (used in the TiVA database). This allows us to identify intermediate products, as defined above, within specific ISIC sections.

Source: Authors

Value-added has grown due to higher commodity exports

80. Given the high level of intra-GVC trade and similarity between imports and exports, a key question is how much domestic value-added is embodied in Malaysia's exports. Visual inspection of Table 6 and Table 7 suggest a significant overlap between import and export products. Indeed there is a genuine question as to whether the participation in global value chains of Malaysia remains marginal, with little value-addition taking place. Box 10 provides a concrete illustration of how a high-(gross) value export can embody limited domestic value-added.

Box 10. Why should we be concerned about value added in manufacturing? – an example of the iPhone

The underlying reason for carrying out a deeper analysis of value addition provided by firms operating within Malaysia in key global value chains, is to try to gain a fuller understanding of how much Malaysia benefits from such GVC participation. For example, while Malaysia exports large aggregate volumes of E&E products, the country also imports substantial E&E intermediate inputs. So it is natural to ask: (i) how much does Malaysia really benefit; and (ii) is Malaysia capturing an increasing share of value addition?

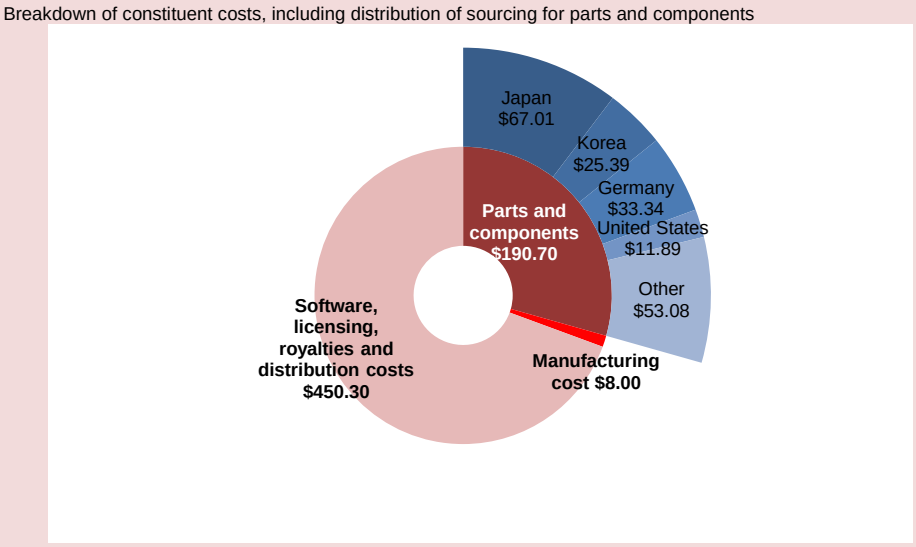
While Malaysian firms are not closely involved in the production of an Apple iPhone, it is an interesting illustrative example of which countries benefit from producing the constituent parts and components. Each import of a finished iPhone into the United States contributes roughly US$ 200 to the China-US bilateral trade deficit. This kind of

[15] Defined as $I2EB\_IMINP_{cs}=I2EBcs/IMINP_{cs}$, where *I2EB* denotes the buyer c's intermediate imports embodied in its gross exports and *IMINP* the buyer's total intermediate imports in a sector s. This measure is computed using input-output tables and trade data.

product is thus considered a desirable "high tech" product with likely high knowledge spillovers.

Yet in an era of fragmented production processes and extended value chains, how much of this value really accrues to China? Following the value added requires information not easily available, but the evidence suggests that it is not very much. Of the US$ 649 average retail price for an Apple iPhone 5s, US$ 450 of that cost is captured by US companies and workers in the distribution, licensing, royalties, software and design processes (Figure 67). Each iPhone is imported into the US from China at a cost of US$ 199. However of this total production cost, manufacturing assembly represents just US$ 8 of the total. The remainder of the manufacturing costs is accounted for by imported parts and components with a breakdown of materials totaling US$ 191. The largest share of these intermediate materials comes from Japan, followed by Korea, Germany and the US. In the end, little more than 1 percent of the total value added in an iPhone is accrued to China's labor for what is primarily assembly work.

Figure 67. Where is production value added in an iPhone that is "Made in China"?



Source: World Bank estimates using IHS Technology data.

81. About 62 percent of the value-added embodied in Malaysia's exports is produced domestically, a share lower than many comparable countries. Gross exports can be broken down into the value-added directly contributed from domestic exporting industries, that indirectly contributed by domestic industries that provide inputs to exporting industries, the foreign value-added coming from imported intermediate goods, and the domestic value-added in imported intermediate goods. Domestic value added embodied in gross exports represents 62 percent of total exports in Malaysia (Figure 68). This figure is relatively low compared to regional comparators (Figure 69). In some cases, this can be attributed to the fact that some of these countries have a higher share of commodity exports (South Africa, Chile). Therefore, it will be more informative to consider value-added in exports by specific industries, which will be discussed in the next section. Because of the expansion of trade within GVCs, most countries experienced a decline in the domestic value-added embodied in exports (i.e. those countries were specializing and importing more intermediate inputs). In Malaysia's case the increase in value-added in exports may be explained by the increased share of commodity exports noted in Figure 59.

82. Conversely, foreign value-added embodied in exports stands largely unchanged at about 38 percent. The reciprocal of total foreign value-added embodied in gross imports as a percent of gross export (by Industry) captures the country's GVC position as a user of foreign inputs in its exports (upstream links or backward participation). For the world as a whole, only 20 percent of gross exports comprise value that was added in a foreign nation (Baldwin and Lopez-Gonzales, 2013). Figure 70 shows the foreign value added in a country's gross exports for 1995 and 2008 for all the countries in the TiVA database. Two patterns stand out: First, almost all countries saw their numbers increase between 1995 and 2008. The expansion is particularly strong in emerging countries, but also in some developed countries such as Japan. The figure is lower for large nations – especially the manufacturing giants, but Germany is

twice as integrated internationally as the US. Meanwhile, numbers rise to a very high level for the smallest nations such as Luxembourg, Singapore or Ireland.

Figure 68. Exports comprise of foreign and domestic value-added

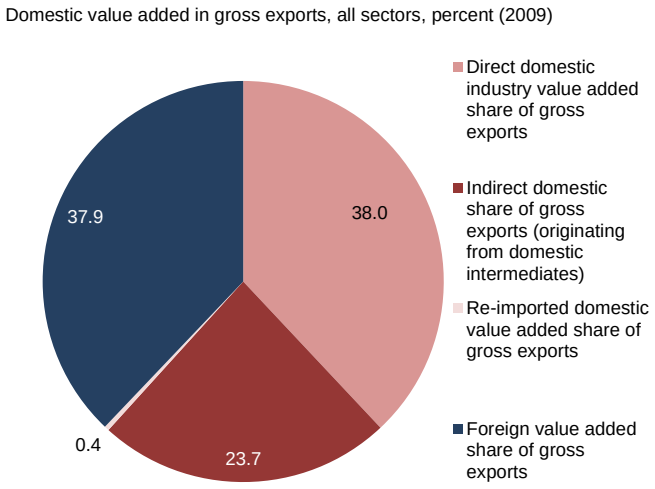
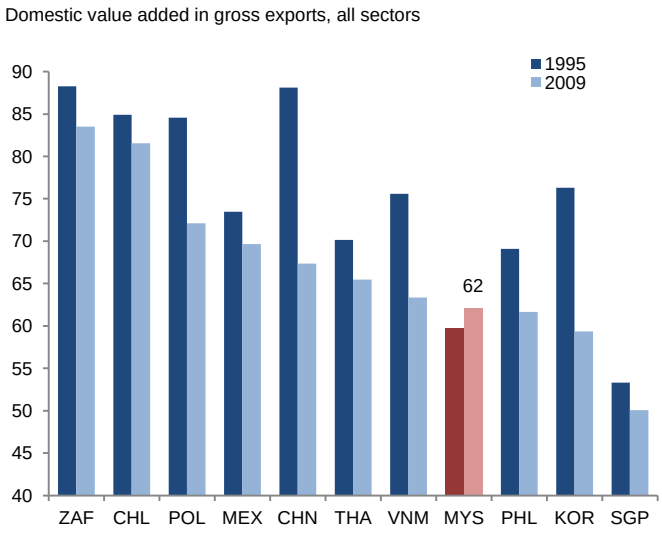
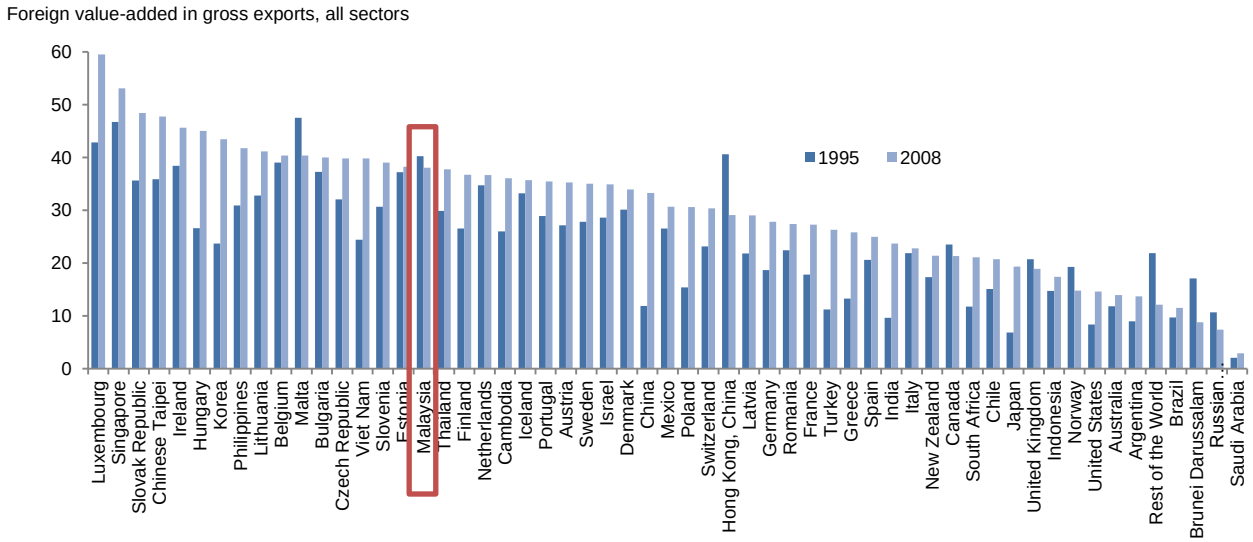


Figure 69. Domestic value-added embodied in gross exports is lower in Malaysia than most peers



Source: OECD-WTO TiVA database, World Bank staff calculations

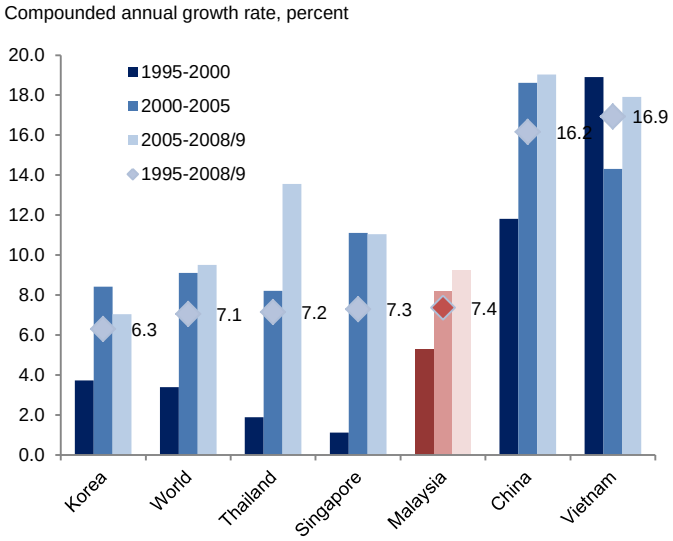
Figure 70. A high share of foreign value-added in gross exports reflects Malaysia's integration in GVCs



Source: OECD-WTO TiVA Database, World Bank staff calculations

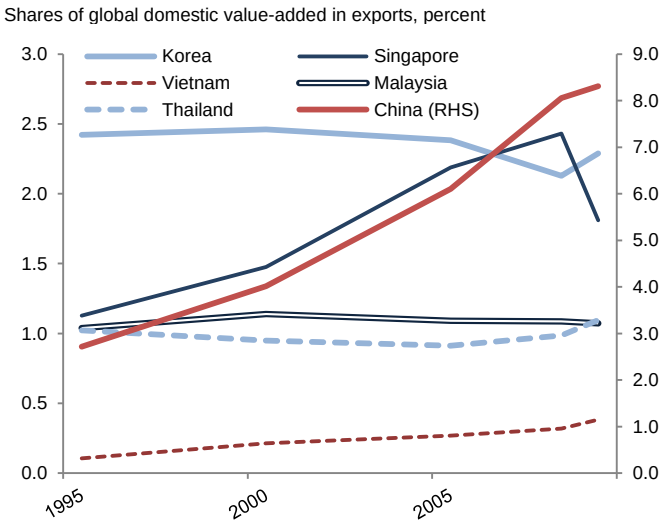
83. Despite slowing export performance, the small increase in the share of domestic value-added embodied in gross exports resulted in a small gain in global market share of value-added exports, at least through 2008/2009. Figure 71 shows that the growth rate of Malaysia's domestic value-added in exports between 1995 and 2008/2009 was slightly above the global average and in line with ASEAN peers Thailand and Singapore. Growth also accelerated across the three periods under analysis. However, this acceleration was more modest in Malaysia compared to Thailand and Singapore as well as the world average. Overall, Malaysia's market share of global trade in value-added terms increased slightly between 1995 and 2008/9 thanks to faster growth in the initial (1995-2000) period (Figure 72). As Figure 70 and Figure 71 show, increased integration in global value chains reflected by higher foreign value added in exports has allowed China and Vietnam to rapidly grow their own domestic value-added exported.

Figure 71. Growth in the domestic value-added of exports accelerated in Malaysia



Source: OECD TiVA dataset and World Bank staff calculations

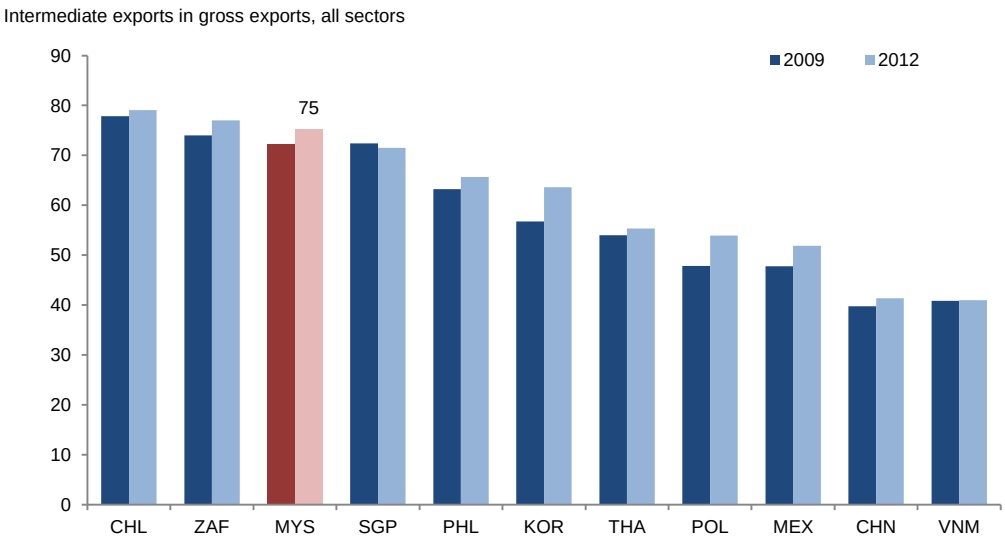
Figure 72. Market shares increased slightly, though not as quickly as that of some of its peers



Source: OECD TiVA dataset and World Bank staff calculations

Malaysia has moved relatively upstream in GVCs

Figure 73. Malaysia is integrated in GVCs on the selling side as well



Source: UN Comtrade, World Bank staff calculations

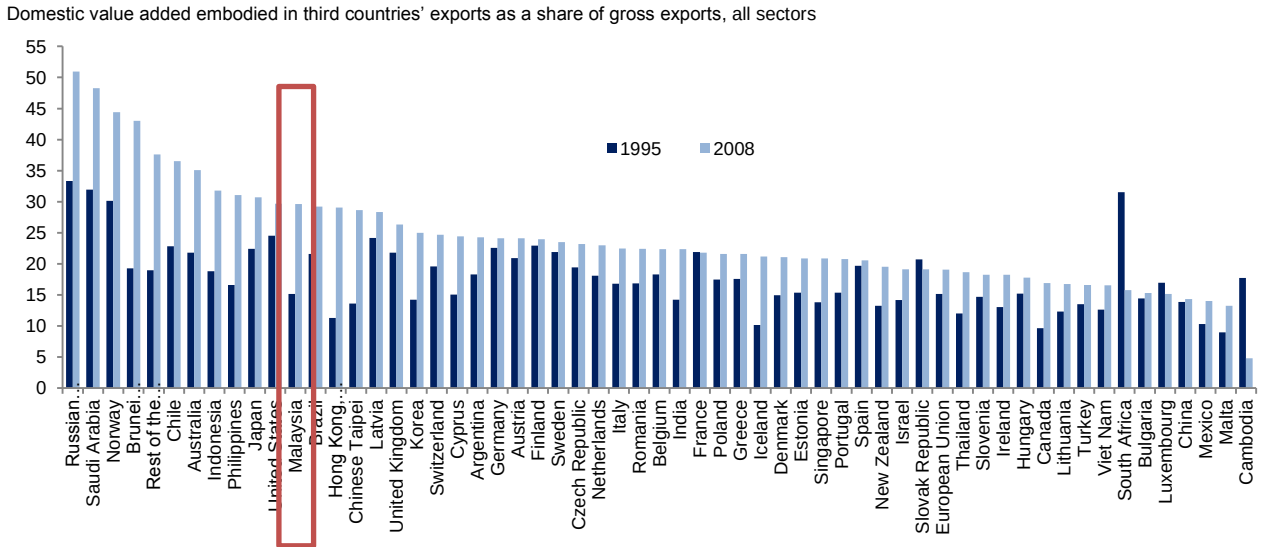
84. While the "buying side" is an indicator of integration in GVCs, adding the "selling side" provides a perspective on the position in the value chain. The value added in exports is a reflection of the "buying" side of GVCs because it is primarily concerned with the domestic and foreign "ingredients" in exports. Turning to the "selling" side, the next question is whether firms are selling into export markets (1) intermediate goods that will be processed further into the value-chain, (2) intermediate goods that will be processed into final consumption goods in the partner country; or (3) final goods. The closer to (1) are the country's exports, the more "upstream" (i.e. removed from the final consumer) it is. In other words, "upstreamness" is the number of stages between the nation's producers and the final consumers of its value-added. Antràs, Chor, Fally and Hillberry (2012) call this 'distance to final demand'. In some industries, countries that are closer to the final consumer (downstream) or at the beginning of the value chain (upstream) seem

to reap the largest gains in terms of value added. [16] This assumption does not hold for every type of production and GVCs (e.g. the high-end furniture manufacturing where production and design usually take place at the same stage of production)[17], but it is generally true for some sectors and value chains (e.g. E&E).

85. Most of Malaysia's top exports are also intermediate goods. The majority of Malaysia's top 50 exports are intermediate goods, parts and components that feed into the production of other products (Table 6). Exports of intermediate goods are 75 percent of gross exports (Figure 73). Only South Africa and Chile have higher shares, which is not surprising given the importance of raw materials for these countries' exports. Similar to all other countries with the exception of Singapore, the share of intermediate exports in gross exports has increased between 2009 and 2012, reflecting increased intra-GVC trade as well as higher commodity prices.

86. In addition, the increase in the share of Malaysian value-added embodied in third country exports suggest those intermediate goods are processed further, representing a move upstream in the value chain. Almost all countries increased the value-added they export that is embodied in intermediate goods that go for further processing (Figure 74). This is partly the effect of longer value chains and increasing specialization in GVCs worldwide and partly due to higher commodity prices, which led to rapid growth of a very upstream and high-value added export (commodities). Indeed, the leading countries in supplying value-added to third countries' exports are all exporters of natural resources, including Russia, Saudi Arabia, Norway, Chile, Australia and Indonesia. Malaysia falls on the lower end of this range, close to Japan and the US, two large non-natural resource intensive countries. On the other side of the spectrum are countries with very low export shares of domestic value-added embodied in third countries' exports, ranging from only 5 percent in Cambodia to 14 to 17 percent in Mexico, China, South Africa, Vietnam and Turkey, suggesting that they are increasingly specialized in final production stages of the value chain. In other words, these countries are located relatively downstream in value chains, tending to export more final goods to end consumers.

Figure 74. Malaysia has become an important supplier of value added in third countries' exports



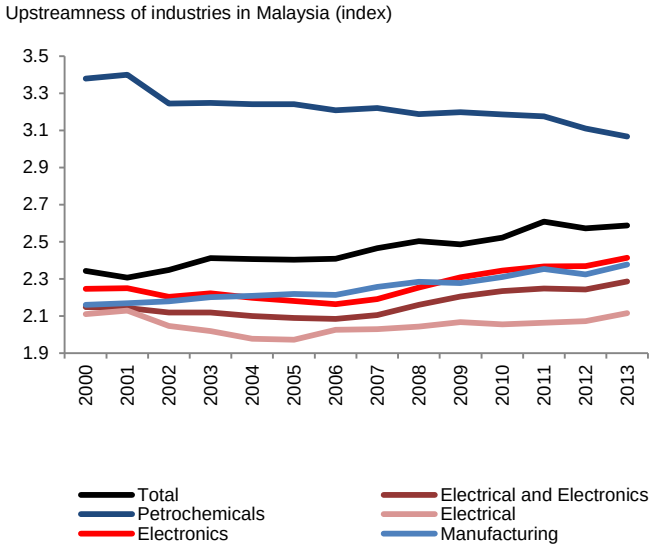
Source: OECD-WTO TiVA Database, World Bank staff calculations

87. For the GVCs in which Malaysia participates, the country maintains an upstream position relatively far from final consumption. We draw on the work of Chor (2014) to measure where Malaysia is positioned along the global production line, asking if exports tend to be in relatively upstream industries, far from final demand, or downstream industries closer to the final consumer. Chor (2014) calculates a measure of the production line position, or

[16] For example: countries specialized in very upstream activities can produce raw materials, say iron ore, or the intangibles involved at the beginning of the production process, say research and design; countries that specialize in customer services are expected to be very close to final demand; finally, countries involved in activities at the center of the value chain may more likely focus on the standardized labor-intensive manufacturing jobs.
[17] See Taglioni and Winkler (2014) for a discussion of this issue.

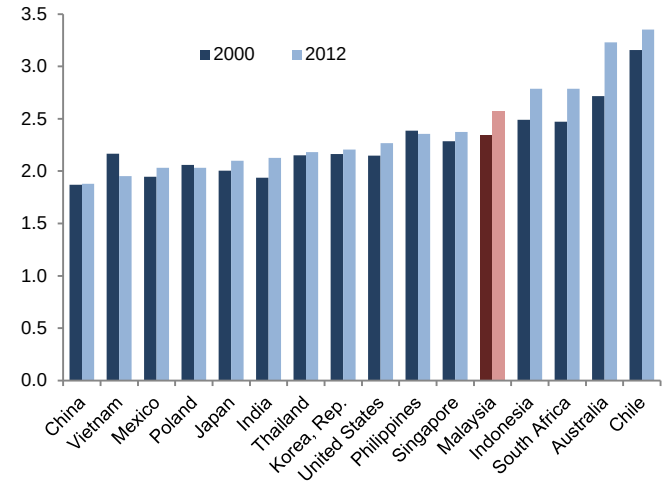
upstreamness, for 426 industries (279 manufacturing) using 2002 data from the United States' input-output tables[18]. The average position of Malaysia's exports from final demand can be calculated as the average upstreamness measure for each industry weighted by the importance of that industry in Malaysia's export basket. Figure 75 plots these calculations to show where Malaysia is positioned in global production lines vis-à-vis its trade partners and how this has changed over time. The electrical industry is the closest to final demand, followed by the manufacturing and electronics industries. Overall, E&E and manufacturing exports have all moved upstream since 2000, or further away from final demand. Yet this is not the case for the petrochemicals industry, which has moved downstream (despite remaining an upstream industry in general).

Figure 75. Malaysia's exports have moved upstream in the past decade



Source: Chor 2014 and UN Comtrade, World Bank staff illustrations.

Figure 76. Malaysia's exports are further upstream than its comparators'



Source: Chor 2014 and UN Comtrade, World Bank staff illustrations.

88. In comparison to peer countries, Malaysia maintains one of the highest upstreamness measures (Figure 76)**.** The exceptions are Brunei, Indonesia, Australia, Chile, and South Africa (all have upstreamness measures above Malaysia's), given that the most upstream industries tend to be related to the extraction and processing of raw materials and resources, and these comparator countries are all natural resource exporters. This provides evidence that within the GVCs in which Malaysia participates, the country maintains a position relatively further from final consumption. Evidence suggests that only a few countries have managed to move downstream (such as Poland and Vietnam in Figure 76). Most countries have increased their upstreamness because the overall length of value chains has increased with the fragmentation of production, and Malaysia is no exception. Moreover, the offshoring-outsourcing process that lengthens GVCs tends to primarily affect early stages of production, although a new wave of services offshoring-outsourcing has been taking place in recent years.

89. The domestic length of the value chain in Malaysia has been changing since 2000. A final useful metric is to combine import and export upstreamness to compute the domestic length of the sectors, calculated as the difference between import and export upstreamness (Figure 77). A positive gap indicates that exports are relatively closer to final demand than imports. Conversely, a negative gap indicates that a country's export profile is more

[18] The measure is based on input-output relationships or how much an industry j purchases from each industry i as inputs. Formally, the measure of upstreamness of industry i is computed as

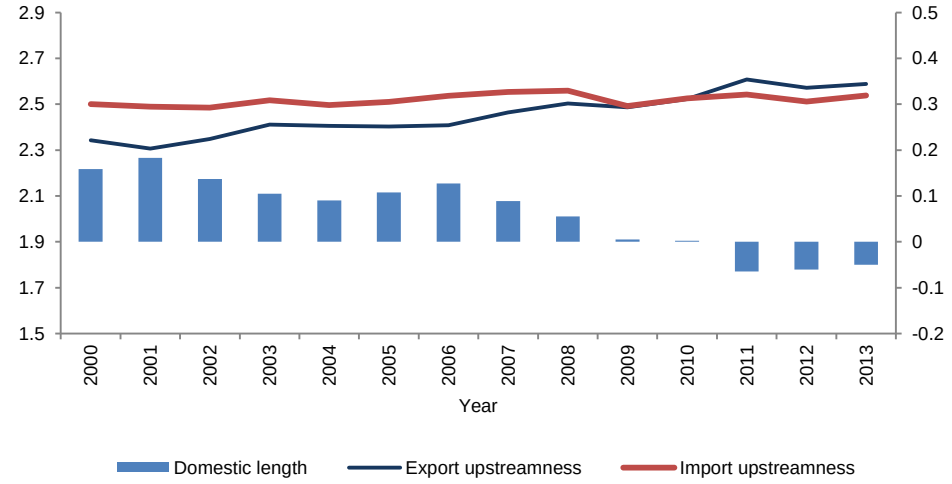
$$U_i = 1 * \frac{F_i}{Y_i} + 2 * \frac{\sum_{j=1}^{N} d_{ij} F_j}{Y_i} + 3 * \frac{\sum_{j=1}^{N} \sum_{k=1}^{N} d_{ik} d_{kj} F_j}{Y_i} + \cdots$$

where Y_i is the total output of the industry, F_i is the value of this output that goes to final uses (final consumption or investment), and d_{ij} is the value of inputs from industry i that are required by industry j to product \$1 of the latter's output. With this definition, an industry that has its entire output channeled to final uses, namely with $F_i = Y_i$, will have $U_i = 1$.

upstream than its import profile, or it may be the case that the country is a large importer of finished consumer goods, rather than being a reflection of the composition of its exports. The longer the domestic "length" the greater on average the number of tasks (production steps) being performed in the economy. Although the gap was positive before 2010, it has become negative ever since. This shift is being driven by exports that have become more upstream or further from final demand; import upstreamness has not changed significantly over the last decade.

Figure 77. The domestic length of the value chain has become shorter since 2000

Import upstreamness, export upstreamness (LHS) and domestic length of the value chain (RHS), indices



Source: Chor 2014 and UN Comtrade, World Bank staff illustrations.

China moves to the center of the trading network

Figure 78: Germany, the United States and Japan were at the core of the network in 1995

The evolution of the network of value-added trade, 1995

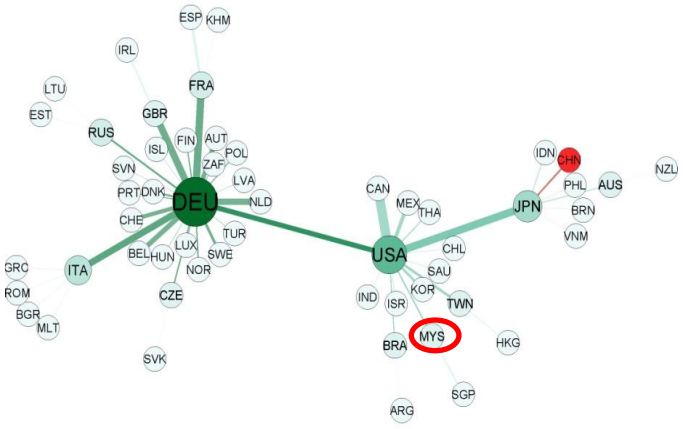
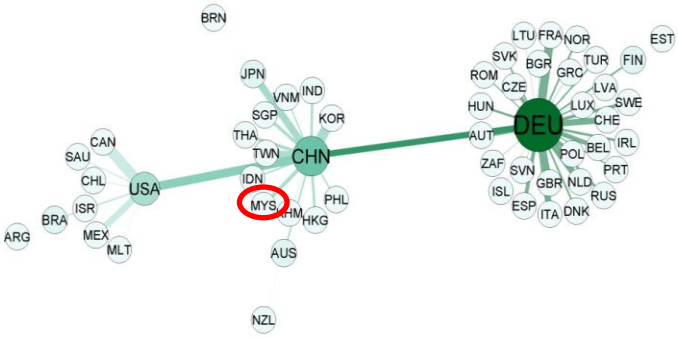


Figure 79: By 2009, China had moved to the core of the network

The evolution of the network of value-added trade, 2009



Source: Own illustration based on OECD-WTO TiVA Dataset.

90. China has moved to the center of the global trade network in the past 15 years, attracting Malaysia to its gravitational pull. The full pattern of "made-here-sold-there" trade, as well as its evolution, can be better understood with a simple visualization of the global network of value-added trade. Representations of trade networks can inform which countries are the important suppliers and sellers of a country's value-added. The visualization is based on the

undirected network between 1995 and 2009, constructed using the measure of domestic value-added embodied in gross exports[19]. It is noteworthy how China moved at the core of the network in the 15 years covered by the analysis (Figure 78 and Figure 79). From a peripheral node in 1995, it became one of the three main nodes of global trade and production networks in 2009. This shift has affected directly Malaysia, whose main trade partner, in terms of value-added flows moved from the USA in 1995 to China in 2009. On the selling side, however, the USA remained as Malaysia's main supplier.

91. Malaysia therefore buys value-added primarily from the USA and sells it primarily to China, the main buyer of value-added worldwide. We visualize the network of trade using the measure of domestic value-added embodied in gross exports from the buyer's perspective as separate from the seller's perspective[20]. Malaysia is in the supply system of the United States and in the buying system of China. In 2009, Malaysia sourced more than 22 percent of overall imported value-added from USA (Figure 80), while China absorbed more than 28 percent of the value-added exported by Malaysia(Figure 81).

Figure 80: Malaysia buys value-added from the United States…

Seller perspective, 2009, biggest suppliers (reduced network)

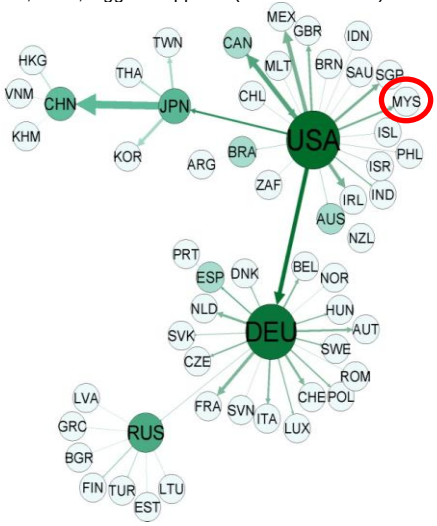
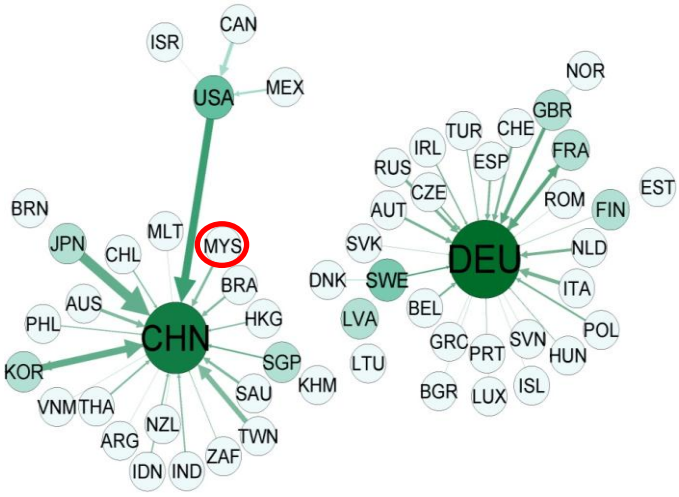


Figure 81: … and sells it primarily to China

Buyer perspective, 2009, biggest markets (reduced network)



Source: Own illustration based on OECD-WTO TiVA Dataset

92. Malaysia's position in GVCs is central and well-clustered in the network. Different metrics from Network Analysis help quantify countries' positions in the global network of value-added trade. Two main concepts are presented in Table 8, constructed using domestic value-added in gross exports. The measure of structural integration is a measure of the centrality of country i relative to the overall structure of the network. It is the most representative measure of the network, which captures the strength of the links and their closeness/proximity. This can be computed from the buyer's (BONwin) or seller's (BONwout) perspective. Clustering (CCw) is instead a measure of the transitivity of the network. It measures how much the neighbors of country *i* are themselves connected. It captures whether country *i* is strong because it trades a lot with other countries that are also strong. Malaysia ranks 13th from the buyer's perspective and 18th from the seller's perspective of 56 countries, supporting the above analysis that the country is well-integrated into GVCs on both the buyer's and seller's perspectives, but is relatively stronger on the buyer's side of

[19] The graphs in Figure 78 and Figure 79 are a Minimal Spanning Tree (MST): a reduced network that reports for each country only the strongest relation in term of value-added flows, considering both imports and exports of value-added. The most connected countries represent the roots of the tree (darker color and biggest shapes), while peripheral countries, or 'leaves', are represented in milder colors and smallest shapes. The size of the nodes reflects a country's centrality.

[20] Since MST is based on the undirected network, it is not possible to focus on incoming (imports) and outgoing (exports) value-added flows. In Figure 80 and Figure 81, the seller perspective graphs for each country only shows the biggest supplier of value-added: for each country I, the color (and size) of the node is proportional to the number of countries *j* for which country *i* is the first VA supplier. The buyer's perspective follows the same structure, but focuses on the relevance of a country as a destination market; for each country *i* the color (and size) of the node is proportional to the number of countries *j* for which country *i* is the first destination in terms of VA absorption.

the chain. Malaysia is also well-clustered in the network (ranking 23rd), suggesting that the country trades with other countries that have strong linkages. Not surprisingly, the United States, Germany, China, and Japan are the strongest. Nevertheless, China and Germany are relatively more important from a buyer's perspective – supplying value-added – while the United States is relatively more important from a seller's perspective – demanding value-added.

Table 8: Malaysia's position in GVCs is central and well-clustered in the network

Network measures, structural integration and clustering

	Total			Electrical			Petrochemical		
	CCw	BONwin	BONwout	CCw	BONwin	BONwout	CCw	BONwin	BONwout
ARG	0.621	0.117	0.127	0.461	0.097	0.116	0.562	0.117	0.126
AUS	0.668	0.132	0.140	0.517	0.112	0.139	0.608	0.125	0.146
AUT	0.677	0.139	0.138	0.559	0.141	0.139	0.618	0.141	0.137
BEL	0.698	0.147	0.143	0.561	0.136	0.145	0.664	0.160	0.148
BGR	0.597	0.118	0.113	0.473	0.106	0.108	0.538	0.123	0.106
BRA	0.660	0.127	0.140	0.523	0.119	0.135	0.610	0.128	0.144
BRN	0.528	0.093	0.100	0.338	0.040	0.091	0.381	0.044	0.099
CAN	0.677	0.139	0.139	0.552	0.137	0.138	0.630	0.143	0.142
CHE	0.689	0.142	0.143	0.584	0.153	0.145	0.650	0.153	0.145
CHL	0.631	0.122	0.129	0.386	0.034	0.128	0.569	0.119	0.128
CHN	0.748	0.163	0.157	0.660	0.187	0.168	0.693	0.166	0.159
CZE	0.666	0.139	0.132	0.565	0.153	0.132	0.599	0.137	0.129
DEU	0.755	0.162	0.162	0.639	0.168	0.170	0.714	0.174	0.167
DNK	0.678	0.141	0.136	0.549	0.137	0.135	0.615	0.137	0.138
ESP	0.698	0.144	0.145	0.572	0.141	0.147	0.652	0.152	0.147
EST	0.578	0.112	0.108	0.472	0.111	0.102	0.502	0.104	0.103
FIN	0.661	0.134	0.133	0.562	0.152	0.131	0.594	0.130	0.132
FRA	0.725	0.152	0.154	0.606	0.155	0.158	0.683	0.162	0.157
GBR	0.717	0.148	0.153	0.603	0.154	0.157	0.674	0.157	0.158
GRC	0.640	0.126	0.129	0.486	0.106	0.123	0.574	0.123	0.126
HKG	0.668	0.132	0.139	0.537	0.124	0.140	0.593	0.123	0.136
HUN	0.653	0.136	0.127	0.557	0.155	0.127	0.587	0.136	0.123
IDN	0.652	0.128	0.135	0.539	0.132	0.133	0.600	0.128	0.137
IND	0.692	0.143	0.143	0.569	0.142	0.144	0.631	0.138	0.147
IRL	0.680	0.142	0.137	0.567	0.150	0.137	0.642	0.151	0.143
ISL	0.542	0.103	0.098	0.448	0.109	0.091	0.482	0.109	0.085
ISR	0.644	0.131	0.127	0.535	0.136	0.127	0.589	0.134	0.125
ITA	0.715	0.148	0.152	0.595	0.150	0.155	0.669	0.158	0.153
JPN	0.718	0.146	0.156	0.625	0.162	0.165	0.667	0.149	0.158
KHM	0.505	0.099	0.084	0.360	0.083	0.064	0.388	0.071	0.072
KOR	0.712	0.151	0.147	0.622	0.170	0.155	0.657	0.155	0.146
LTU	0.580	0.112	0.109	0.448	0.098	0.100	0.533	0.118	0.108
LUX	0.636	0.132	0.122	0.476	0.102	0.118	0.557	0.123	0.117
LVA	0.571	0.107	0.109	0.431	0.089	0.102	0.488	0.092	0.107
MEX	0.660	0.138	0.130	0.572	0.160	0.131	0.586	0.127	0.131
MLT	0.546	0.134	0.000	0.456	0.120	0.000	0.463	0.002	0.000
MYS	0.686	0.144	0.139	0.591	0.158	0.145	0.634	0.149	0.138
NLD	0.709	0.151	0.146	0.581	0.147	0.149	0.675	0.165	0.150
NOR	0.672	0.134	0.141	0.531	0.121	0.138	0.612	0.127	0.147
NZL	0.593	0.115	0.114	0.446	0.098	0.106	0.517	0.106	0.109
PHL	0.629	0.126	0.123	0.558	0.152	0.130	0.488	0.086	0.114
POL	0.676	0.140	0.137	0.561	0.144	0.137	0.617	0.142	0.134
PRT	0.638	0.128	0.126	0.518	0.131	0.121	0.577	0.129	0.123
ROM	0.626	0.124	0.124	0.510	0.125	0.123	0.560	0.126	0.116
RUS	0.695	0.134	0.155	0.543	0.116	0.153	0.660	0.138	0.167
SAU	0.648	0.118	0.143	0.470	0.080	0.140	0.627	0.131	0.154
SGP	0.706	0.150	0.143	0.599	0.163	0.146	0.664	0.161	0.144
SVK	0.635	0.132	0.121	0.536	0.145	0.121	0.563	0.130	0.115
SVN	0.605	0.122	0.114	0.498	0.120	0.110	0.544	0.124	0.108
SWE	0.690	0.143	0.142	0.576	0.147	0.144	0.636	0.146	0.142
THA	0.673	0.139	0.136	0.584	0.161	0.139	0.604	0.133	0.134
TUR	0.663	0.135	0.134	0.532	0.129	0.131	0.605	0.137	0.132
TWN	0.687	0.141	0.142	0.607	0.164	0.151	0.634	0.148	0.138
USA	0.746	0.153	0.166	0.634	0.161	0.173	0.706	0.162	0.173
VNM	0.627	0.129	0.119	0.488	0.116	0.115	0.531	0.106	0.117
ZAF	0.626	0.124	0.124	0.472	0.100	0.121	0.554	0.115	0.122

Source: Own illustration based on OECD-WTO TiVA Dataset.
Note: The cells are colored according to the strength of these metrics – a red cell indicates a strong measure, a blue cell indicates a weak measure, and a white cell indicates an average measure.

93. The aggregate trends discussed so far may hide important developments in underlying manufacturing industries, which can be analyzed using a similar set of tools. Higher commodity prices between 1995 and 2009 may hide more structural changes in trade competitiveness. In particular, as noted earlier, the decline in gross trade shares has been

driven by high-technology products. Accordingly, the next two sections will look in more depth at the two largest tradable sectors in the Malaysian economy – E&E and petrochemicals – with a view to diagnosing demand side trends and disaggregating the participation of Malaysia within these two GVCs.

Electrical and Electronics (E&E)

94. The most famous example of the successful development of value chains is the East Asia value chain in electrical and electronic (E&E) products, in which Malaysia participates. Hiratsuka (2005) and Baldwin (2008) provide an overview of how the production and delivery of products such as personal computers and mobile phones were distributed among many firms and countries which either produced sub-assemblies (Malaysia, Philippines, Thailand), performed final assembly (China), engaged in product design and development (Japan, United States) or in the intermediate production planning known as original design manufacturing or ODM (Taiwan).

China has assumed a central role in the E&E GVC

95. A key feature of the E&E industry over the past 15 years is the growing role of China and the relative decline of ASEAN MICs, including Malaysia. Figure 82 shows the trajectory of E&E exports in nominal terms compared to the export values registered in 2000 for respective countries or regions, while Figure 83 shows the disparity in growth rates between China and the rest of the world both in the pre-and post-crisis environments. Both figures illustrate that although middle-income ASEAN countries remain important players in the E&E GVC, their contribution relative to China was declining even before the crisis.

Figure 82. China's exports of E&E were growing exponentially prior to the financial crisis…

Index; RHS: China, log scale; LHS: all other countries/groups, linear scale

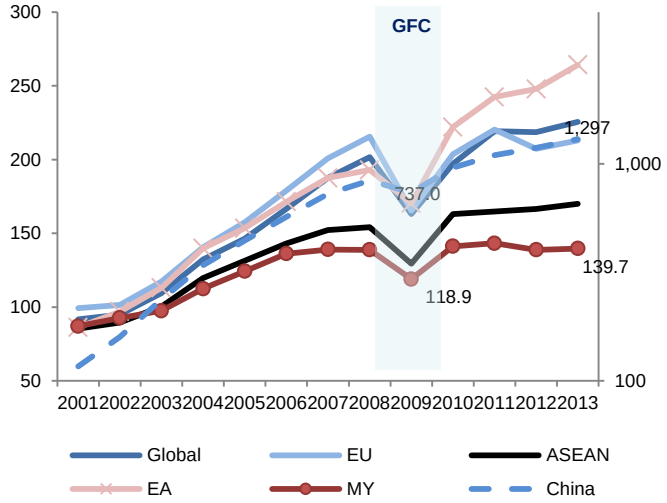
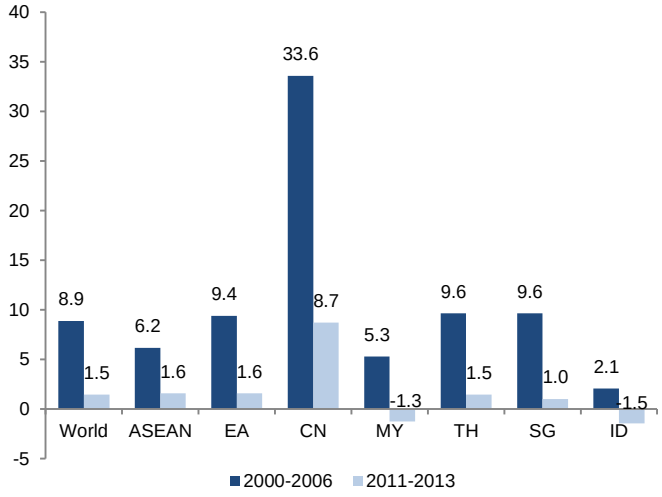


Figure 83. … and continued to grow faster than ASEAN MICs in the post-crisis period as well.

CAGR, percent



Source: Global Trade Atlas (GTA).

Note: 1. EA includes Hong Kong, Taiwan and South Korea; ASEAN includes Singapore, Malaysia, Thailand, Indonesia and Philippines; EU consists of 27 European countries.

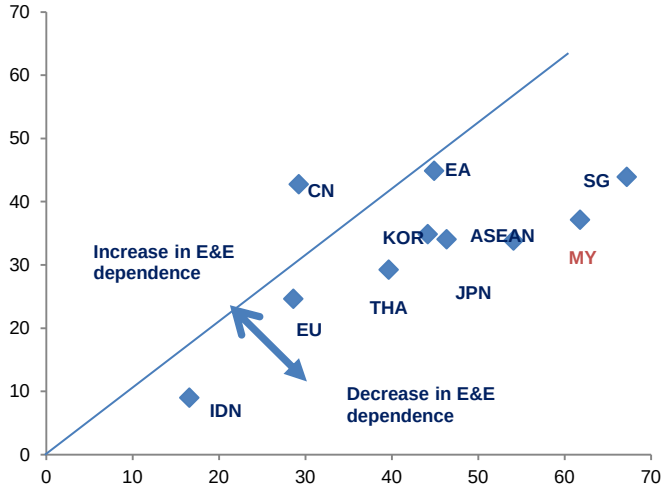
2. E&E exports are derived from products classified as HS84 and HS85.

96. China's rise corresponded with a decline in Malaysia's global market share. China's share of E&E shipments as a percentage of total exports has increased about 14 percentage points while for Malaysia and Singapore, the shares have declined respectively by 25 and 23 percentage points (Figure 84). The share of high-tech products in total manufactured exports from China increased from about 5 percent in 1980-1985 to about 35 percent in 2007-2009[21]. Its share of global E&E exports increased by over 7 percentage points, while Malaysia's declined by about 0.3 percentage point (Figure 85).

[21] Anand, R., Mishra, S. and Spatafora, N. 2012.

Figure 84. Since 2000, the share of E&E in total exports declined across East Asian MIC, except China…

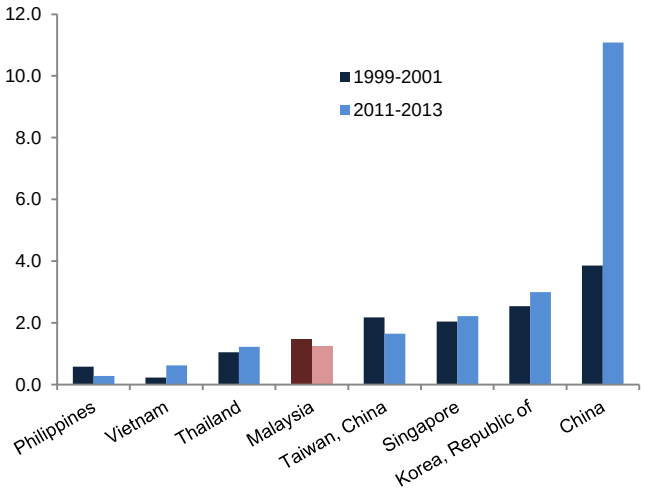
Share of E&E in total exports, 2013 (y-axis) versus 2000 (x-axis), percent



Source: World Bank staff calculations

Figure 85. … which also gained the most market share in the E&E space.

Share of country's E&E/Global E&E exports, percent



Source: World Bank staff calculations
Note: Office and telecommunications equipment

97. China has replaced the US as the most important immediate buyer of E&E value-added. In 2009, the United States is still the most relevant supplier ("seller") of value-added for Malaysian E&E exports (18 percent). From the buyer perspective, China absorbs about 41 percent of all E&E value-added produced in Malaysia (Figure 86 and Figure 87).

Figure 86. The US remains the largest supplier of inputs to the E&E industry through indirect links

Seller perspective, 2009, biggest supplier (reduced network), E&E

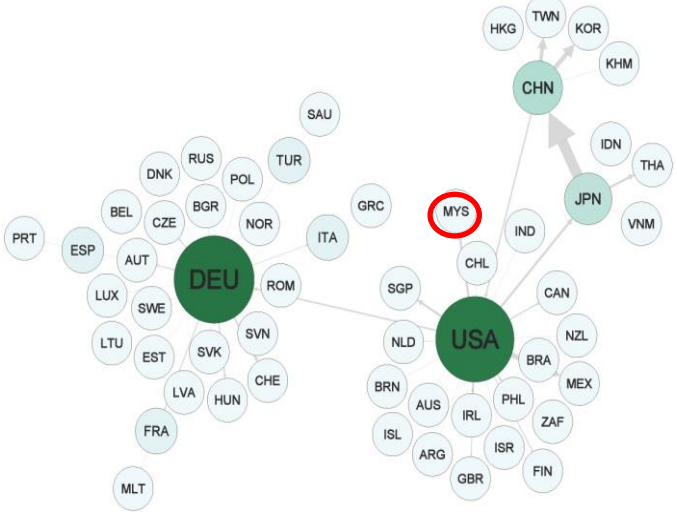
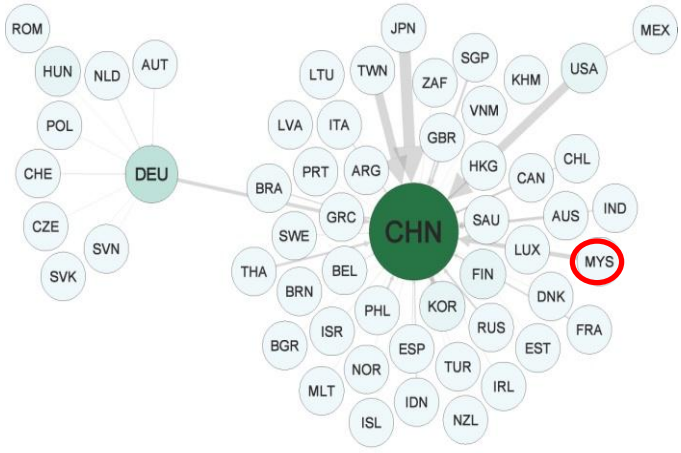


Figure 87. Malaysia is in the buying system of China for E&E GVC

Buyer perspective, 2009, biggest markets (reduced network), E&E



Source: Own illustration based on OECD-WTO TiVA Dataset

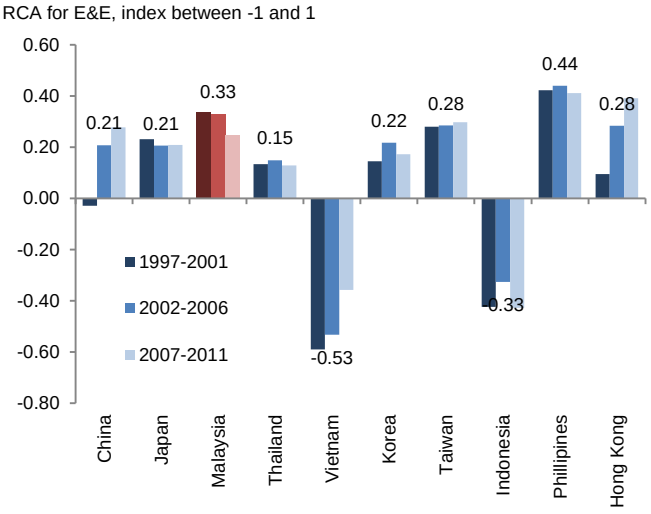
98. An analysis of revealed comparative advantage (RCA) further suggests that middle-income ASEAN countries, including Malaysia, have been losing competitiveness in E&E. RCA indices monitored over time can point towards directional changes in comparative advantage (Maule 1996)[22]. Malaysia, Thailand and the Philippines still have

[22] It is common in the empirical trade literature to measure international trade specialization and competitiveness of exports across countries by using the revealed comparative advantage method (Balassa, 1965).The RCA for a country in a given product is the ratio of the share of total exports that the product represents in the country's export basket and the share of global trade in that

revealed comparative advantage in producing electrical and electronic products, but this has declined, in Malaysia's case significantly, between 2002-2006 and 2007-2011 (Figure 88). Meanwhile, the RCA of North Asian countries (China; Taiwan, China; and Hong Kong) has increased in the period. Interestingly, the RCA of Japan and Korea has either stagnated or declined, perhaps reflecting a shift in production base and greater fragmentation of global value chains. It is also noteworthy that while Vietnam does not yet appear to have a revealed comparative advantage in E&E, the change in RCA is the largest positive change in the period analyzed.

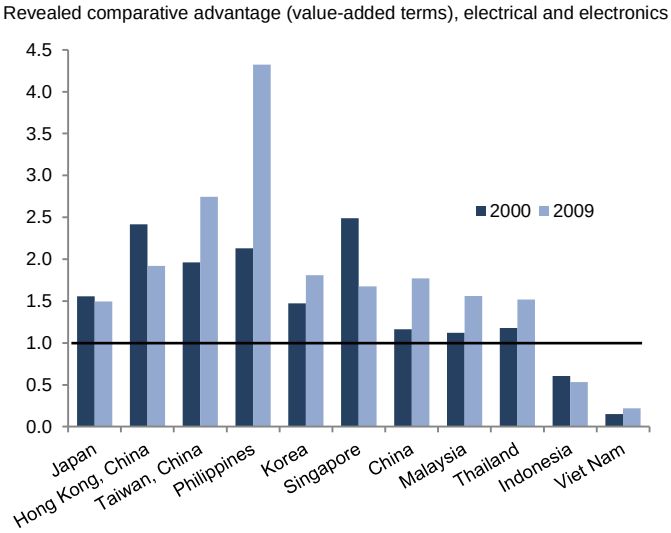
99. In value-added terms, RCA analysis suggests that Malaysia has made modest gains. As another indicator of competitiveness in GVCs, Figure 88 and Figure 89 present the RCA indicators calculated using the TiVA database. Unlike traditional RCA indicators, the measure is constructed using domestic value-added embodied in gross exports. A country is said to have a comparative advantage in the sector if this version of the RCA measure is above 1. Like Malaysia, many of the comparator countries also reveal a comparative advantage in electrical and electronic goods (with the exception of Vietnam and Indonesia).

Figure 88. ASEAN MICs show a decline in RCA for E&E, while China's and Vietnam's have increased



Source: WITS and World Bank staff calculations

Figure 89. Most comparators reveal a comparative advantage in electrical and electronics



Source: OECD-WTO TiVA database and staff calculations

100. China's increased presence in E&E has also been accompanied by higher investments in research and development. Integration into the GVCs involves large foreign investments, which have the potential to bring technology transfers. Leveraging on these dynamics by putting in place an ecosystem which supports the industry is therefore critical in sustaining a country's competitive advantage. For example, the availability of skilled labor, the emphasis on R&D[23] (Figure 90), the existence of supporting industries, political stability, the ease of doing business, and financial incentive packages offered to investors are factors that attract investments. With the government's support, China has managed to build this ecosystem, including a cluster of supporting industries that enables it to compete in the global markets. For instance, emphasis has been given to improve indigenous innovative capacity within the

product. A product is over represented in a country's export basket if RCA is >1. $X_{c,p}$ is equal to the dollar exports of country c for product p, then the RCA of country c in product p is given by the following formula:

$$RCA_{c,p} \equiv \frac{X_{c,p}/\sum_p X_{c,p}}{\sum_c X_{c,p}/\sum_c \sum_p X_{c,p}}$$

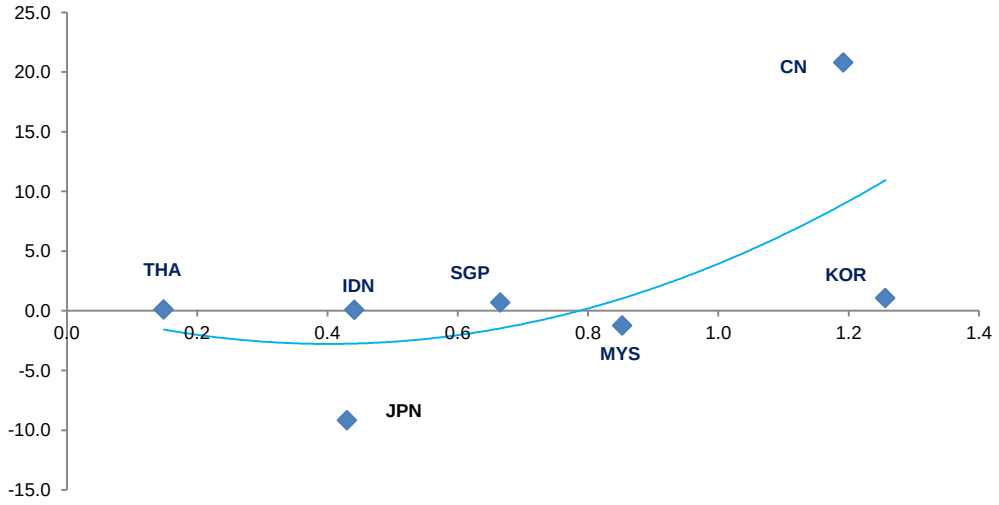
The RCA index is made symmetric, obtained as (RCA-1)/ (RCA+1); this measure ranges from -1 to +1 (Laursen,1998).

[23] Although the electronics sectors in different countries have experienced different recovery trajectories since the GFC, a common characteristic that sustained their competitiveness over the years is that the R&D intensity, notably in China, South Korea and Singapore.

electronics industry as the government has earmarked an investment of RMB 3.86 trillion until 2020 to be spent in R&D related to sensor network technology[24].

Figure 90. China's increase in E&E exports has been accompanied by relatively high R&D expenditures

Change in E&E exports share (y-axis) vs. R&D as a percent of GDP (x-axis)



Source: CEIC and World Bank staff calculations

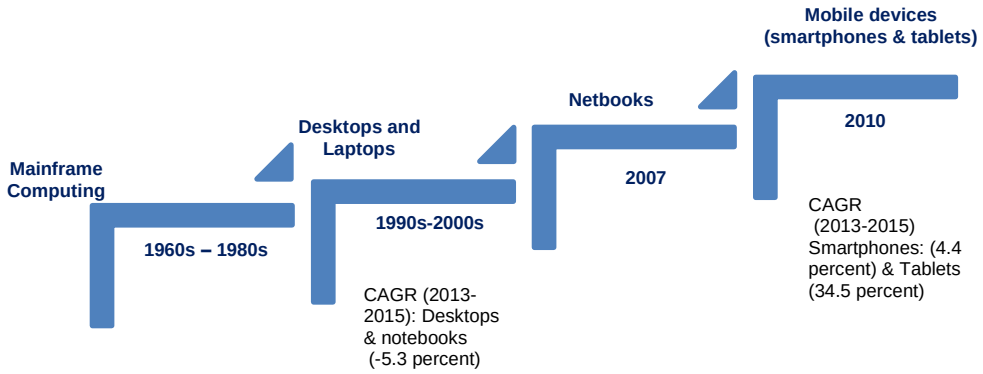
101. Part of the decline in performance in the ASEAN MICs and Malaysia in particular may be linked to an erosion of the traditional sources of competitiveness. The three ASEAN countries traditionally plugged into the computer components industry are Malaysia, Singapore, and Thailand. Singapore has a number of indigenous firms focused on supplying a wide range of services and advanced technology components to multinationals. Thailand and Malaysia specialize in hard-disk drives as well as integrated circuit packages, although Malaysia has been able to attract some R&D around the manufacturing core of integrated circuits, notably from Intel. Thailand and Malaysia's historical reliance on competing on attractive labor costs and adequate infrastructure is being threatened by the emergence of Vietnam as a cost-competitive country. Vietnam is gaining foothold in the E&E GVC with local firms initially acting as suppliers to multinationals[25]. Vietnamese engineers reportedly are cost-competitive, as their wages are half of the engineers in China. The Vietnamese assembly workers are also highly cost-competitive as the minimum wage can be as low as only half of the average of the manufacturing wage in certain manufacturing areas in China. However, in terms of labor productivity, Vietnamese workers' productivity is reportedly half of that of China's workers[26].

102. ASEAN countries like Malaysia, while having an adequate supply base, may not in fact be present in the most critical parts of the production chain for fast-growing product segments. The key components produced in the ASEAN region include computer parts and components such as hard disk drives (HDDs), computer central processing units (CPUs), and assembled printed circuit boards. Malaysia has a competitive network of suppliers in the northern region, Penang, which forms a relatively strong electronics cluster but similarly to Thailand concentrates in the production of PC parts and semiconductors,[27] a segment which is growing less rapidly compared to the mobile computing segment[28] (Figure 91). Malaysia has a smaller presence in the mobile computing segment compared to China, Taiwan and South Korea. Malaysia's position in the slow-growing market segments and China's growing role as the

[24] Market Analysis Report: China's Electronics Industry (2010) a presentation to Israel Ministry of Industry, Trade and Labor and Israel Export & International Cooperation Institute.
[25] To address this gap, the government in Vietnam is pursuing policy initiatives to develop the local electronics supplier base Vietnam. See Industrial Competitive Report (2011) by Ministry of Industry and Trade of Vietnam (MoIT) and United Nations Industry Development Organisation (Unido)
[26] Asian Productivity Organization, APO Productivity Databook (2009).
[27] E&E in Penang are concentrated in assembly and testing rather than higher value wafer fabrication. Therefore, the value-added per worker of about RM70,000 is comparable to China and only a fifth of that of Singapore (Economic Transformation Programme (ETP) Handbook (Chapter 11 on Revitalising the Electronics and Electrical Sector).
http://etp.pemandu.gov.my/upload/etp_handbook_chapter_11_electronics_and_electrical.pdf
[28]The CAGR estimates are taken from Gartner, Inc Newsletter, published on 7 January 2014.

leading location for final assembly of computers products and parts could have affected Malaysia's export competitiveness and resulted in an erosion of its global market share.

Figure 91. Evolution of Technology Across Time

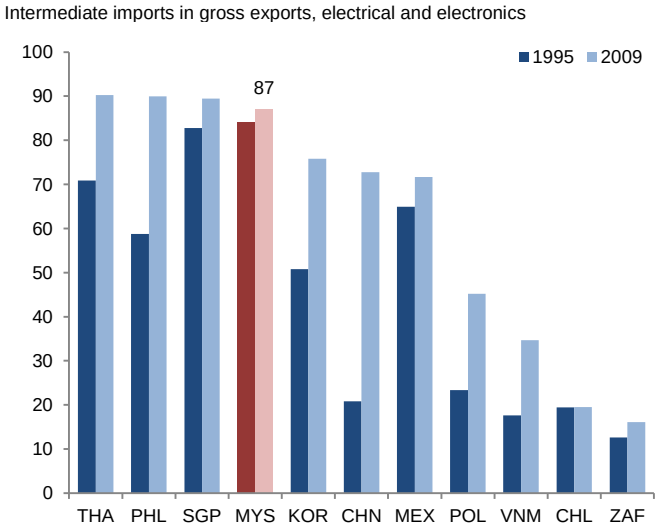


Source: Adapted from Morgan Stanley and Gartner, Inc. 2014

Value-added of the E&E industry has increased, but remains relatively low

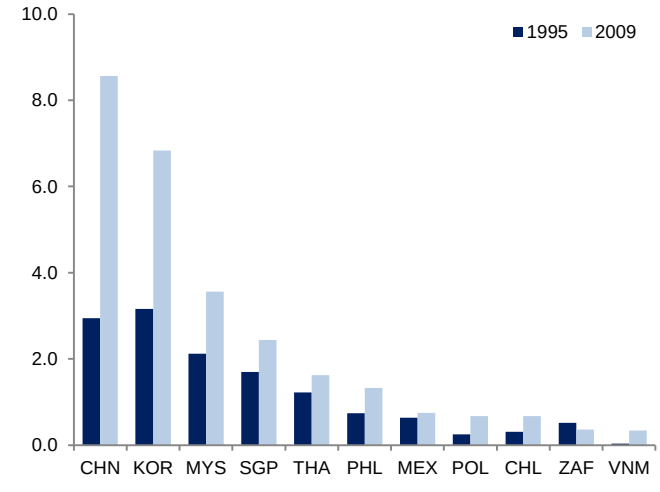
103. Malaysia remains a key player in the E&E global value chain despite the decline in market share of gross exports. The large share of intermediate imports embodied in exports (87 percent; Figure 92) indicates that Malaysia's imports of E&E are mostly processed within the GVC for downstream exports rather than used for final domestic absorption. From 1995 to 2009, Malaysia actually increased its global role as a supplier of value-added in E&E, reaching a share of 3.6 percent of overall sectoral flows (Figure 93). Hence, the share of E&E global value-added accruing to Malaysia has been increasing (Figure 94). Another implication of Figure 93 is that the E&E industry has moved upstream, which is confirmed by Figure 95, which also shows that the domestic length of the value chain shrunk post-crisis.

Figure 92. Nearly all E&E intermediate imports end up in exports



Source: Authors' calculations using data from UN Comtrade

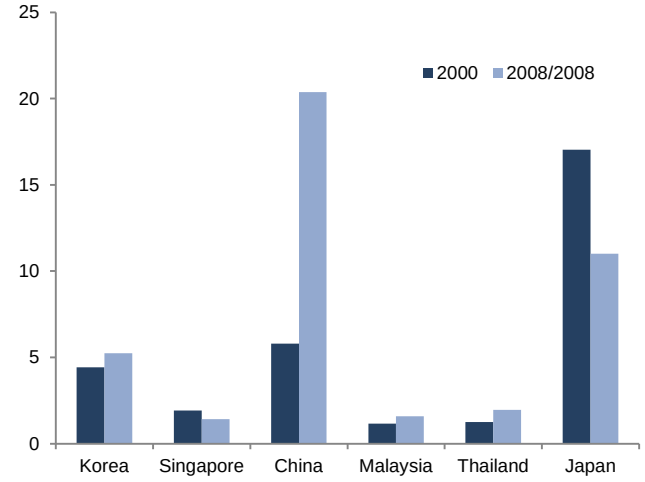
Figure 93. Malaysia is a significant supplier of value-added in the E&E supply chain



Source: Own illustration based on OECD-WTO TiVA Dataset

Figure 94. Malaysia gained export market share in terms of domestic value-added

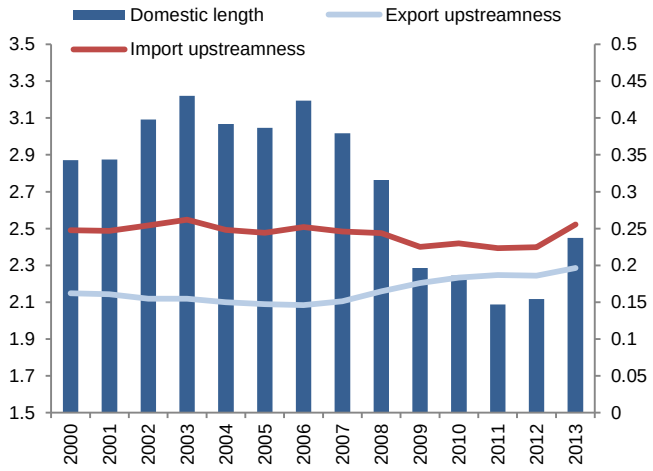
Market share based on domestic value added, electrical and electronics



Source: OECD-WTO TiVA Dataset and authors' calculations

Figure 95. Export upstreamness increased, shrinking the domestic length of the E&E GVC

Import and export upstreamness, index (LHS); domestic length, index (RHS)

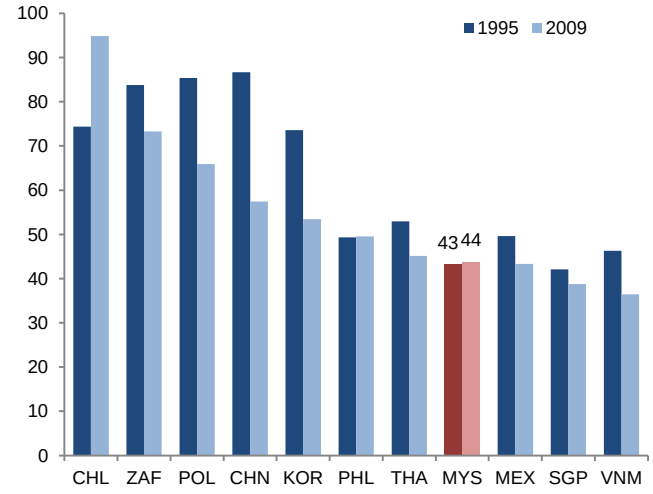


Source: Authors' calculations using data from UN Comtrade

104. Domestic value-added of Malaysian E&E exports have increased, but remain among the lowest of comparator countries partly due to weak linkages with domestic players. Figure 96 shows that between 1995 and 2009 the domestic value added in E&E exports declined in most East Asian countries due to the significant increase in intra-GVC trade. Malaysia's domestic value-added embodied in gross exports of E&E increased slightly during the period, but at 44 percent remains low compared to peers. Figure 97 suggests that the limited value-added in overall exports is partly due to the small contribution from domestic intermediaries, implying Malaysia's E&E industry has limited domestic linkages – a hypothesis that is considered more carefully below.

Figure 96. Domestic value-added increased slightly, but is in the low end of comparator countries.

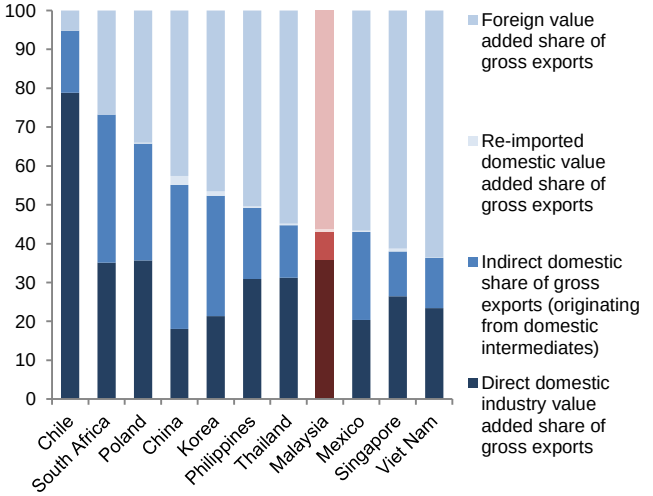
Domestic value added in gross exports, electrical and electronics



Source: OECD-WTO TiVA Database

Figure 97. Malaysia has the smallest contribution from domestic intermediaries to value-added.

Value-added components in gross exports, electrical and electronics, 2009

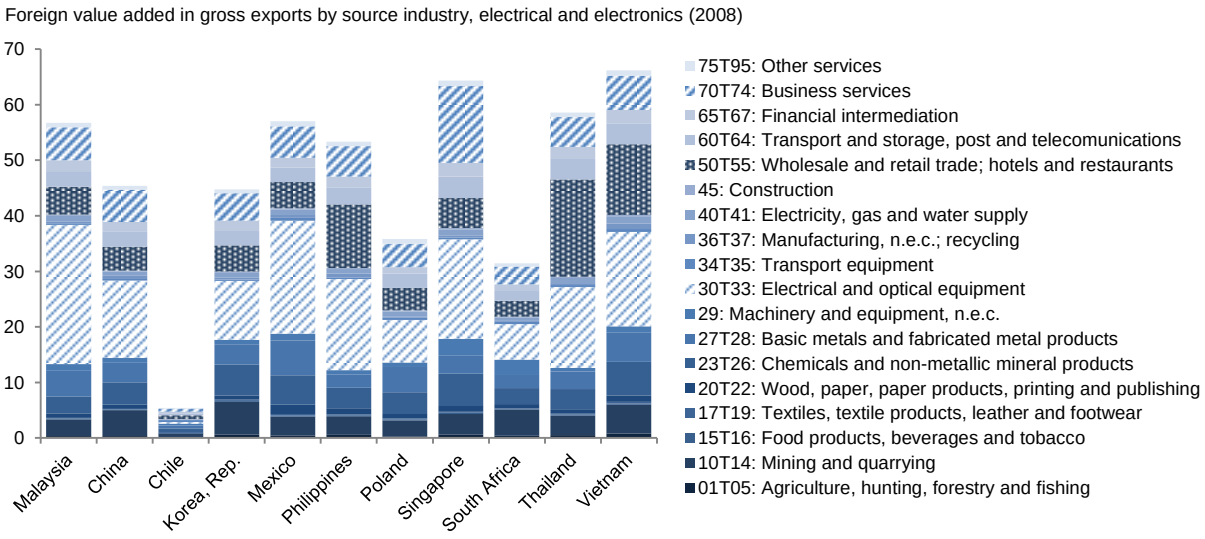


Source: OECD-WTO TiVA Database

105. Malaysia relies most heavily on intra-industry imports for the foreign value-added of its exports of E&E. Figure 98 shows the foreign value-added in gross exports broken up by source industry for the Malaysian electrical and electronics sector in 2008 and compares it to the same sector in other comparator countries. In Malaysia, intra-industry foreign value-added contributed a dominant share (25 percent). While this figure is also large in other countries such as Vietnam and Mexico, the share in Malaysia is overwhelming. This may be linked to the limited

domestic linkages, and suggests that Malaysia may be able to add more domestic value added to the E&E industry's exports by moving these tasks domestically. Business services and wholesale and retail trade are all important foreign value-added inputs to E&E exports in all other countries considered, but not necessarily in the same order.

Figure 98. Malaysia relies most heavily on intra-industry imports for its value added exports of E&E



Source: Own calculations based on OECD-WTO TiVA Dataset

Opportunities to further increase value-added through improved linkages

106. Firm-level analysis confirms the limited linkages in the E&E industry in Malaysia. Javorcik 2004, Blalock and Gertler 2008, Havranek and Irsova 2011 support the existence of positive backward spillovers from multinationals on local suppliers, while evidence on forward spillovers is mixed. This section uses measures of direct linkages in GVCs derived from firm-level data from the World Bank Enterprise Surveys, which were last conducted for Malaysia in 2007. This section differentiates between three types of firms that are characteristic of GVCs: multinationals relying on inputs from domestic suppliers, domestic producers that rely on imported inputs, and domestic suppliers that export.

Figure 99. Multinationals source a majority of inputs from foreign suppliers

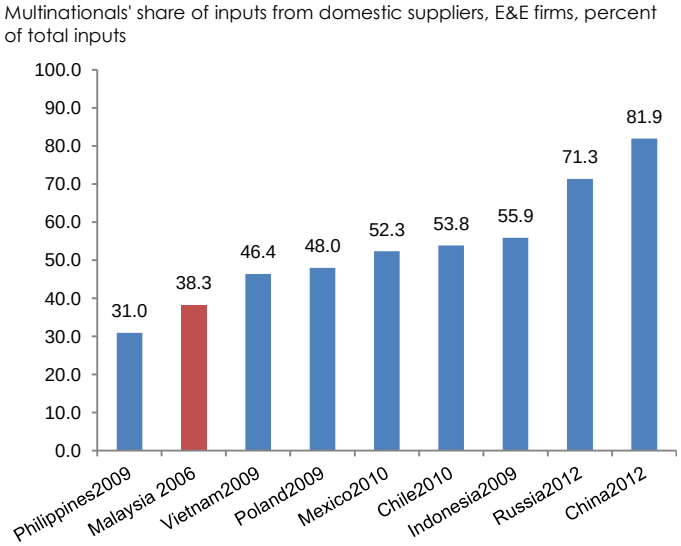
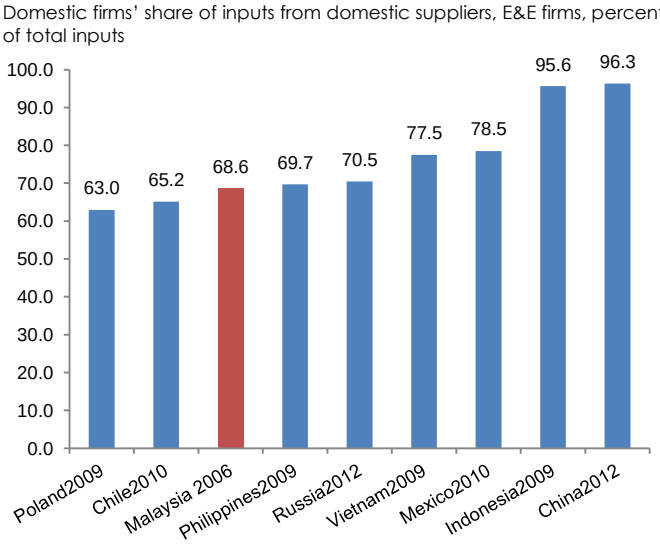


Figure 100. Domestic firms source more inputs domestically



Source: World Bank Enterprise Surveys, years indicated in charts
Note: Averages not weighted due to missing strata for Malaysia

107. E&E multinationals in Malaysia source a majority of inputs from foreign sources. While results are only indicative and aggregate, Figure 99 shows that in Malaysia multinationals in the E&E industry tend to source most inputs from foreign sources. The share of domestic inputs is lower than in comparable countries, except for the Philippines. Figure 100 shows that domestic firms in Malaysia and all comparator countries except Russia use more domestic inputs compared to multinationals. Malaysia's domestic firms' use of domestic inputs is more typical compared to that in other countries analyzed, though significantly lower than other key players in the E&E GVC such as Vietnam and China.

108. Domestic E&E firms in Malaysia hold a lower share of exports than multinationals, but the highest share among comparator countries. Malaysian multinationals in the E&E sector, similarly to those in other mid-sized economies in the E&E GVC such as Philippines and Poland, export most of their output (Figure 101). Domestically-owned E&E firms in Malaysia export less than 1/3 of their output (Figure 102). Nonetheless, these numbers are well above other comparator countries, confirming Malaysia's export vocation in E&E. These charts confirm that Malaysian domestic firms are linked to GVCs, but primarily in third countries, where their participation is small relative to domestic and other imported inputs.

Figure 101. Domestic firms in Malaysia export less than multinationals

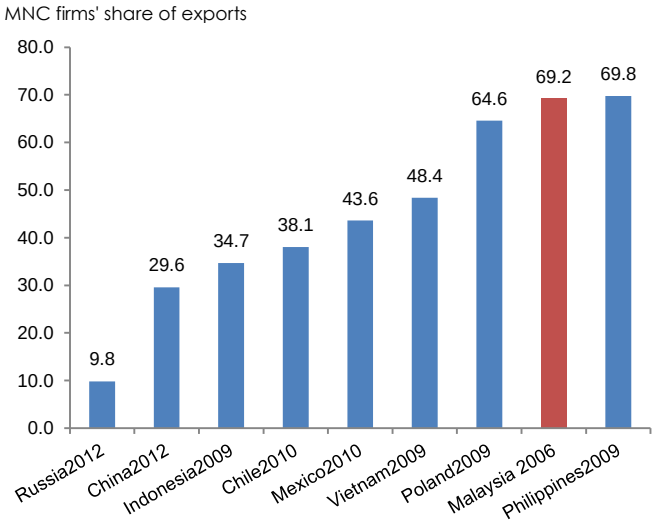
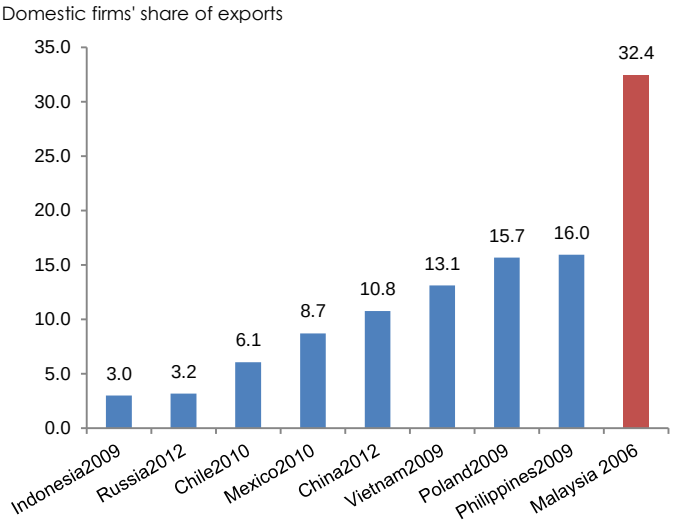


Figure 102. Domestic firms share in exports in Malaysia is higher than comparators



Source: Malaysia Enterprise Surveys 2007
Note: Averages not weighted due to missing strata for Malaysia

Petrochemicals

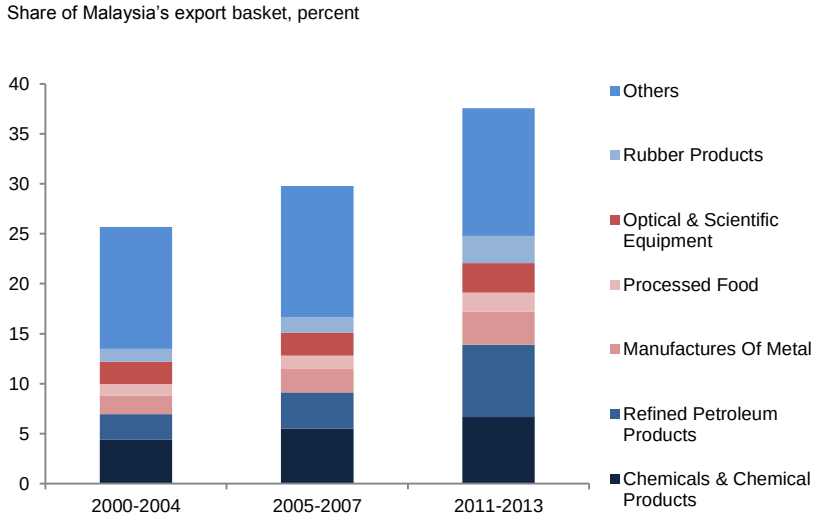
109. Malaysia's declining share of E&E exports in the recent decade has been accompanied by a rise in the share of non-E&E[29] manufactured exports. Non-E&E manufactured exports has increased from approximately 26 percent in 2000-2004 to 37 percent of total exports in 2011-2013 (Figure 103). Supported by the domestic availability of raw materials and ongoing policy initiatives to move the resource-based sector up the value chain, Malaysia has emerged as a major exporter of downstream products in chemicals and chemical-related products, refined petroleum products and rubber products. In addition, higher investment in optical and scientific equipment has also resulted in stronger growth in this industry in Malaysia. Box 11 provides more details on the petrochemical industry in Malaysia.

110. A decline in output from the oil and gas sector has prompted a move downstream into petrochemicals. The oil and gas sector[30] contributes significantly to the Malaysian economy, in terms of both value-added (approximately 10

[29] Non-E&E manufactured exports refers to resource based products such as refined petroleum, chemicals, rubber and wood products; and non-resource based products such as metals, optical and scientific equipment and transport equipment.
[30] Includes downstream products i.e. petrochemicals.

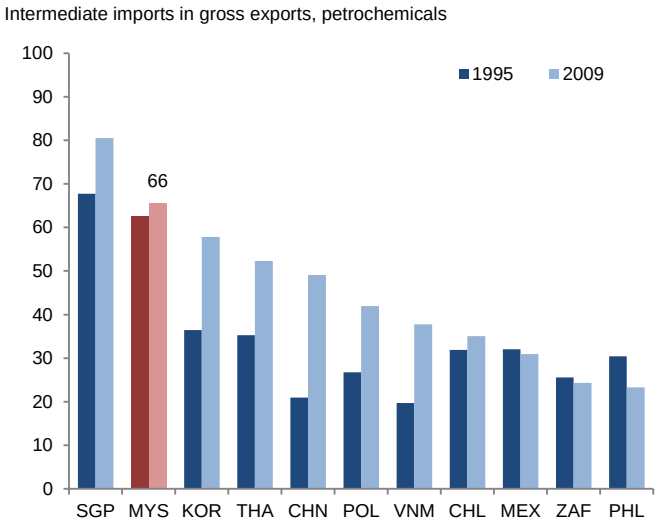
percent share of GDP in 2013) and export receipts (2013: approximately 25 percent of gross exports). As a non-renewable resource, the sector is projected to face a natural decline of 2 percent annually (ETP, 2011). Thus, PETRONAS has been working to spur downstream activity in the oil and gas industry and diversify sources of growth. Malaysia's strength is in its existing ecosystem of oil and gas-related industries, comprising of upstream extraction, offshore structure manufacturers and fabricators, oil and gas storage and terminal operators, engineering and logistic services providers, steel and petrochemical players. This ecosystem provides a strong foundation for further expansion in downstream activities.

Figure 103. Non-E&E exports increased over the past decade



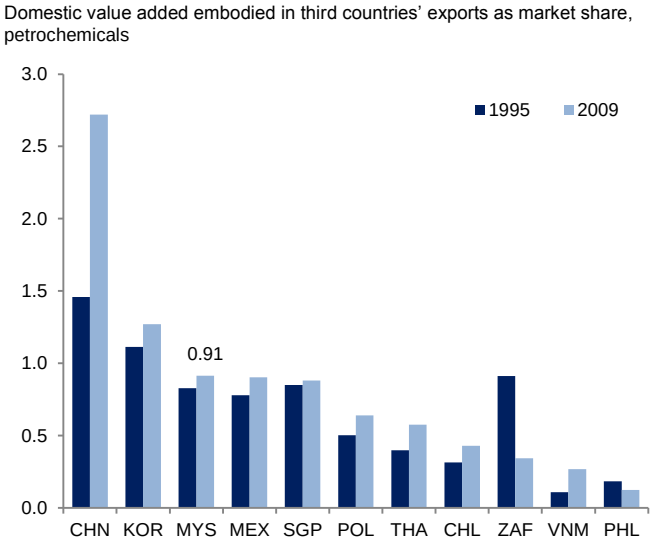
Source: CEIC and World Bank staff calculations

Figure 104. Intermediate imports in the petrochemical industry are also largely used for exports



Source: Authors' calculations using data from UN Comtrade

Figure 105. Malaysia's share in domestic value-added in petrochemical exports of third countries has increased



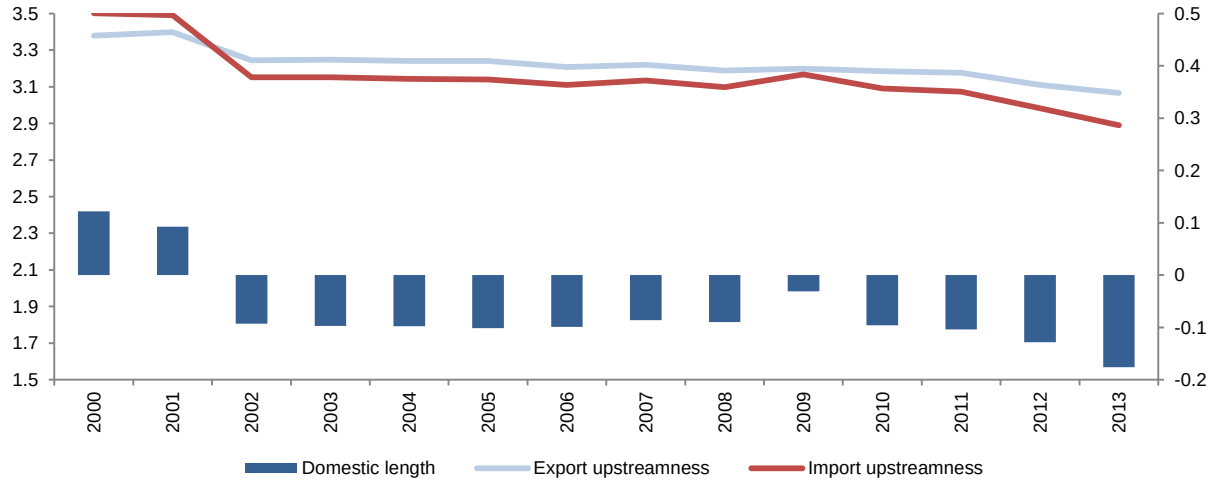
Source: OECD-WTO TiVA Dataset and staff calculations

111. Malaysia is an emerging player in the petrochemical value chain. Malaysia is a producer of oil and gas, but the share of intermediate imports embodied in exports is relatively large (66 percent; Figure 104), suggesting that Malaysia's vocation as an efficient importer also applies in this sector. This may be due to the fact that Malaysia exports high-quality Tapis crude oil and imports oil lower-grade oil. From 1995 to 2009 Malaysia increased its global role as supplier of value-added in petrochemicals, reaching a share of 0.9 percent of overall sectoral flows (Figure

105). At the same time, the industry's exports have moved downstream, although a parallel increase in the upstreamness of imports kept the length of the industry negative (Figure 106).

Figure 106. Petrochemical exports moved upstream, as did imports

Import and export upstreamness, index (LHS); domestic length, index (RHS)

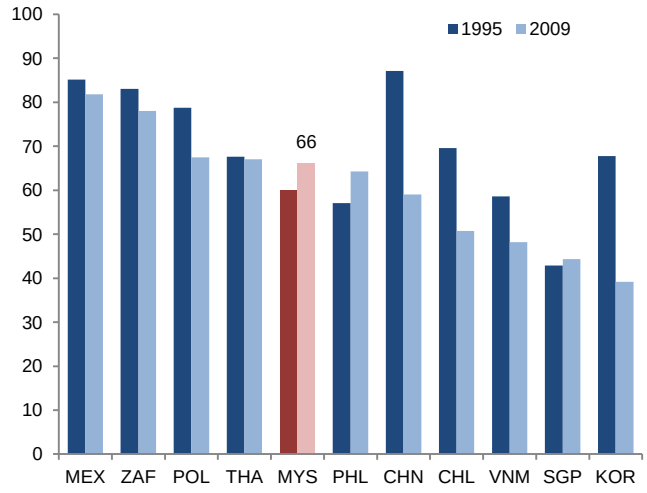


Source: Own calculations based on OECD-WTO TiVA Dataset

112. Domestic value-added of Malaysian petrochemical exports have increased. Figure 107 shows that between 1995 and 2009 the domestic value-added in petrochemical exports declined in most comparator countries. Malaysia's domestic value added embodied in gross exports of petrochemicals increased during the period; however. At 66 percent, it is average compared to comparator countries. Figure 108 shows that this is largely due to indirect domestic share of gross exports – primarily the mining (upstream) industry, which is larger in Malaysia than in similar countries.

Figure 107. Petrochemical exports embody more domestic value-added than the average industry

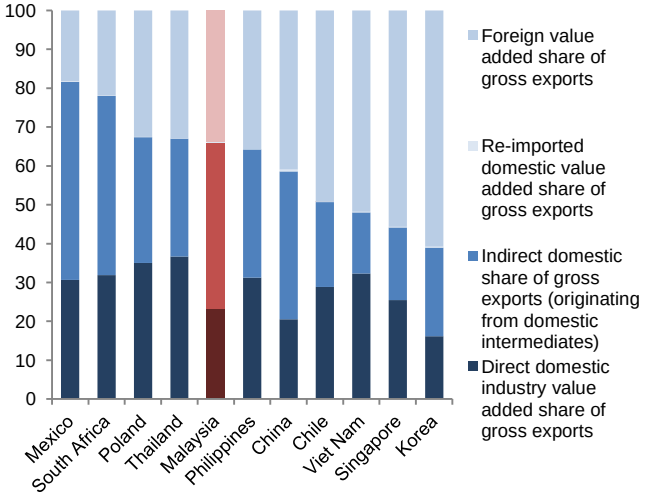
Domestic value added in gross exports, petrochemicals



Source: Own illustration based on the OECD-WTO TiVA Database

Figure 108. Malaysia's domestic petrochemical industry makes a relatively small contribution.

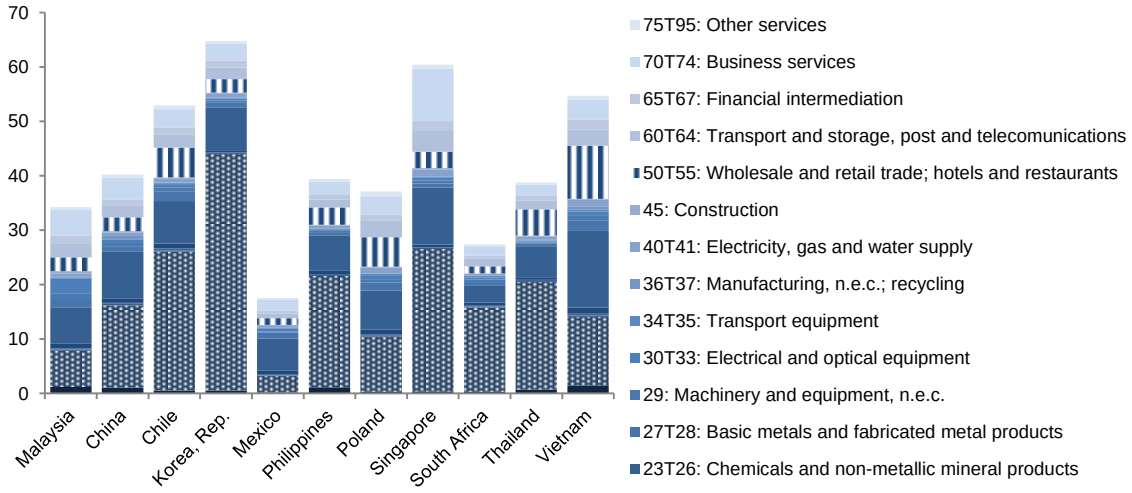
Value-added components in gross exports, petrochemicals, 2009



Source: Own illustration based on the OECD-WTO TiVA Database

Figure 109. Malaysia relies equally on mining and intra-industry imports for its value added exports of petrochemicals

Foreign value added in gross exports by source industry, petrochemicals



Source: Own calculations based on OECD-WTO TiVA Dataset

113. Malaysia relies equally on mining and intra-industry imports for its value-added exports of petrochemicals. Figure 109 shows that total foreign value-added in gross exports in this sector in Malaysia reached 34 percent in 2008. While intra-industry foreign value-added is an important input to petrochemical exports globally, it is not the most important foreign value-added input for many countries. Rather, mining and quarrying tends to be the most important foreign value added input. This is less the case for Malaysia, where these sectors have equal shares (6.7 percent). This suggests that Malaysia's petrochemical exports may be relying too heavily on intra-industry foreign inputs that are not processed domestically. Business services and wholesale and retail trade are also important foreign value-added inputs to petrochemical exports in many of the countries considered and highlights the importance of services sectors for competitiveness in manufacturing.

114. Similarly to E&E, most value-added is supplied by the US, while sales are primarily to China. Figure 110 and Figure 111 visualize the seller and buyer perspectives respectively focusing on the petrochemicals sector. In 2009 the United States is still the most relevant supplier of value added for Malaysian exports (24 percent). From the buyer perspective Singapore absorbs around 21 percent of all petrochemical value added exported by Malaysia, and then re-exports to China.

Figure 110: Malaysia remains in the supplying system of the United States for petrochemicals…

Seller perspective, 2009, biggest supplier (reduced network), petrochemicals

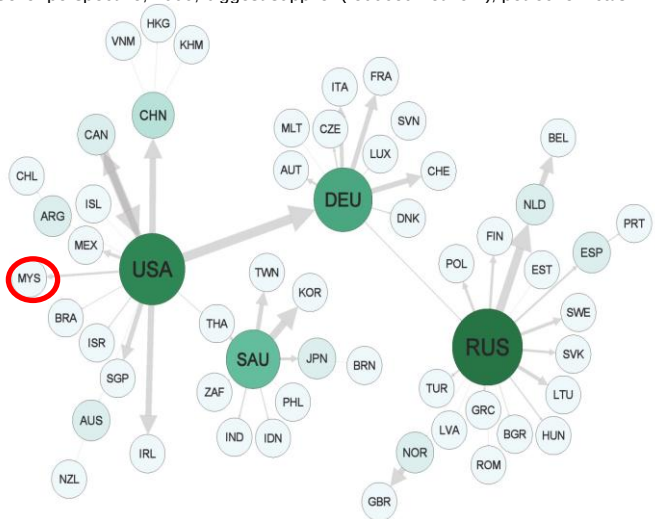
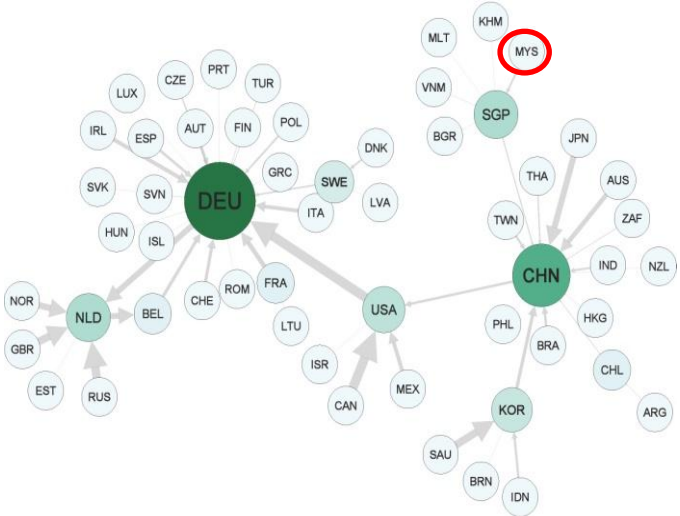


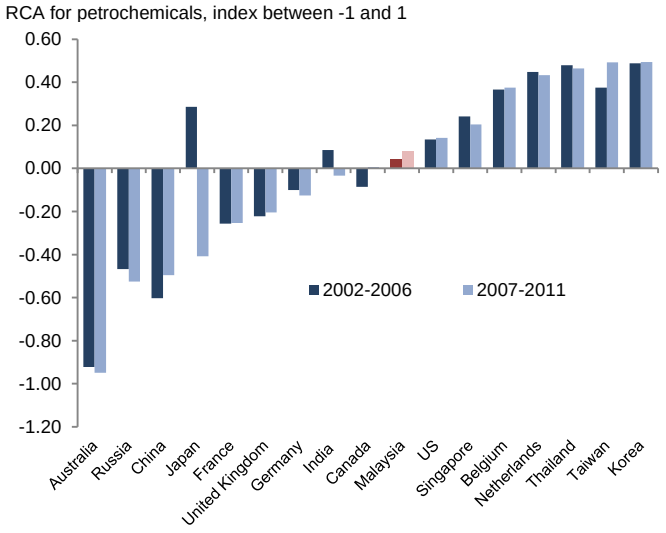
Figure 111: Malaysia is in the buying system of Singapore for petrochemicals

Buyer perspective, 2009, biggest markets (reduced network), petrochemicals



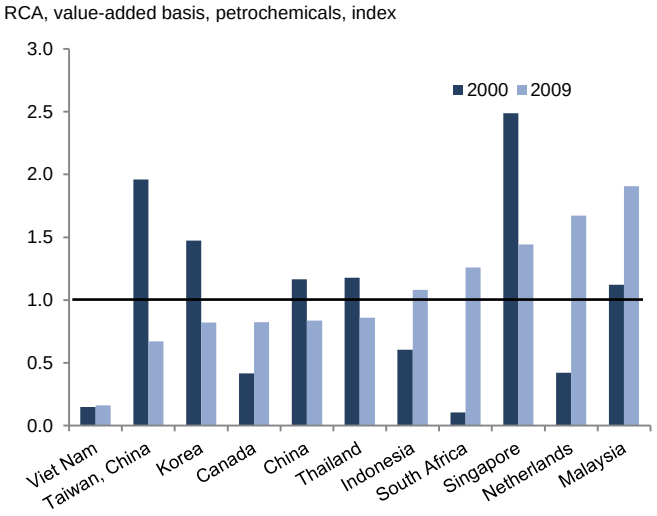
Source: OECD-WTO TiVA Dataset and World Bank staff calculations

Figure 112. Malaysia's RCA for petrochemicals has increased both in gross export terms…



Source: WITS and World Bank staff calculations

Figure 113. … as well as in value-added terms



Source: Own illustration based on OECD-WTO TiVA Dataset

115. Malaysia's comparative advantage in in petrochemicals is more unique in East Asia compared to E&E. Figure 112 and Figure 113 suggest that Malaysia has revealed comparative advantage in petrochemicals, with a larger RCA when measured in value-added terms. The RCA that Malaysia achieves in the petrochemicals industry is more unique relative to its regional comparators compared to E&E, with the exception of Singapore. This result supports the findings on Malaysia's competitive edge in petrochemicals (Box 11).

Figure 114. Multinationals source a majority of inputs domestically

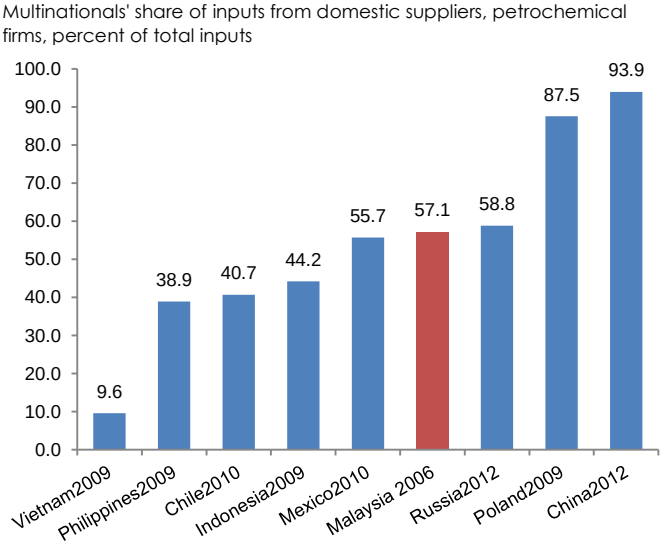
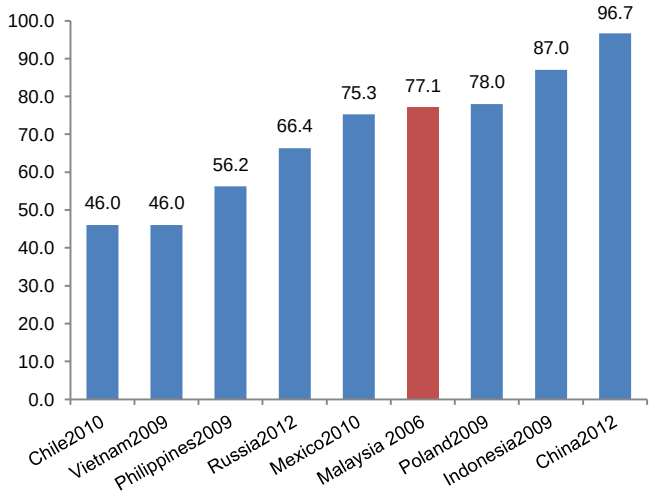


Figure 115. Domestic firms source more inputs domestically



Source: World Bank Enterprise Surveys, years indicated in charts
Note: Averages not weighted due to missing strata for Malaysia

116. Domestic sourcing is higher in the petrochemical industry compared to E&E. Figure 114 and Figure 115 show the extent firms in the petrochemical industry source inputs domestically as opposed to imports. Linkages in Malaysia's petrochemical industry appear greater compared to the E&E industry. The pattern of domestic firms sourcing more inputs domestically also holds in petrochemicals, but the difference is less marked. The more significant contribution

from domestic suppliers is partly due to Malaysia's role as a commodity producer, but may also signal that the industry has developed more significant linkages compared to E&E.

117. Under the Economic Transformation Programme, the oil, gas and energy sector has been identified as a National Key Economic Area, with a target annual growth of 5 percent between 2010 to 2020. 13 entry point projects (EPPs) have been identified (Table 9). The EPPs emphasize on enhancing the downstream oil & gas related manufacturing and services activities, while ensuring sustained oil and gas production levels and diversification into alternative energy capabilities.

Table 9. Entry Point Projects for the Oil, Gas and Energy NKEA

Key Thrusts	Entry Point Projects	
Sustaining oil and gas production	EPP1	Rejuvenating existing fields through enhanced oil recovery
	EPP2	Developing small fields through innovative solutions
	EPP3	Intensifying exploration activities
Enhancing downstream growth	EPP4	Building a regional storage and trading hub
	EPP5	Unlocking premium gas demand in Peninsular Malaysia
	EPP13	Increase petrochemical outputs
Making Malaysia the number one Asian hub for oil field services	EPP6	Attracting MNCs to bring their global oil field services and equipment operations to Malaysia
	EPP7	Consolidating domestic fabricators
	EPP8	Developing engineering, procurement and installation capabilities and capacity through strategic partnerships and joint ventures
Building a sustainable energy platform for growth	EPP9	Improving energy efficiency
	EPP10	Building up solar power capacity
	EPP11	Deploying nuclear energy for power generation
	EPP12	Tapping Malaysia's hydroelectricity potential

Source: PEMANDU.

Box 11. The Petrochemical Industry in Malaysia

The petroleum and petrochemical industry represents an important growth industry for Malaysia, attracting RM6.2 billion of investments in 2013 (MIDA, 2013). Malaysia's comparative strength in this industry can be attributed to several enabling factors including:

i) Large domestic availability of crude oil and natural gas as feedstock
ii) Good infrastructure such as the existence of a trans-peninsular gas transmission pipeline system
iii) Competitive cost of labor and land resources
iv) A strong and established base of supporting industries and services
v) Strategic location within the ASEAN region

The rapid growth of Malaysia's petrochemical industry is driven mainly by PETRONAS, which is increasing its involvement in both international and domestic petrochemical projects. In addition, policies adopted by the Malaysian Government, in line with the ETP, have also contributed to the steady inflow of foreign direct investments into this industry.

The notable presence of foreign multinational petrochemical companies in Malaysia, such as BP, Shell, BASF, Eastman Chemicals, Toray, Mitsubishi, Idemitsu, Polyplastics, Kaneka, Dairen and Honam have facilitated Malaysia in accessing global markets. Most of these companies having established joint-ventures with PETRONAS. Over the years, Malaysia has evolved to become an exporter of a wide-range of major petrochemical products, such as olefins, aromatics, ethyl benzene and polyvinyl chloride.

In addition, the well-established petrochemical sector has contributed significantly to the development of local downstream industries including the production of plastic products and synthetic rubber, by providing a steady supply of feedstock material to these industries. Consequently, the Malaysian plastics industry has been rated as

among the most competitive in Asia, producing products ranging from common household items to parts and components for the electrical and electronics and automotive industries.

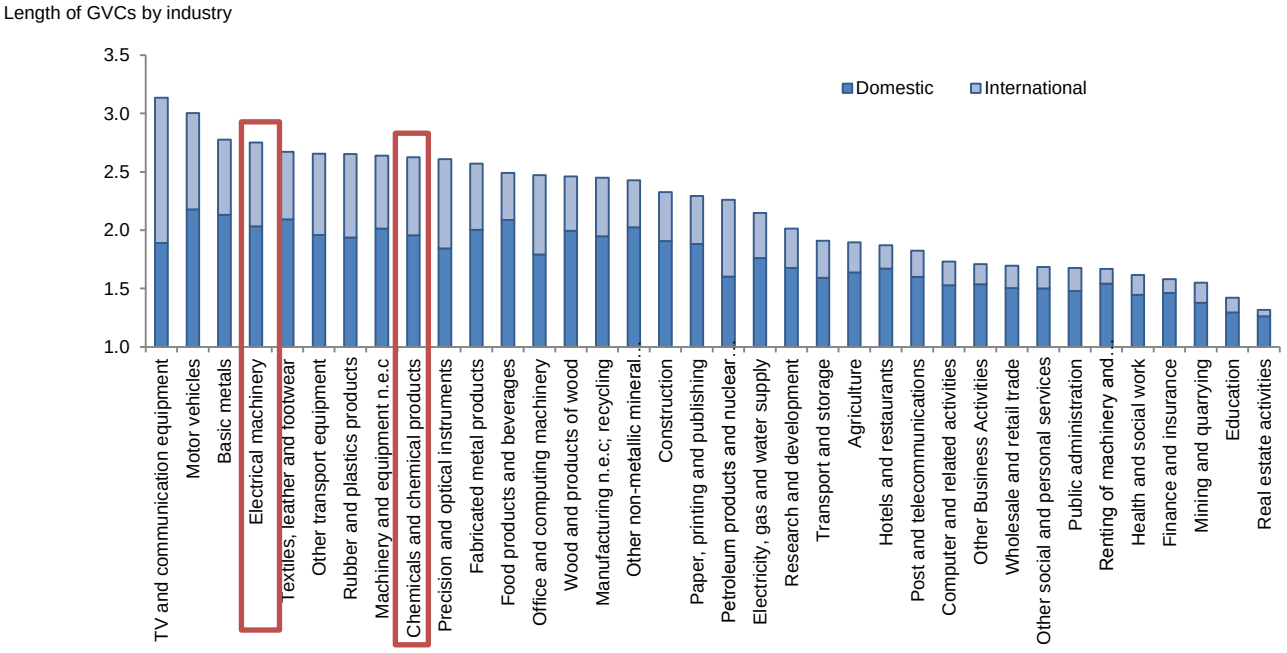
Currently, Malaysia's three major petrochemical manufacturing hubs are situated in Kertih in Terengganu, Gebeng in Pahang and Pasir Gudang in Johor. Nevertheless, the commencement of operations of the Refinery and Petrochemicals Integrated Development (RAPID) project in Pengerang is expected to further spur growth in the industry. Upon completion RAPID is expected to produce 9 million tons of petroleum products and 4.5 million tonnes of petrochemicals per year (mt/y). In addition, the proposed crude oil refinery will produce diesel and gasoline to Euro 5 specifications, supplying feedstock for the production of specialty chemicals in the complex.

Source: Malaysian Petrochemicals Association, MIDA Article "Petrochemical and Polymer Industry" 2012; MIDA Annual Report 2013; Malaysia Chemicals Report 2013 (Global Business Report, December 2013).

Upgrading Malaysia's participation in global value-chains

118. The two key value chains in which Malaysia is involved – petrochemicals and electrical and electronics – show relatively long value chains, indicative of opportunities for upgrading. One measure of the 'length' of the value chain can be captured by a recursive measure of I2E ("import to export") on the sourcing side developed by Fally (2011) and applied to a large set of countries by DeBacker and Miroudot (2012)[31]. Figure 116 shows the length of GVCs, noting the length of the supply chains within and across nations. This measure can be useful in several ways. For instance, if the length rises for a given sector in one nation, we know that the GVC in this sector is becoming more complex, with stages done in more nations and possibly more opportunities for upgrading.

Figure 116. Petrochemicals and electrical and electronics show relatively long value chains



Note: The minimum value of the index is 1 when no intermediate inputs are used to produce a final good or service.
Source: OECD (2012a).

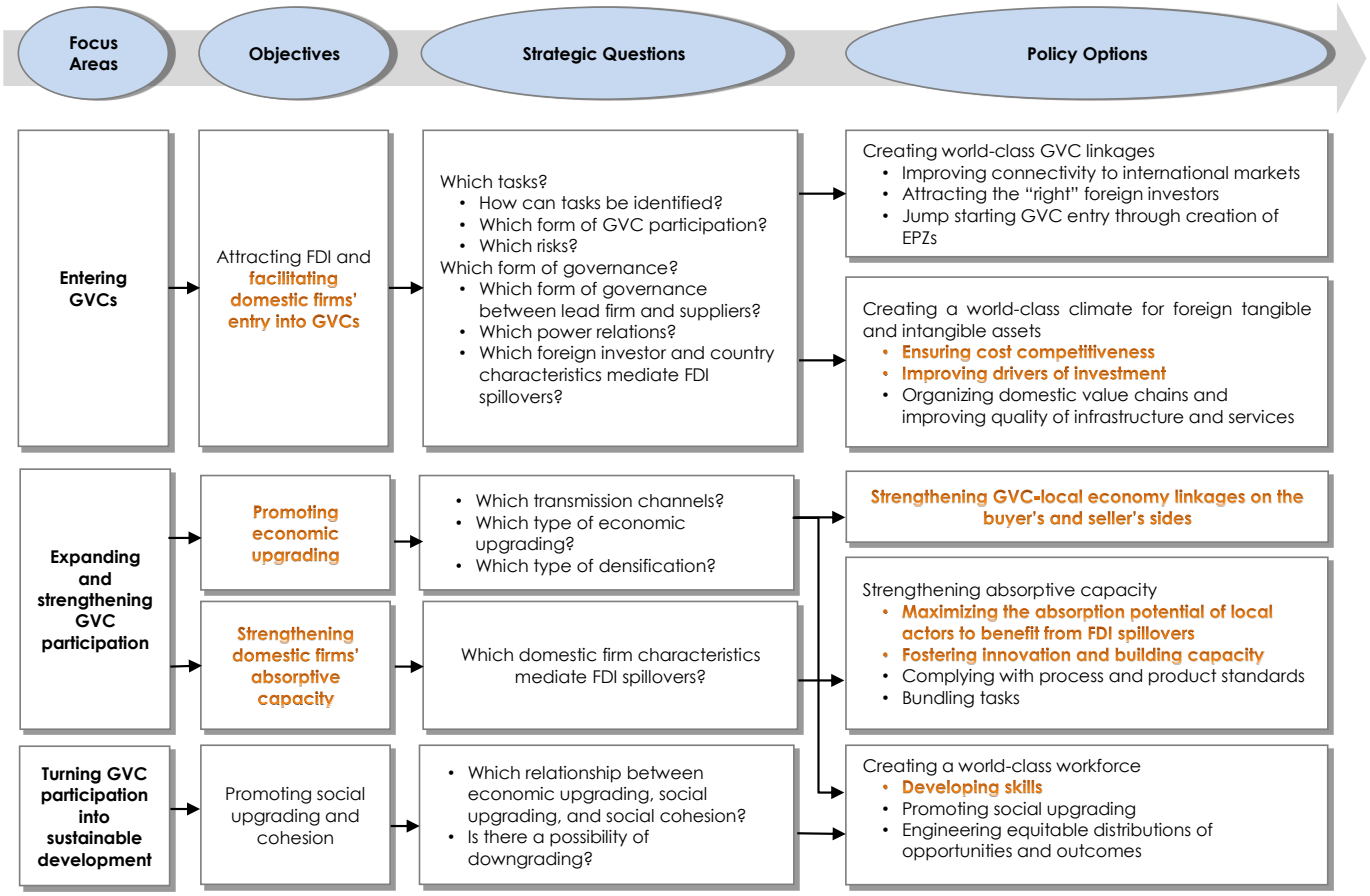
[31] To illustrate the concept, consider a simple hypothetical value chain where the electronics industry in the US requires 40 cents of parts and components from Taiwan for each dollar worth of electronic devices produced (the other 60 cents being value-added brought in by the US-based electronics industry). Assuming the Taiwanese parts are 100 percent Taiwanese value-added, the length of the chain is 1.4. That is, the US stage always counts as one stage and the 40 percent value added in Taiwan counts as 0.4 stages, so the length is 1.4. The concept becomes recursive in more complex examples. For instance, if the 40 percent 'Taiwanese' value-added itself included parts made in Japan, the chain would be longer. If the Japanese parts were 100 percent made in Japan and made up 30 percent of the value of the Japanese-parts exports to the US, the Taiwanese part's chain would by 1.3 (1 for Taiwan and 0.3 for Japan). Thus the US electronic industry's chain length would be 1+0.4(1.3) = 1.52.

119. The petrochemicals and electrical and electronics value chains also show relative complexity and "knowledge-intensiveness". To understand the relative complexity of GVCs that a nation is involved with, we use an alternate measure constructed by Costinot (2009). Ideally, the complexity of a GVC would capture the number of tasks that must be performed to produce one unit of output. Rather, Costinot (2009) proxies complexity by the average number of months necessary to be fully trained and qualified in a given industry (assessed using household survey data from the United States), with the least complex industry then normalized to 1. Industrial chemicals and electronic computing equipment are ranked as two of the most complex industries, with a complexity rating of 26.92 and 29.37 respectively. In this sense, electrical and electronics and petrochemicals – the sectors that dominate Malaysia's GVC – appear to be relatively complex sectors.

120. Three broad areas of policy are proposed in order to help improve the effective participation of Malaysia in global value chains. These areas focus on: (a) helping domestic firms participate in GVCs; (b) promoting economic upgrading; and (c) strengthening firm-level absorptive capacity. A framework, outlining a logical approach to reviewing strategic objectives questions and policy options for enhancing GVC participation is presented in Figure 117. The following paragraphs focus on some of the key lessons from other country experiences in the aspects of the framework most relevant to Malaysia (highlighted in bold text in Figure 117).

Figure 117. A framework for enhancing GVC participation

Theoretical framework, key areas most relevant to Malaysia are highlighted in bold text



Source: Taglioni and Wingler 2014

121. The goal should be higher labor productivity and wages allowing the country to remain cost-competitive despite rising living standards. It is important to state that labor costs per se are irrelevant – unit labor costs, namely labor costs adjusted for productivity and the capacity to meet production requirements must be taken into consideration when assessing costs. If cost savings due to relocation go hand in hand with productivity losses, lead firms might end up

facing higher overall costs. Skills development and productivity gains associated with innovation should be encouraged. Some examples of policy options are presented below.

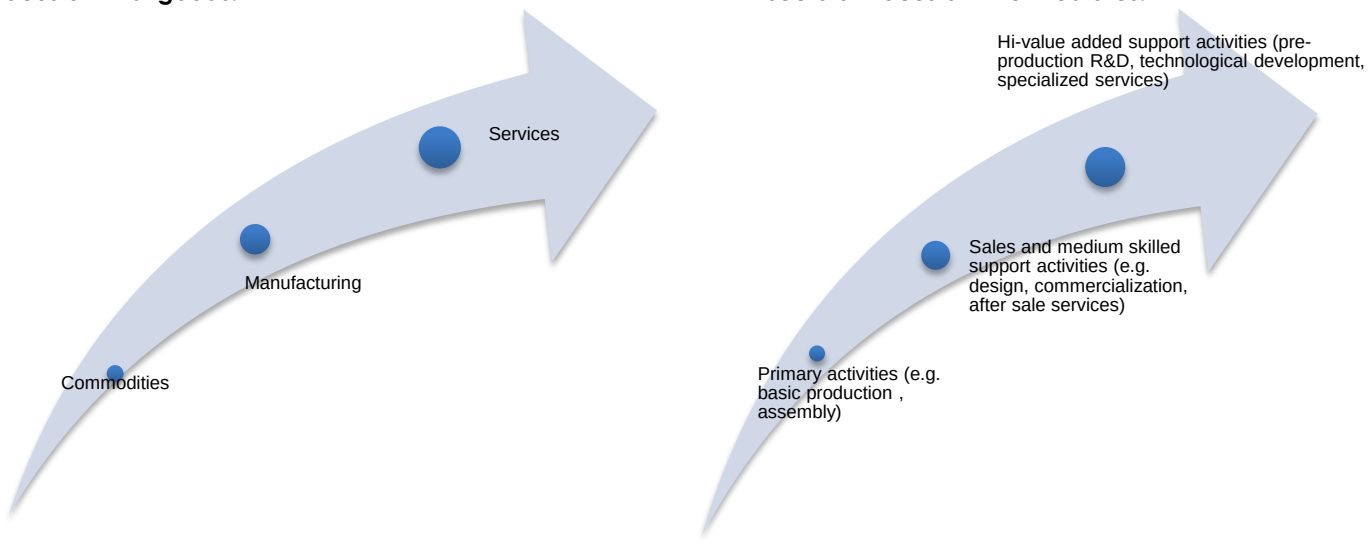
Promoting economic upgrading

122. New approaches suggest that it is more appropriate to consider the type and knowledge-intensity of specific tasks undertaken within a country, rather than the type of finished product. Reasoning in terms of broad sectors is dubbed by experts of GVCs the "old" paradigm. It focuses on the assumption that countries sell final goods to each other. The implicit assumption is that, as countries grow richer, they transition from a specialization in the primary sector, to manufacturing and ultimately to services. To contrast, this "sectoral" vision of development a "new paradigm" based on tasks has recently gained popularity. The new paradigm is meant to capture the GVC-world, dominated by complex and fragmented production process. In this context, according to this view, development is best achieved by specializing in the tasks and activities of comparative advantage, among the broad range available (see Figure 118). Porter (1985) distinguishes between primary, support and sales activities. Primary activities range from manufacturing of inputs, outputs and assembly operations to inbound and outbound logistics, marketing, sales and a range of other service activities. Support activities include the production of other inputs, machinery and equipment as well as R&D, technological development, and activities aimed at organizing the firm infrastructure, human resources management, and procurement. Broadly speaking, the value added content of such activities and tasks tends to increase in the technological and know-how requirements needed to perform the task.

Figure 118. From sectors to tasks-based development strategies

Old paradigm: from low to high value-added sectors – focus on final goods.

New paradigm: from low to high value-added activities within sectors – focus on intermediates.



Source: Authors
Note: The upward sloping arrows are meant to represent increasing value addition

Which Type of Economic Upgrading?

123. Depending on the type of economic upgrading that a country pursues, we can define four specific objectives:

1) Increasing Productivity in Existing GVC Tasks (Process Upgrading)

Domestic firms performing GVC tasks can pursue process upgrading by better organizing their production or introducing new technologies in order to capture efficiency gains (. In other words, this refers to total factor productivity growth in existing activities in the value chain which cannot be directly attributed to the production factors labor or capital.

2) Moving into More Sophisticated Products in Existing Value Chain (Product Upgrading)

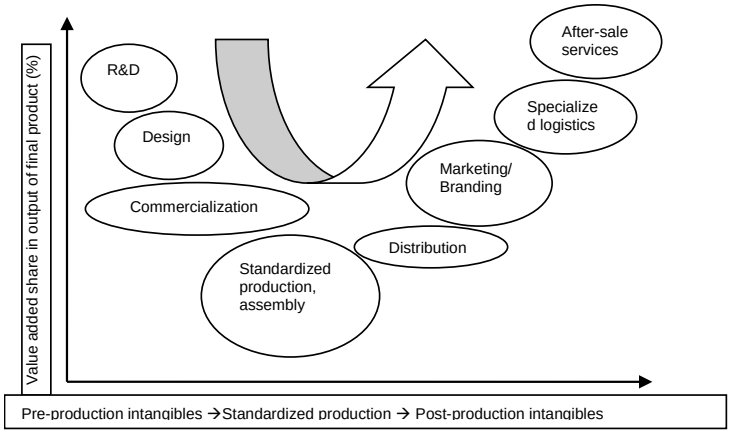
Product upgrading is the move into more sophisticated products within the same value chain. Product sophistication can be measured in terms of increased unit values or higher value added as percentage of output.

3) Increasing Value Added Share in Existing GVC Tasks (Functional Upgrading)

The value added share (in output of final product) in existing GVC tasks can be increased by functional upgrading. Functional upgrading is defined as the move into more technologically sophisticated or more integrated tasks of a given production process and relates to the overall skill content of activities.

In many GVCs, the greatest value added lies with the intangible activities located either at the beginning (pre-production activities such as basic and applied R&D, design, commercialization) or at the end (post-production activities driven by marketing knowledge, such as marketing, advertising and brand management, specialized logistics and after-sale services) of the value chain. Around 1992, Stan Shih, the founder of Acer, built on this fact to highlight that value creation in value chains usually takes a U (smiley) shape, with the value created at the extremes of the smile, i.e. in pre-production or in post-production (Figure 119). At the center of the value chain – where manufacturing and standardized services take place – there is little knowledge creation compared to the extremes.

Figure 119. Curve of value added in the E&E sector



Source: Adapted from Stan Shih. Note that the U-curve does not necessarily hold for all sectors. In the chemical sector, for example, the higher value-added parts are found at the beginning of the value chain.

4) Moving into New Supply Chains with Higher Value Added Share (Intersectoral Upgrading)

Firms can pursue intersectoral upgrading, i.e. they can move horizontally into new supply chains that require similar knowledge and skills. Once countries have identified the tasks in which they have a comparative, they identify sectors that require similar tasks but add more value (per output of final product). Countries can detect such sectors by classifying sectors by their labor intensity, skill intensity, and technology intensity.

Promoting economic upgrading by strengthening GVC-local economy linkages

124. Helping domestic firms find the 'right' trade partners and technology abroad is an important way to improve investment and domestic firms' linkages with foreign companies. GVC participation involves international trade when domestic suppliers export to international buyers abroad or when domestic final producers import intermediates from international suppliers abroad. Such supplier-buyer relationships can take different types of governance structures, ranging from market-based transactions, to modular, relational, captive, and hierarchical forms. The governance form is a result of the complexity of information between buyers and suppliers, the codification of information for production, and the level of supplier competence.

125. While it is difficult for governments to directly target international buyers and suppliers that are located outside the boundaries of the country, they can help domestic firms reduce search time and costs of finding the right trading partners in GVCs and technology. Governments can assist potential buyers and suppliers – both domestic and international. They can help in making the right connections, e.g. by creating an effective system of information on certificates that local suppliers have obtained. Becoming a supplier to lead firms requires meeting specific quality, legal, labor, health, safety, environmental and other standards in the first place. The Chilean Internalization Plan has helped improving the exporting skills of smaller existing exporters and to encourage new SME exporters (see Box 12 for a description). However, in a world of GVCs, the concept of importing to export also requires public efforts to focus

on import promotion, as a country's ability to participate in GVCs critically depends on its capacity to import world class inputs.

Box 12. Lessons from Chile's trade internationalization plan

Chile is a middle income country with significant reliance on the mining and metals sector, but also with significant agricultural export capacity. In the past two decades, Chile has become a major export success, particularly beyond its traditional minerals sectors, encompassing the agricultural and agriprocessing sector, including salmon, wine, and horticulture. *ProChile*, Chile's export promotion agency, is widely acknowledged as having played a critical role in facilitating the country's export oriented growth over this period.

ProChile has four operating divisions: Sectoral Division (~40 staff) manages the delivery of export promotion products and services to each exporting sector; International Division (~160 staff; 140 of which are based outside the country) manages the operation of the trade offices abroad; Marketing Division (~30 staff) manages all marketing activities, including trade missions; Information and Technology Division (~15 staff) manages systems for providing information to clients, including websites and training modules. The Sectoral Division is organized into seven separate business units, one for each key sector. Linked to this, *ProChile* maintains very close financial and working relationships with the main industry associations representing these sectors.

To improve the export skills of smaller existing exporters, and to encourage new SME exporters, *ProChile* developed the *Internalization Plan* in 2001. One component, Interpac, is designed for SMEs in the agricultural sector; the other, Interpyme, is designed for SMEs in industrial sectors. These programs provide Chilean companies with systematic training in exporting issues faced by SMEs. They include training modules on production capabilities, market research, logistics, marketing plans, banking, international law, searching for partners, and the export process. Interpyme and Interpac are operated by a team of private sector consultants hired by *ProChile* and participants are provided with individualized one-on-one counseling as part of the program. Participants complete one module at a time, and when they have completed the full program, they become eligible for *ProChile* co-financing programs, provided that they have promising export plans. These programs take about one year to complete. *ProChile* covers up to 90 percent of the cost, provided that participants have an exportable product for which there is international demand and that they use labor-intensive production methods.

Since the early 1990s, the number of exporters in Chile has doubled. Diversification – of sectors, products and markets – has been dramatic, with the number of new products doubling, the number of markets growing by more than 50% and the relative concentration of the mining sector reducing significantly. Between 1996 and 2006, Chile's non-traditional exports (which account for 90% of SME exports from Chile) increased from US$6 billion to US$15 billion, an annual growth of 10%. Several impact evaluation studies have shown that ProChile has had a positive and significant impact on export participation, new product introduction, and firm-level technological and management improvements.

Source: Partly derived from Nathan Associates (2004) Best Practices in Export Promotion, Technical Report submitted to USAID, April, 2004

Maximizing the absorption potential of local actors to benefit from FDI spillovers

126. Complementary policies which leverage the opportunities offered by GVC participation can help local firms to more quickly absorb the benefits of internationalization. At the domestic firm level, studies identify, e.g., technology gap, research and development (R&D), human capital, firm size, firm location, export behavior, type of ownership, and sectoral competition as mediating factors. These factors determine the local firm's absorptive capacity.

Technology Gaps, Research and Development

127. The technology gap between foreign and domestic firms has been identified as one the most important mediating factors for FDI spillovers. Views on the role of the technology gap for FDI spillovers conflict. Some studies find that a large technology gap is beneficial for local firms since their catching-up potential increases (e.g., Findlay 1978, Wang and Blomström 1992; Smeet 2008; Jordaan 2011), while other studies argue that local firms might not be

able to absorb positive FDI spillovers if the technology gap between the multinational and local producers is too big (Farole and Winkler 2014b; Winkler 2014) or too small (Blalock and Gertler 2009). Some studies reconcile both views and finds a non-linear relationship between a domestic firm's technology gap and FDI-induced productivity benefits (e.g., Girma 2005; Girma and Görg 2007). The literature finds solid evidence for the supportive role of R&D in local firms in high income countries, e.g. Spain (Barrios and Strobl 2002; Barrios, Dimelis, Louri, and Strobl 2004), the US (Keller and Yeaple 2003), Ireland (Barrios et al. 2004), and Sweden (Karpaty and Lundberg 2004).

Scale

128. Firm size has been positively related to a domestic firm's capacity to absorb FDI spillovers (e.g. Jordaan 2011 for Mexico and Farole and Winkler 2014b for a large cross-section of developing countries). Larger firms may be better positioned to compete with multinationals and to imitate their tools (Crespo and Fontoura 2007). Analogously, larger firms may pay better wages and therefore find it easier to attract workers employed by multinational firms. Larger firms might also be more visible, e.g. organized in associations, and, thus, more likely selected as local suppliers by foreign firms.

Firm Location

129. Several aspects of domestic firm location have shown to be important for the extent of productivity spillovers from FDI. Foreign firms collocating (agglomeration) in the same sector and region, for example, can significantly increase productivity and employment of local firms (e.g., Barrios et al. 2006; Farole and Winkler 2014b). Besides agglomerations, studies focused on other aspects of location. Firm location in special economic zones, for example, can have a negative impact on FDI spillovers if the zone focuses on export processing combined with a high percentage of imported inputs. More regional development and a domestic firm's geographical proximity to multinational firms seem to have a positive effect (e.g., Girma and Wakelin 2007; Resmini and Nicolini 2007; Winkler 2014)

Exporting

130. Exporting has been linked to a domestic firm's absorptive capacity for at least two reasons. First, local exporting firms are generally characterized by a higher productivity, be it via learning-by-exporting or self-selection into exporting, rendering them more competitive to bear up against negative rivalry effects created by multinationals (Crespo and Fontoura 2007). Second, the more a local firm exports, the lower will competitive pressures from multinational firms be felt (assuming that the multinational firm does not enter the same export market), hence, the incentive to improve, which lowers the extent of positive FDI spillovers. However, empirical studies show no clear evidence whether exporting increases or lowers the productivity gains from FDI.

Sector Dynamics

A few studies have pointed out that spillovers also depend on the sectors in which domestic firms operate (Temenggung 2007; Suyantu and Salim 2010). FDI-enhanced productivity spillovers in the food-processing industry, for example, seem to be driven by efficiency improvements, while technological progress seems to be the main driver in the electrical machinery industry. Other studies specifically compare the extent of spillovers in technology intensive industries to other industries. Foreign presence in technology-intensive or high-tech industries tend to lead to larger positive spillovers in comparison with labor-intensive or low-tech industries (Buckley, Wang, and Clegg 2007; Keller and Yeaple 2009).

Competition

131. Finally, the level of competition also influences the extent of FDI spillovers. Competitive pressures from multinational firms might be lower if the local firm already faces a high level of competition at the sectoral level. As in the case of exports, local firms in competitive sectors might have a lower incentive to improve, resulting in lower benefits from FDI spillovers. On the other hand, local firms could be better equipped to benefit from positive demonstration effects (Barrios and Strobl 2002; Farole and Winkler 2014b).

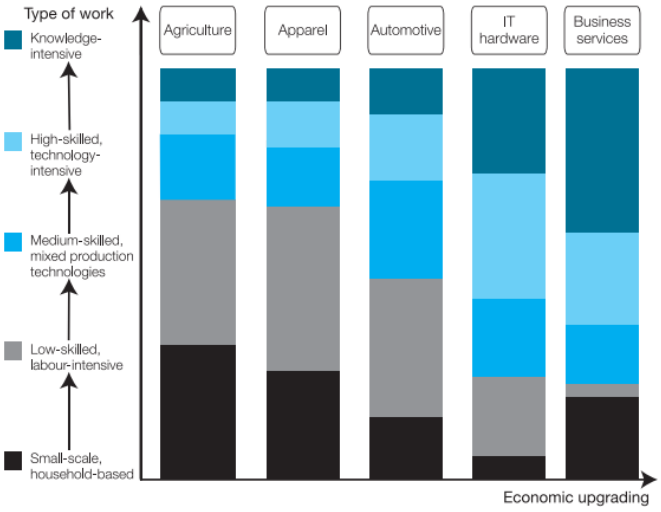
Skills

132. Skills are an important part of capacity building, although effects are visible only over the long run. Developing skills not only is a way to strengthen the absorptive capacity of the domestic economy, but it also helps turning GVCs into sustainable development by fostering the creation of a world-class workforce earning competitive wages.

133. Skills development is a key element of competitiveness, participation in GVCs, and economic and social upgrading within a given GVC. There is, for instance, a positive and statistically significant correlation between human capital and services exports (Saez and Goswami, 2010). Economic upgrading requires the availability of new skills and knowledge either by increasing the skill content of a country's activities (and thus workforce) or by developing competencies in niche market segments (Humphrey and Schmitz, 2002). In other words, economic and social upgrading are linked and dependent on each other (Figure 120).

134. Skills shortages can impede a country's upgrading efforts. Upgrading strategies in GVCs have been most successful when accompanied by complementary workforce development interventions. The case studies also reveal that for workforce development to be successful, it needs to be part of an overall coherent upgrading strategy involving key stakeholders. In addition, workforce development needs to be customized to the specific job requirements.

Figure 120. Skills development and economic upgrading



Source: Barrientos, Gereffi and Rossi (2011, p.328).

135. GVCs contribute to skills development through lead firm transfers. There are indeed strong incentives for lead firms to train their workforce to comply with their standards. Beyond private initiatives, there is a strong case for public investment in skills development to meet the needs of international trade and participation in GVCs. Looking at the link between economic upgrading and skills development in four GVCs (fruit and vegetables, apparel, offshore services, and tourism) in around 20 developing countries, Gereffi, Fernandez-Stark and Psilos (2011) reached the following conclusions:

- Appropriate worker skills are essential to industry upgrading;
- The focus of skills development must reflect both local needs and those of the global economy;
- A new and evolving set of workforce skills is needed to participate in GVCs;
- Required skills and workforce development needs vary substantially by stage within industry-specific upgrading trajectories;
- Workers need "soft skills" in today's world of work;
- In developing countries, managerial skills for GVCs are in short supply; and
- Upgrading in GVCs requires more and better professionals and technicians in bottleneck positions.

Services is an area of great scope for boosting trade and domestic linkages

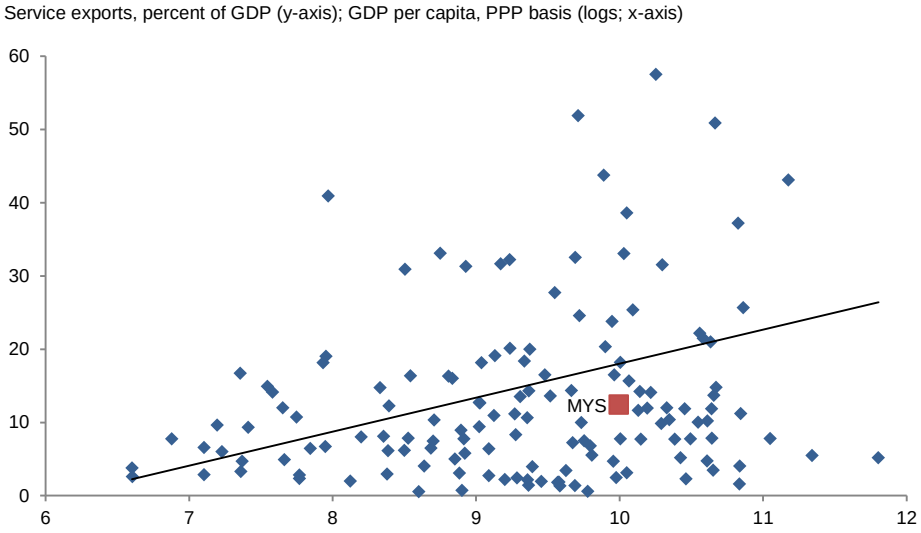
136. Exports of services from Malaysia remain an area of great potential. Service exports as a share of GDP are well below the expected level for a country at its level of income and growth has not been as robust as in neighboring countries. In particular, while Thailand maintained its trade share to GDP by rapidly expanding services exports even as goods exports languished in the aftermath of the global financial crisis and a major flood, the share of services exports to GDP declined in Malaysia (see Figure 52). Malaysia's services sector is concentrated in traditional services

such as transportation, travel, and construction, whereas the rest of the world is increasingly specializing in modern services such as ICT, professional, health, and other business services.

Services exports have not reached their full potential

137. Advancements of information and communication technology have changed the nature, productivity and especially the tradability of services. Greater tradability means services can be subject to external competitive pressures and bring in global demand for domestic production, two characteristics that have made manufacturing an engine of growth in the past. In addition, a strong services sector is complementary to high value-added tasks in other sectors; for example, as seen above a modern petrochemical sector depends on high-quality business services for its competitiveness (Hoekman and Kostecki, 2009). Ghani and Kharas (2010) found that there is a relationship between high growth in services and high overall economic growth. Although the causality relationship cannot be established, Figure 121 confirms the correlation between higher levels of income and a higher share of services exports.

Figure 121. Higher income countries tend to have higher levels of service exports

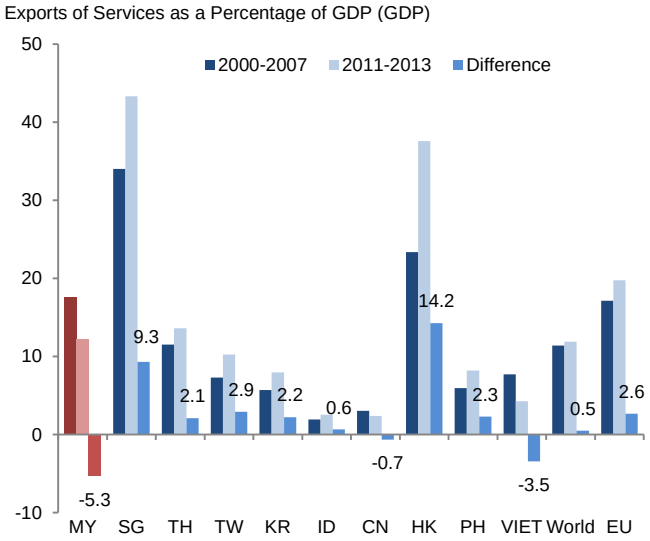


Source: WDI and World Bank staff calculations

138. Malaysia's share of trade in services has lagged. The performance of Malaysia's exports of services as a share of GDP falls short of what would be expected for a country of its income level (Figure 121). Moreover, the share of exports of services relative to GDP shrank post-GFC. Malaysia's share of exports of services has declined by 5.3 percentage points post-GFC (Figure 122), mirroring the decline in the share of exports of goods. The only other countries that see a decline in the share of exports of services are China and Vietnam, where the decline is more closely linked to improved competitiveness of manufacturing exports rather than particular weakness in services. In contrast, Hong Kong and Singapore, the regional financial centers, have shown significant increases in the export of services in the past 13 years.

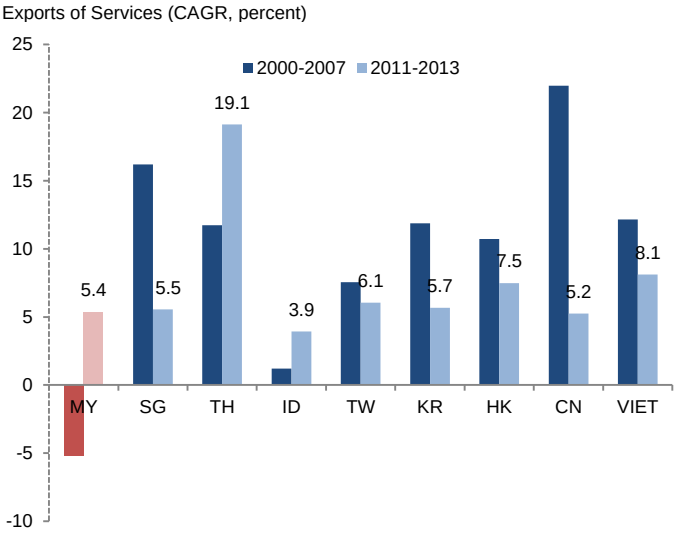
139. Growth in services exports after the financial crisis has only been average compared to other countries, but is higher and less volatile from the earlier period. Exports of services for Malaysia registered a 5 percent CAGR post-GFC broadly in line with regional trends (Figure 123). Moreover, growth has been less volatile post-GFC based on the standard deviation of growth rates for both the periods (2002-2007: 18.1; 2011-2013: 4.5 respectively). While the more volatile growth rates for exports of services during pre-GFC are observed for most regional countries such as Hong Kong, Singapore, Thailand and China, Malaysia's growth rate is almost twice as volatile. This is due to unstable income derived from transportation and personal and recreation and intellectual property.

Figure 122. Malaysia's services export share is down since the GFC, while that of most other countries is up



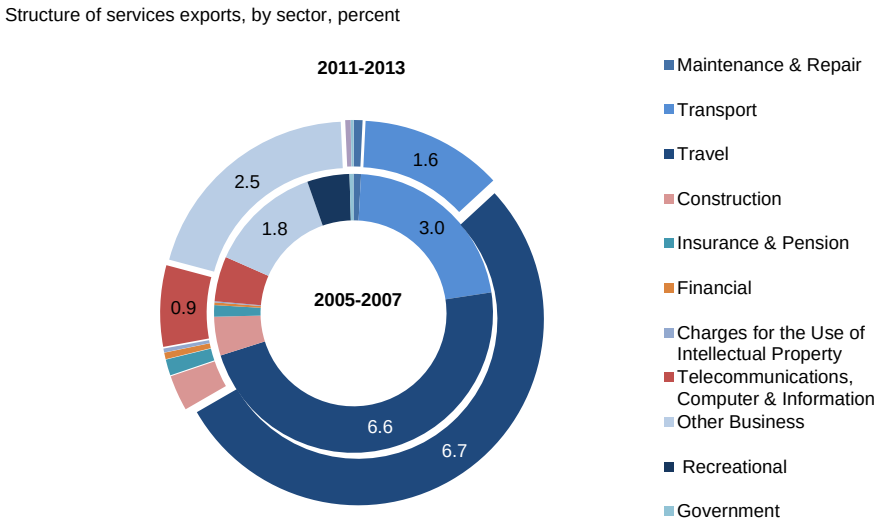
Source: Haver Analytics, CEIC and The World Bank.
Note: World and EU shares are calculated from periods 2005-2007 and 2011-2013 and represent trade in services

Figure 123. Growth in services exports picked up from a low base, but performance was middling



Source: Haver Analytics

Figure 124. The bulk of Malaysia's services exports are in the lower value transport and tourism sectors



Source: World Bank staff calculations

140. The structure of services exports has changed little over recent years, with travel, transport and other business services representing the three largest components in the sector. Figure 124 shows the composition of Malaysia's service exports as a share of GDP. Malaysia's structure is quite similar to that of other countries in East Asia, except for Singapore and Hong Kong, where export of financial services accounts for about 5-6 percent of GDP – a much larger share of the total (Figure 125 – Figure 127). Singapore's knowledge-processing offices in legal and business consulting are also important contributors to its economy, although its relatively large share of services exports are travel and transport services, consistent with Singapore's role as a transit hub (for both passengers and freight; Figure 127). The Philippines' services exports are broadly similar to India's in terms of their importance for the overall economy, and both countries are exposed to information technology and software (ITS) services exports.

141. Malaysia is still concentrated in exports of two of the largest traditional services namely, travel and transportation. These sectors have a combined share of 8 percent of GDP in 2013. According to Anand et al. (2012), high income countries tend to export more sophisticated services, which are classified as "modern services". These

also tend to be knowledge-intensive and require high levels of human capital. In Malaysia, the share of modern services exports, which includes financial services, other businesses and telecommunication and computer and information technology is growing, albeit very slowly, and accounts for only 3.8 percent of GDP (Figure 128).

Figure 125. Thailand has seen robust growth post GFC, mostly in the tourism sector

Structure of services exports, by sector, percent (Thailand)

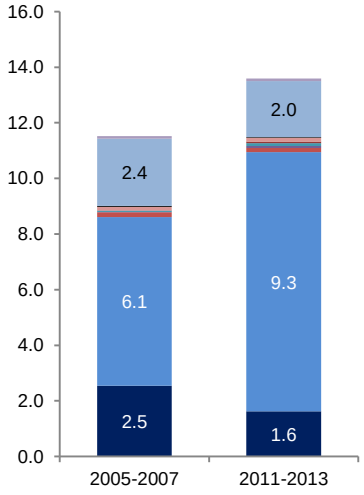


Figure 126. China has seen services share of GDP shrink as manufacturing outperforms

Structure of services exports, by sector, percent (China)

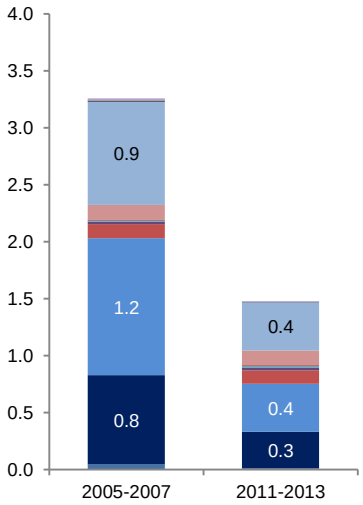
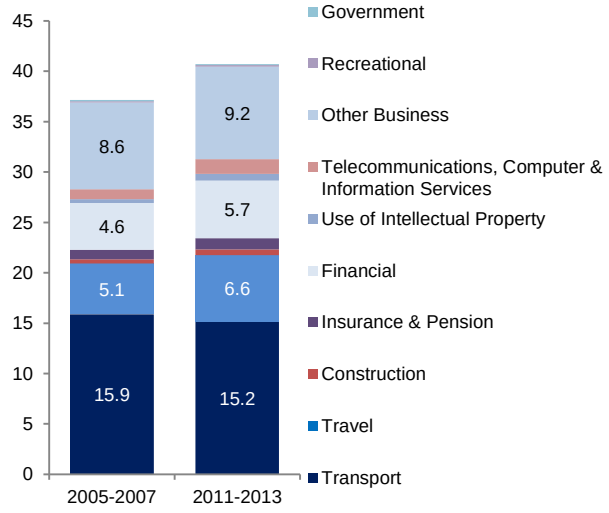


Figure 127. Services occupy a larger share of the Singaporean economy, with solid growth in financial services

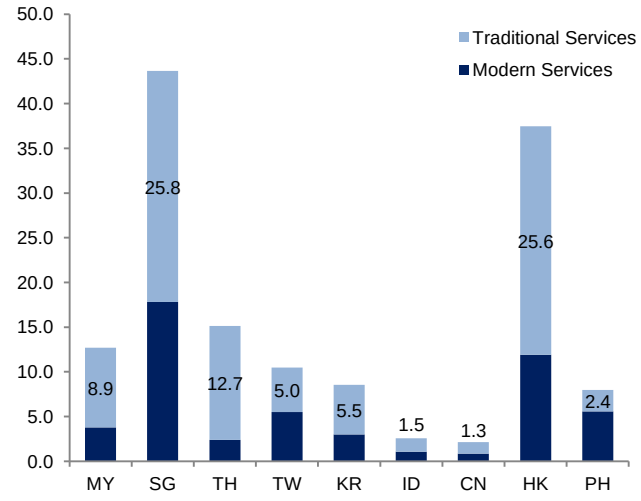
Structure of exports of services, by sector, percent (Singapore)



Source: IMF and World Bank staff calculations

Figure 128. Exports of modern services represent a smaller share in Malaysia compared to regional peers

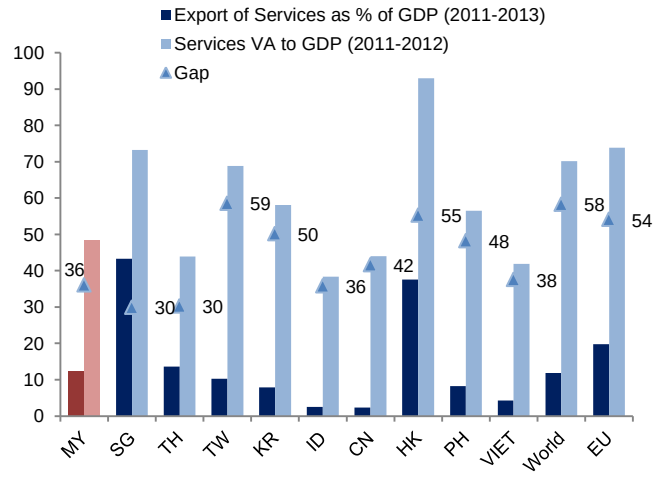
Share of Modern and Traditional Exports of Services as a Percentage of GDP, percent



Source: Haver Analytics and World Bank

Figure 129. Export of services is low compared to services value-added

Exports of Services and Value Added of Services to GDP



Source: Haver Analytics and World Bank

142. The untapped potential in services trade can be measured as the gap between the value-added of services to GDP and the size of the exports of services in GDP (Figure 129). Many countries have considerable untapped potential to satisfy the demand for business process outsourcing services such as accounting, engineering, IT and legal services. Countries such as India have leveraged on the rising global demand for such services as it has a large composition of the modern services which includes business and computer software services. India's share of computer information services grew from 0 to 51 percent of the total export basket by 2009 resulting in the rapid growth in the sophistication of its services exports (Anand et al, 2012). It is evident that the more advanced Asian

countries such as Singapore and Hong Kong which have established and more liberal financial services sectors, receive a larger GDP contribution from their services sectors.

Services sectors remain relatively restrictive, reducing incentives for domestic providers to export

143. Malaysian services providers tend to be inward-oriented. The reasons for service providers not internationalizing are linked to the relatively restrictive nature of services sectors that raises the returns to operating in the domestic economy and, in turn, reduces the incentives for services providers to seek external markets. Despite recent initiatives to improve both the overall regulatory environment as well as to facilitate access by foreign providers, Malaysia's services sectors remain relatively restrictive. In addition, a disconnect between different parts of the policy eco-system dampens the benefit of recent reforms. Firms are also constrained by a lack of knowledge of market opportunities or suitable business partners in destination countries, restrictive policies in partner countries. Perhaps most significantly, Malaysian services providers lack competitiveness due to a limited human capital base, with weaknesses in both more basic skills such as languages, as well as in more specialized and knowledge-intensive skills.

144. Despite important new initiatives towards liberalizing services sectors, there is more room for increasing competition especially by reforming behind-the-border regulations. Malaysia's services regulatory regime can be analyzed using the information provided in the World Bank Services Trade Restrictions Database**.** The database, compiled during 2007–2008, encompasses information from 103 countries (79 developing and 24 OECD countries), broadly representing the world's regions and income groups (Borchert et al. 2012).[32] Figure 130 depicts the relationship between income per capita (x-axis) and trade restrictiveness (y-axis). Typically, countries with higher per capita income also have low restrictiveness. East Asian countries have, in general, higher-than-expected restrictiveness (above the trend line), except Cambodia and Nepal (and to a lesser extent China and Vietnam), which were all required to make much deeper services liberalization commitments as part of the process of acceding to the World Trade Organization (WTO). Malaysia maintains higher-than-predicted restrictiveness in services, despite recent unilateral liberalization initiatives, although somewhat lower than in other East Asian countries (Figure 131).

Figure 130. Developing countries show high levels of services restrictiveness compared to advanced economies…

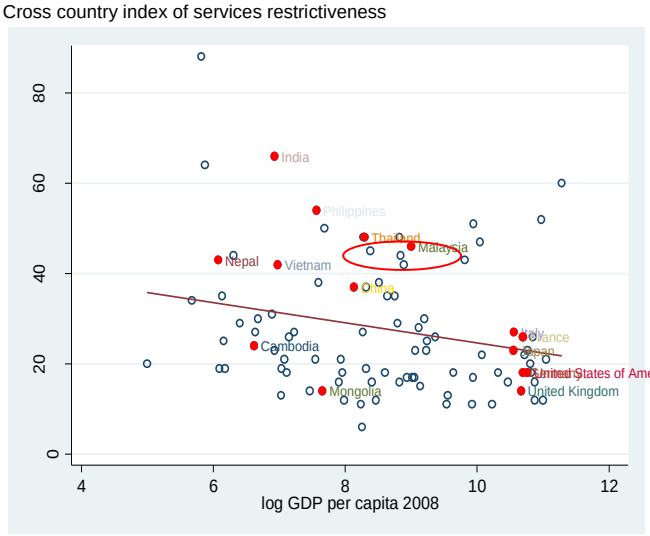
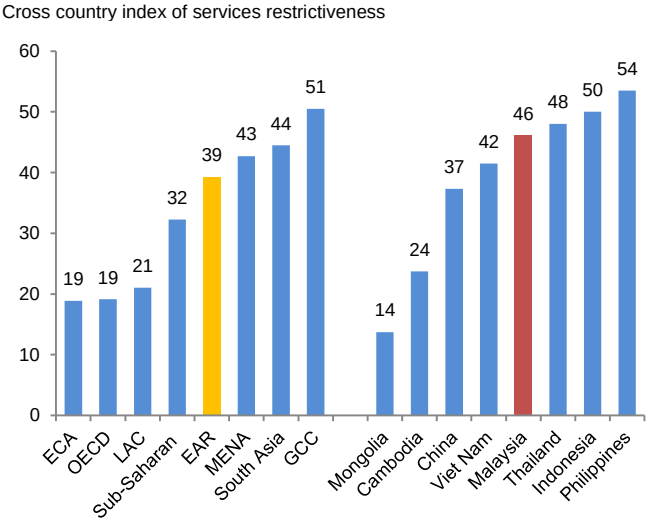


Figure 131. …and Malaysia's level of restrictiveness is around the mid-point for East Asia



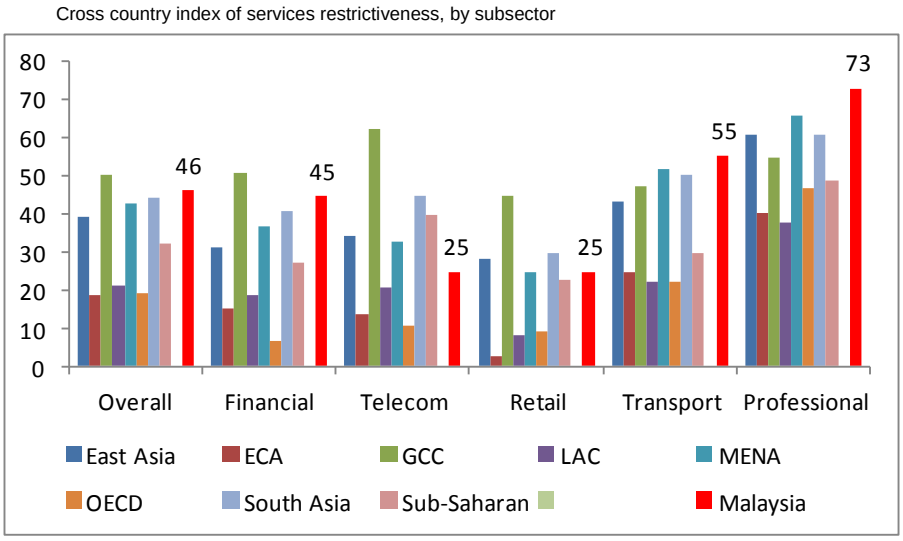
Source: Borchert et al. 2012, Services Trade Restrictions Database.

145. In common with other East Asia economies, the levels of protection across Malaysia's services subsectors varies considerably, much more so than in other regions (Figure 132). The region maintains significant restrictiveness in

[32] A guide, data sources, and the methodology employed can be found in http://iresearch.worldbank.org/servicestrade/.

transportation services and professional services as well as financial services. Levels of restrictiveness are lower in the telecommunications and retail services subsectors.

Figure 132. The level of restrictiveness varies across services subsectors



Source: Borchert et al. 2012, Services Trade Restrictions Database.

146. Financial services emerge as an area with significant potential for higher exports. The composition the exports of modern services also suggests that Malaysia's services structure needs to evolve in order to fully benefit from the growing demand for services. Therefore, apart from the measures to enhance the traditional services such as tourism, Malaysia is also placing emphasis on building the capacity of domestic banks to serve domestic and international markets. In terms of Islamic banking, Malaysia has already carved out a leadership position as Malaysia now has the largest Islamic fund management industry in the world in terms of number of funds. It is also recognized as a center for product innovation in the area of Islamic finance. However, there are challenges for Malaysia to develop its finance sector and exportability of financial services. Some of the challenges outlined in the Economic Transformation Programme (ETP)[33] include, the lack of liquidity and diversity in financial markets, low levels of financial literacy and more importantly, the intense competition from the regional financial centers, namely Hong Kong and Singapore.

147. Apart from financial services, the business services sector represents another untapped source of export income. While the sector is still relatively small at present, it is growing rapidly. Its contribution to GDP grew by 7.9 percent a year between 2000 and 2010. Within business services, IT Services and outsourcing is the largest sub-sector, contributing 37 percent of the Business Services Sector's gross national income (GNI)[34]. Engineering services (9 percent), management services (9 percent), legal (8 percent) and accountancy (7 percent) are also significant components of the Business Services sector.

148. While the business process outsourcing sector presents great opportunities, Malaysia faces a stiff competition from India in the areas of IT outsourcing. According to the ETP report on business services, many Malaysian business services companies occupy an unsustainable middle ground between low-cost providers in large emerging economies and high-value competitors in more advanced economies[35]. India which has cheap, educated and a large English-speaking workforce makes labor-intensive service-based operations India in cost efficient[36]. In addition for IT services outsourcing which includes consulting, system integration and management, India also has a

[33] Economic Transformation Programme (ETP) Handbook (Chapter 7 on Positioning Financial Services as the Bedrock of the High-income Economy); http://etp.pemandu.gov.my/upload/etp_handbook_chapter_7_financial_sevices.pdf
[34] Economic Transformation Programme (ETP) Handbook (Chapter 12 on Driving High-Income Growth through Business Services); http://etp.pemandu.gov.my/upload/etp_handbook_chapter_12_business_services.pdf
[35] Ibid
[36] ETP Handbook's chapter on Business Services states that in 2009, the annual salary of a Malaysia IT worker in 2009 was RM46,000, compared with RM40,000 in India and RM35,000 in the Philippines.

competitive edge in financial and accounting services as Indian workers have a high level of knowledge on the other related industries such as medical transcription, and processing of mortgage and credit card applications. As Malaysia cannot compete with India or Philippines in terms of cost, the ETP has highlighted that Malaysia should find its own niche in the business services sector. The sector must also enlarge the pool of skilled workers to meet the needs of this knowledge-intensive sector.

Expanding trade in knowledge-intensive services

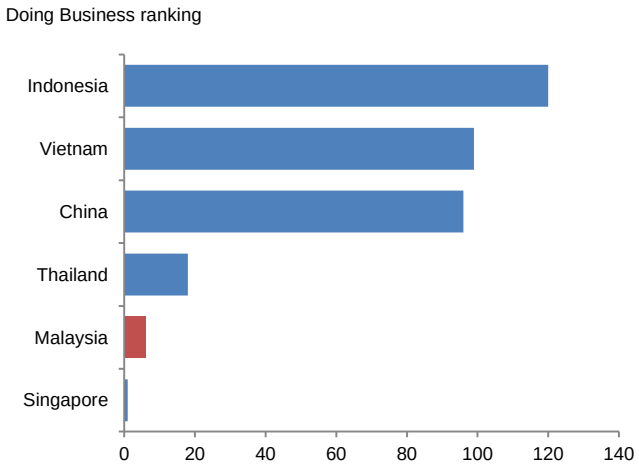
149. Similarly to upgrading Malaysia's participation in GVCs, expanding trade in knowledge-intensive services will require building skills. There are two sets of policy directions in this area. The first is to highlight that development of the services sectors also requires addressing the key long-term structural challenge of ensuring that Malaysia produces and retains the talent a high-income economy demands. The second set of policy directions concerns options complementary to long-term reforms: first, to increase the availability of professionals for knowledge-intensive sectors by leveraging the higher education sector and attracting and retaining foreign professionals; second, to develop dynamic manpower-planning tools in line with those discussed in Chapter 2 to reduce the skills mismatch; and third, to emphasize the skills most critical to the services sectors (namely English, IT and management).

150. Moreover efforts can be made to review services regulations and governance in order to liberalize the domestic services sector. At a macro-level Malaysia needs a strategy and framework for sectoral governance reforms as well as an implementation structure. By "strategy" what is meant is a set of (i) priority sectors; (ii) timing of implementation; and (iii) common elements of the individual sector-level strategies. This strategy would include the role of foreign ownership liberalization but also of domestic regulations. Enhancing the policy ecosystem for services would encourage greater exports by improving domestic competition. This would be an important step in order to increase the competitiveness of services firms so that they can better compete internationally and also to provide a more efficient services support base to domestic manufacturing firms.

Trade costs are low, but non-tariff barriers remain significant

151. Malaysia is among the world's most highly ranked countries when it comes to measures of cross-border logistics and "at-the-border" costs. Malaysia performs exceptionally well on cross-country measures of economic governance and the business environment. It is ranked 6th in the world under the World Bank Group's Doing Business survey, behind only top-ranked Singapore, among comparators in East Asia. High quality at-the-border infrastructure and relatively simple and cost-effective logistics see Malaysia ranked 5th in the world under the Doing Business Trading Across Borders subindicator. Figure 133 presents the doing business rankings for trading across borders.

Figure 133. Malaysia ranks highly on cross country measures of the regulatory costs of doing business



Source: World Bank Doing Business survey

152. Malaysia also performs strongly in the World Bank's Logistics Performance Index (LPI). The LPI provides a more detailed breakdown of costs associated with the international trade in goods. With an overall LPI indicator or 3.59, on the scale of 1 to 5 (and up from 3.48 in 2007), Malaysia is one of the world's top performers on the index. With the exception of Singapore, Malaysia performs above regional peers across all six dimensions of the LPI (covering the efficiency of customs administration; the quality of logistics infrastructure; the availability of high frequency international shipment services; the competency of logistics service providers; the ability to track and trace shipments from source to destination; and the timeliness with which shipments arrive versus expected delivery times).

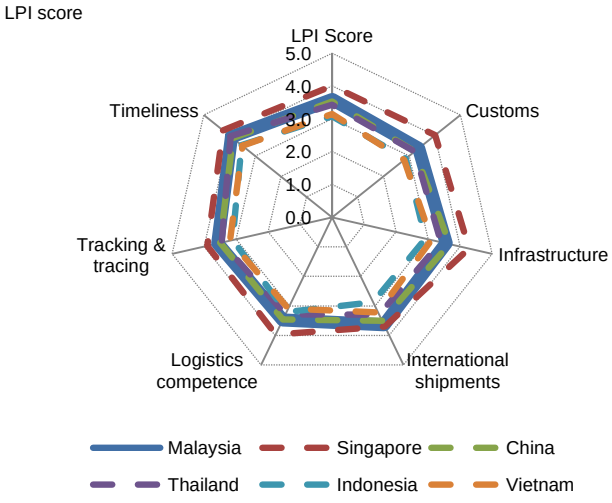
Table 10. Malaysia similarly compares well with regional competitors when measuring at-the-border regulatory costs

		Trading Across Borders					
	Rank	Documents to export (number)	Time to export (days)	Cost to export (US$ per container)	Documents to import (number)	Time to import (days)	Cost to import (US$ per container)
Singapore	1	3	6	460	3	4	440
Malaysia	*5*	*4*	*11*	*450*	*4*	*8*	*485*
Thailand	24	5	14	595	5	13	760
Philippines	42	6	15	585	7	14	660
Indonesia	54	4	17	615	8	23	660
Vietnam	65	5	21	610	8	21	600
China	74	8	21	620	5	24	615

Source: World Bank Doing Business survey

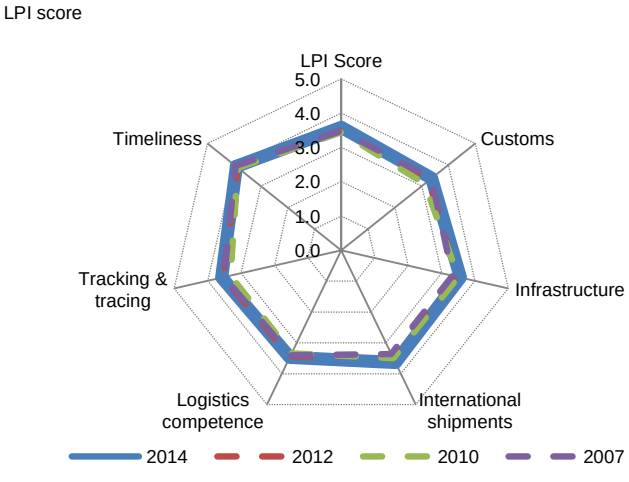
153. Some further improvements have been observed in the LPI. One of the highlights is the quality of trade and transport-related infrastructure available conducive to logistics operations (up from 3.33 to 3.56) and on which competitively priced international shipments can be arranged (up from 3.36 to 3.64). A more modest improvement has been seen for the measures of how logistics services are competently provided with good quality (up from 3.40 to 3.47) and how consignments can be tracked and traced by shippers and consignees (up from 3.51 to 3.58). This may have been contributed by increased competition that has pressured logistics providers to lower their costs and to improve the efficiency and effectiveness of supply chain operations. The measure of the efficiency of customs clearance process saw no change from 2007 to 2014. (Figure 134 and Figure 135)

Figure 134. Malaysia performs well against regional peers on measures of cross-border logistics performance…



Source: World Bank Logistics Performance Index 2014

Figure 135. …but has seen fairly limited improvement in logistics performance over recent years



Source: World Bank Logistics Performance Index 2014

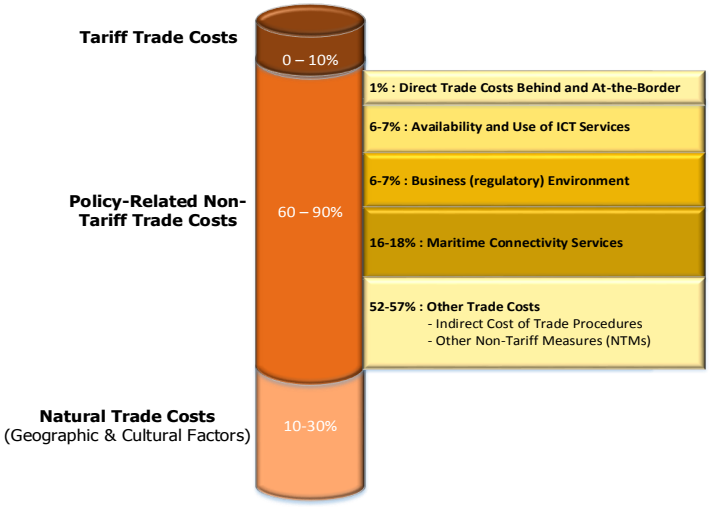
154. Aside from Malaysia's strong aggregate performance on trade logistics, are two additional notable trends, suggesting that the impact of this strong performance is less than anticipated. Firstly the gap between Malaysia and

comparator countries when using broader measures such as the Logistics Performance Index is much less than in measures such as under Doing Business. This may suggest that the advantages of low at-the-border costs are less than anticipated when fuller logistics costs across the supply chain are taken into account. Secondly there has been only fairly limited incremental improvements in Malaysia's performance over the last ten years, a period when regional comparators within ASEAN have been rapidly gaining competitiveness and catching up with the market leaders.

155. Nontariff costs now account for as much as 90 percent of remaining (non-transportation) trade costs in East Asia. With rapidly falling shipping costs, what remains are the large trade costs associated with indirect costs at the border and behind the border. These costs largely involve domestic, regional, or international regulations and standards (Figure 136).[37] Tariffs, on average, account for no more than 10 percent of the direct and indirect costs associated with factors other than transportation, and this figure is expected to further decline as further liberalization takes place through agreements such as the AEC and TPP. NTM costs, which include understanding and complying with licenses, permits, and certificates associated with moving goods across border, affect the international competitiveness of businesses. They also affect the ability of enterprises, including in particular small enterprises, to participate in regional and global value chains; trade in intermediate goods for production networks is especially sensitive to trade costs.

Figure 136. Non-tariff measures account for as much as 90 percent of non-transportation related trade costs

Ad valorem tariff-equivalent trade costs, percentages



Source: World Bank-UNESCAP trade costs database

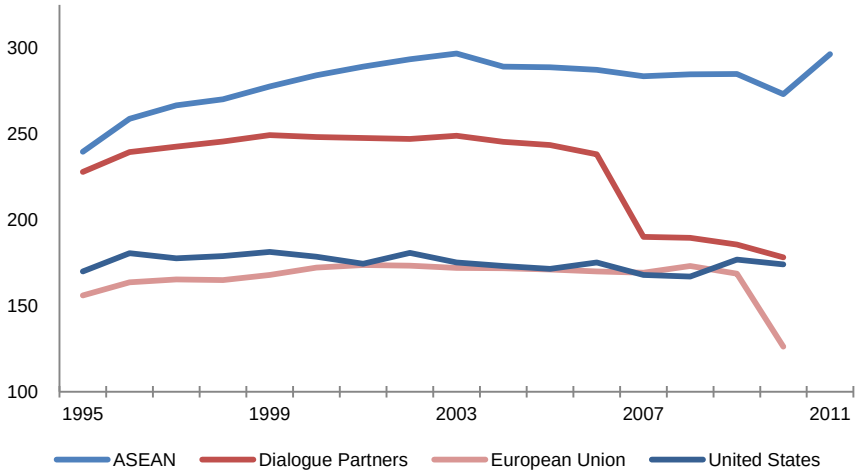
156. In Southeast Asia, total trade costs (including transport, border-related, and local distribution costs) remain high relative to other regions.[38] They have recently escalated in many countries, widening the gap even further. This new trend represents a reversal of the gradual decline during the last decade (Figure 137). Although some countries had, until recently, made significant progress in reducing costs, nearly half the reductions were attributable to tariff cuts. Further gains will need to come from addressing NTMs.

[37] See http://data.worldbank.org/data-catalog/trade-costs-dataset.

[38] Data on trade costs are drawn from the ESCAP-World Bank *Trade Cost Database* and ESCAP (2013c). This dataset captures bilateral trade costs between countries, including international transportation costs, tariffs, and other direct and indirect trade costs.

Figure 137. Total trade costs have fallen much faster among other groups compared to in ASEAN

Ad valorem tariff-equivalent trade costs, percentages

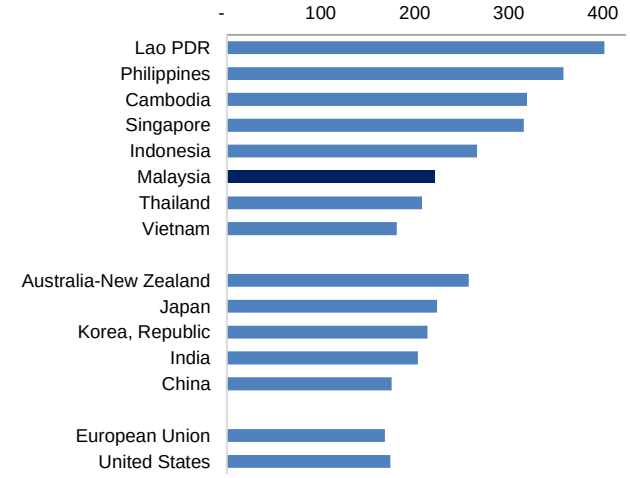


Source: World Bank-UNESCAP trade costs database

157. Within the region there are large differences in both the magnitude and evolution of trade costs. The highest-cost countries are Lao PDR, the Philippines, and Cambodia; in contrast, Vietnam, Thailand, and Malaysia enjoy the lowest costs. Among the ASEAN Dialogue Partners, China has the lowest costs. While Vietnam, China, Thailand, and Singapore have led the way in lowering costs, Malaysia has experienced stagnant or even slightly rising costs over the same period (2000-01 to 2010-11). This suggests that Malaysia's competitive advantage is being gradually eroded (Figure 138 and Figure 139).

Figure 138. Trade costs in ASEAN countries are generally high, with Malaysia around the mid-point…

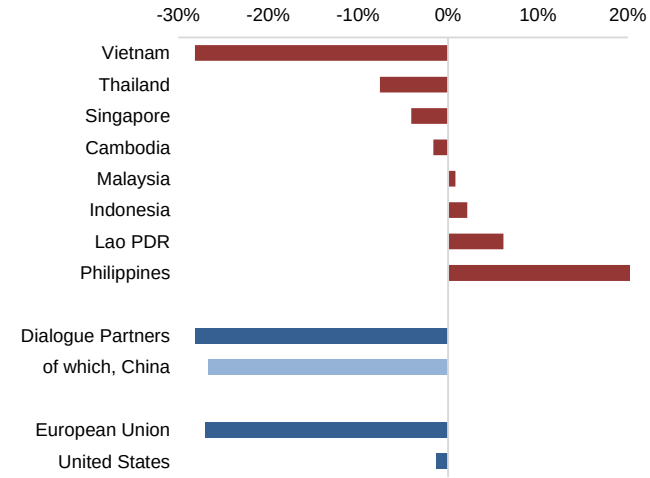
Ad valorem tariff-equivalent trade costs, percentages



Source: World Bank-UNESCAP trade costs database

Figure 139. but costs have been falling fast among key manufacturing competitors

Ad valorem tariff-equivalent trade costs, pp change, 2010–11 vs 2000–01

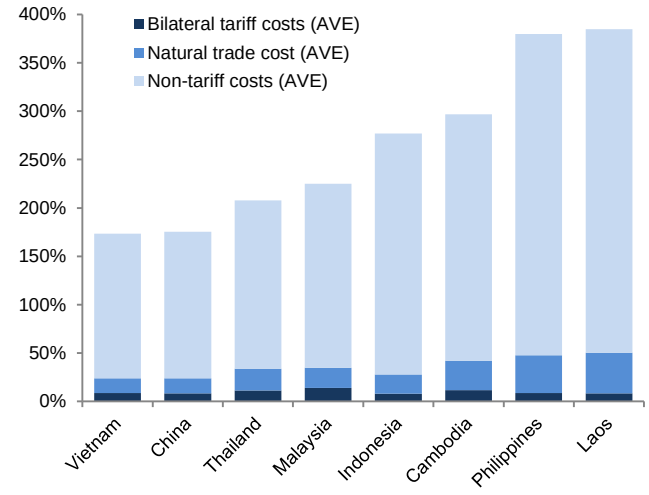


Source: World Bank-UNESCAP trade costs database

158. A breakdown of total trade costs shows that while bilateral tariff costs are broadly consistent across ASEAN member states and there is some variation in natural trade costs, the most significant differences are in non-tariff costs. This includes principally the indirect costs of trade procedures and compliance with measures, licenses and other regulatory requirements, business constrain, as well as ICT and connectivity services, and other behind-the-border costs. Here Malaysia's performance is much less stellar than in other measures, lagging behind key competitors such as Vietnam, China and Thailand (Figure 140 and Figure 141).

Figure 140. Most of the differences in total trade costs across the region are accounted for by non-tariff costs

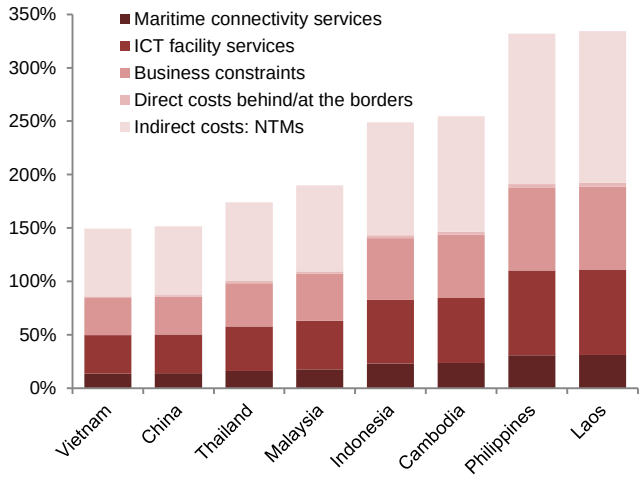
Decomposition of comprehensive total trade costs in ad valorem tariff-equivalent terms, percentages



Source: World Bank-UNESCAP Trade Costs Database.

Figure 141. Malaysia's performance is less impressive once full trade costs are taken into account

Decomposition of comprehensive total trade costs in ad valorem tariff-equivalent terms, percentages



Source: World Bank-UNESCAP Trade Costs Database.

159. While the overall trade costs have declined, high non-tariff and behind-the-border costs offset Malaysia's advantages from strong logistics and efficient processes at-the-border. Non-tariff costs in percentage ad valorem equivalent (AVE) account for as much as 190 percent of total trade costs. The non-tariff costs can be decomposed into marine connectivity services costs (18 percent), limited ICT facility services (45 percent), business regulatory constraints including access to trade finance, contract enforcement and investor protection (44 percent), direct costs at the border and behind the border (2 percent), and indirect costs of related-trade procedures (81 percent). Tariffs account for merely 14 percent of the direct and indirect trade costs (total trade costs) and natural trade costs has a share of 21 percent of the total trade costs. The indirect trade costs include costs to deal with a range of business licenses, import and export permits, and technical and sanitary certificates for moving goods across borders. The high indirect trade costs certainly undermine the competitiveness of the economy, constraining the ability of Malaysian enterprises including small businesses to integrate more efficiently and effectively into international supply chains and regional value chains.

Options to boost trade competitiveness

160. The analysis so far suggests that the immediate policy objectives of a strategy aimed at boosting trade competitiveness are threefold:

a. Upgrading Malaysia's participation in GVCs by moving towards knowledge-intensive and high-value added segments;
b. Increasing linkages between domestic suppliers and other GVC participants; and
c. Expanding trade in knowledge-intensive services

These objectives have been discussed alongside in more detail in the individual sections on services and Global Value Chains.

161. Achieving these objectives ultimately requires structural reforms to build capabilities and increase competition in the economy. Comparative advantage in knowledge intensive tasks can be developed through policies to build skills and provide firms with access to finance and technology – the capabilities agenda. A more competitive domestic environment, especially in the service sectors, will facilitate access to better and cheaper inputs, support greater linkages in GVCs, promote an entrepreneurial culture, and provide incentives for services providers to venture overseas, upgrading their capabilities in the process. The skills agenda includes, among others, improving the quality of education, as discussed in the December 2013 Malaysia Economic Monitor (World Bank, 2013), or addressing the skills mismatch discussed in the Special Issue Note in this Economic Monitor. Increasing competition in the economy is

the subject of several Strategic Reform Initiatives in the Economic Transformation Programme such as reviewing the role of Government in the economy, creating the appropriate legal environment by implementing a competition law, and moving towards more market-friendly affirmative action policies.

162. Trade policy can also play a helpful role and Malaysia's role as the Chair of ASEAN in 2015 presents significant opportunities in this regard. Trade policy can also be helpful in achieving the three immediate policy objectives. Three concrete policy actions that Malaysia can consider to boost trade competitiveness in the context of its upcoming chairmanship of ASEAN in 2015 are as follows:

a. **First**, Malaysia can deepen its liberalization efforts in services by achieving a commitment of ASEAN members to classify and disclose their 'behind-the-border' restrictions on services trade; Malaysia could take the lead and implement such classification and disclosure as part of its own autonomous liberalization of services.
b. **Second**, Malaysia can pursue mutual recognition agreements for professionals, both to create more competition but also to meet short-term skills gaps.
c. **Third**, Malaysia can lead in streamlining non-tariff measures by reviewing domestic regulations such as licensing requirements affecting firms potentially linked to global value chains.

Table 11 summarizes the policy options:

Table 11. Summary of trade-related policy options to boost trade competitiveness in Malaysia

Policy option	Description	Link to outcomes
A. Deepen liberalization efforts in services by achieving a commitment of ASEAN members to classify and disclose their 'behind-the-border' restrictions on services trade	▪ Set up a National Services Portal featuring a compilation of all laws, decrees, regulations, instructions and other documents that affects the business environment in the services sector ▪ Use ASEAN chairmanship to propose that other ASEAN member states commit to setting up a similar knowledge exchange platform on services regulations	▪ Transparency helps generate evidence-based policy dialog and a revision of regulations to achieve legitimate policy objectives while maximizing competition ▪ Improved competition in services sectors and greater openness both domestically and regionally helps promote services exports as well as deeper linkages of services providers into GVCs
B. Pursue mutual recognition agreements for professionals	▪ Faster implementation, and expanded coverage, of Mutual Recognition Agreements (MRAs) within ASEAN ▪ Propose framework for following up on implementation and expand MRAs to other areas such as oil & gas or IT services	▪ Helps fill skills gaps in services and manufacturing by facilitating the cross-border flow of talent ▪ Facilitate trade in knowledge-intensive services by making it easier for Malaysian professionals to provide services abroad.
C. Streamline non-tariff measures	▪ Adopting clear criteria for NTM elimination and put in place a resulting work program	▪ Further reduces trading costs and provides greater integration of Malaysia into GVCs, including potentially in higher-value added ▪ Promotes improved domestic linkages by encouraging more participants of GVCs to set up production facilities in Malaysia

Leveraging the ASEAN Economic Community for services liberalization

163. Malaysia can deepen its liberalization efforts in services by seeking a commitment by ASEAN members to classify and disclose regulations affecting services trade. The domestic regulatory reform agenda where regional commitments are transposed into implementable laws represents a critical area in services sector reforms. In this context, transparency of national services regulations will help to boost the regional competitiveness. Transparency is an important element of both regional and global trade agreements, including the ASEAN Trade in Goods Agreement (ATIGA) and the WTO Trade Facilitation Agreement (TFA). Transparency can be achieved by organizing services knowledge platforms that bring together regulators, trade policy makers, and private sector representatives to exchange information and generate evidence-based policy dialogue.

164. Malaysia could take the lead and implement such classification and disclosure as part of its own ongoing autonomous liberalization of services by establishing a National Services Portal (NSP).The NSP is an internet portal featuring, among other things, a searchable database of all laws, decrees, regulations, instructions, and other legal

documents that affect the business environment for the services sector. The NSP would, among other things, provide comprehensive information on the regulatory framework governing the establishment and operation of a services company, or the provision of services trade and investment in services, including measures relating to licensing, operation of foreign companies, restrictions over foreign transactions, etc. which may affect the establishment and operation of foreign services providers, or their ability to export services abroad through cross border means or through the movement of natural persons.

165. The NSP could expand upon MITI's existing services portal. As part of Malaysia's autonomous liberalization of selected services sectors, MITI has set up a services portal (myservices.miti.gov.my) to provide information for potential investors. The portal incudes the relevant acts that govern these sectors, the regulatory agencies overseeing the sector, and the liberalization initiatives and specific service sector commitments that Malaysia has entered into. Specific steps to expand the existing portal include (1) ensuring that all relevant laws, decrees and regulations relating to trade and investment in services are on the site, and creation of the regulatory database for the NSP. This step includes the digitalization, classification and compilation of such laws and regulations. Regulations should be classified according to the modes of services supply and services sector affected (Namely, cross-border trade; consumption abroad; investment; and movement of natural persons). Classification should be made at least at the 3-4 digit level adopted in the WTO W/120 document[39], reflecting a minimum of 154 distinct services categories.[40] A protocol needs to be developed to ensure that any new regulations are automatically entered into the NSP.

166. Malaysia could propose that ASEAN members commit to developing similar NSPs as part of its chairmanship of ASEAN. Improving efficiency of services sectors benefits Malaysia's own services and manufacturing sectors, but achieving regional coordination would provide additional opportunities for its service providers to seek domestic markets. Malaysia can highlight to its ASEAN partners that this would provide a useful opportunity to review the state of services sector regulations and to bring it into line with international best practice and the objectives as well as commitments under the ASEAN Blueprint.

Pursue mutual recognition agreements

167. Faster implementation, and expanded coverage, of Mutual Recognition Agreements (MRAs) within ASEAN would help to alleviate short to medium term gaps in key specialized skills necessary to boost services competitiveness. In the longer term, greater investments and better incentives for the acquisition of specialized skills and education will be needed to provide a greater domestic supply of knowledge-intensive service sector workers within Malaysia. However, in the near-term, improving MRAs could serve as an additional source of skilled professionals that Malaysia requires to expand trade in knowledge-intensive services as well as knowledge-intensive segments of manufacturing GVCs.

168. There has been some progress in the area of skilled labor mobility in the ASEAN region but further enhancements are possible. ASEAN member states have signed eight MRAs based on specific occupations covering engineering, architecture, accountancy, surveying, nursing, dental and medical practitioners, and tourism. Progress in implementing these has also varied across sectors with some sectors such as engineering and architectural services being well ahead of others. Moreover, in November 2012, the ASEAN Agreement on the Movement of Natural Persons was signed. This is expected to accelerate progress in facilitating the movement of skilled professionals across the region. Malaysia could propose frameworks to accelerate the implementation of existing MRAs, and launch the negotiation of MRAs on other key sectors such as oil and gas services and information technology.

169. One approach that has been advocated by some analysts is to aim for common minimum standards in professional qualifications that are acceptable to all member states. Setting such common standards would avoid the sometimes difficult discussions concerning the equivalence of qualifications and alleviate fears of a race to the

[39] http://www.wto.org/english/news_e/news00_e/w120.doc
[40] Measures should be accessible at least according to: mode of supply affected; services sector affected: free word search; specifics of the measures concerned (law number, year of entry into force, etc.); any combination of these parameters.

bottom in terms of educational and professional standards. It would require, though, that partner countries come to an agreement on core competences and the harmonization of training schedules and programs.

Review and streamline behind-the border constraints and NTMs

170. Efforts will be required to review behind-the-border non-tariff measures (NTMs), improve transparency and publication, and streamline high cost measures and licensing requirements. Malaysia's upcoming chairmanship of ASEAN in 2015 also provides an opportunity to put this kind of behind-the-border focus on the ASEAN agenda, building on commitments made under ATIGA to improve transparency and publication of measures affecting trade facilitation and to reform and liberalize NTMs (see Box 13). Similarly, the new WTO Agreement on Trade Facilitation, concluded in Bali in December 2013, provides a framework for policymakers to give much broader attention to the range of systems, permits, measures and requirements that contribute to costs along the entire supply chain.[41] In addition, negotiations under the Trans Pacific Partnership Agreement, which many expect to set a new standard in terms of quality or completeness in coverage of non-tariff issues, may also accelerate reform progress.

171. The importance of streamlining NTMs is now well recognized by governments. Quantifying their impact on firms and households allows policymakers to make informed decisions. The World Bank's 2012 toolkit on "Streamlining Non-Tariff Measures: A Toolkit for Policy Makers" proposes institutional mechanisms among various stakeholders within government as well as with the private sector to review NTMs, and develops a general framework for assessing the impact of NTMs. In addition, analytical methodologies are being developed to quantify the impact of NTMs (i) on firm competitiveness using sector-level and firm-level data, and (ii) on poverty using household data.

Box 13. Possible criteria that countries can use to guide their own NTM streamlining process

In attempting to streamline NTMs, Malaysia may wish to consider a three-step process as follows. Adopting clear criteria for NTM elimination and putting in place a clear resulting work program could (i) eliminate NTMs that are potentially non-transparent and discriminatory in application, (ii) next eliminate NTMs that are transparent but discriminatory, (iii) retain NTMs that have scientific basis, or are imposed for public health and safety, environment, religious, or national security reasons, but ensure that they are uniformly applied to both domestic and imported goods. Together with the process of elimination, replace the NTMs with measures that are transparent and achieve the same objective in a less distortive manner.

For NTMs which have a protective objective, a reexamination is suggested in view of the commitment to promote intra-regional trade, in which case the replacement tariffs should also be set within the terms of the CEPT. Alternatively, to cushion the impact of the shift, they may be initially set at rates with equivalent impact to the NTM, and gradually reduced in order to be less discriminatory against imports.

Following the proposed criteria, the greatest positive impact on trade is likely to come from the removal of NTMs with large potential for non-transparent and discriminatory application and based on the verified ASEAN NTM list, these are administrative pricing, non-automatic licensing, quotas, enterprise-specific restrictions, pre-shipment inspection. These are to be replaced by tariffs, fiscal incentives, or risk management with post-entry audit systems at customs. NTMs that are transparent but discriminate between imports may be considered next although their immediate removal would also yield trade benefits: prohibitions on "non-sensitive" goods, single channel for imports. Tariff quota duties, antidumping measures, restrictive foreign exchange allocation are not included in the ASEAN scheme, the last two affect products outside of the 9 priority sectors, while antidumping is covered by WTO rules (although this must extend to non-WTO members). Tariff quota duties may be tariffed. Prohibitions are usually

[41] Under WTO rules (GATT Article X), Member States are expected to publish their trade laws in a prompt and accessible manner and to refrain from enforcing measures prior to publication. The newly agreed TFA spells out in more detail how WTO Members should enhance transparency, by publishing all import, export and transit procedures, forms, documents rates of duty and taxes, fees and charges, rules for classification and valuation, laws, regulations and rulings, restrictions and prohibitions, penalties, bilateral regional and international agreements, rules of origin, and procedures for administering tariff quotas.

imposed on sensitive goods for national security, religious or moral, health and safety, or environmental reasons, hence those covering "non-sensitive" goods should be tackled first. The single channel for imports may be replaced with a tax, incentives, and regulations on domestic consumption or operation of buffer stock depending on the purpose of the NTM.

Sectors with relatively high NTM incidence and whose products fall under the nine priority goods sectors are electrical equipment, organic chemicals, motor vehicles, tobacco, cereals, sugar, cosmetics, beverages, cereal/flour/milk preparations, edible fruit and nuts, pharmaceuticals, cocoa, dairy products, coffee/tea/spices, live animals, vegetables, meat/fish preparations, vegetable preparations, waste from the food industry, seeds, live trees, meat and edible offal. More often than not, the sectors with high NTM incidence are the same ones under the priority sectors, and confirm the priority selection.

Sectors in which ASEAN may have the potential advantage as a low-cost producer and are candidates for testing the above model are taken from a tabulation of those that export the highest values of goods to countries outside the region, are part of the nine priority goods list, and contribute relatively higher value added: fats and oils, organic chemicals, rubber, apparel, computer machinery, electrical equipment, and optical/medical equipment.

Source: ASEAN Secretariat (2006)

Using trade agreements beyond ASEAN to 'lock-in' domestic reform

172. The process of negotiating and concluding trade agreements can be a conduit for structural reforms that extend beyond simple trade policy. Acceding to trade agreements often involve commitment to structural reforms within a defined timeframe in order to implement the agreement. Box 14 discusses how WTO accession has served this purpose for many countries, although the process applies to other multilateral trade agreements.

Box 14. Using the trade negotiations to leverage domestic reforms

While the WTO accession typically is part of the structural reform package and not its cause, signaling the readiness of a prepared and willing government to implement substantial policy reform, WTO accession can act as a hand-tying maneuver for governments to leverage domestic reforms that may be politically difficult to implement otherwise.

Negotiations of bilateral market access include measures that surpass tariff policy, such as customs administration, technical barriers to trade, and sanitary and phyto-sanitary measures. They also include liberalization of the foreign investment regime (in particular regulations relating to the services sector), privatization including the dissolution of state monopolies, taxation, government procurements, price controls, foreign exchange regimes, transparency in trade regulations, and trade-related governance matters. As such, many of the benefits of WTO accession come from countries' own internal structural reforms, impacting export development, domestic market enhancement, investment in infrastructure and human capital, and domestic and social reform measures.

Haddad et al. (2014) show that countries acceding to the WTO accelerate and deepen their structural reforms compared to those that are not going through an accession process or are already members of the WTO. Using simple correlations, evidence that the number of World Bank Development Policy Operations (DPOs) that countries undertake increase in the years prior to their WTO accession. Developing countries that are in the process of acceding to the WTO commit to more policy reforms (proxied by the prior actions in the DPOs) as compared to developing countries that are already members of the WTO or that have not postulated for accession. In addition, for almost all developing countries acceding to the WTO, the country risk (measured by a composite indicator of political, financial, and economic risk called International Country Risk Guide) and the policy and institutional indicators (measured by the World Bank's Country Policy and Institutional Assessment) significantly improve at the time a country reaches WTO membership compared with the beginning of the WTO accession process.

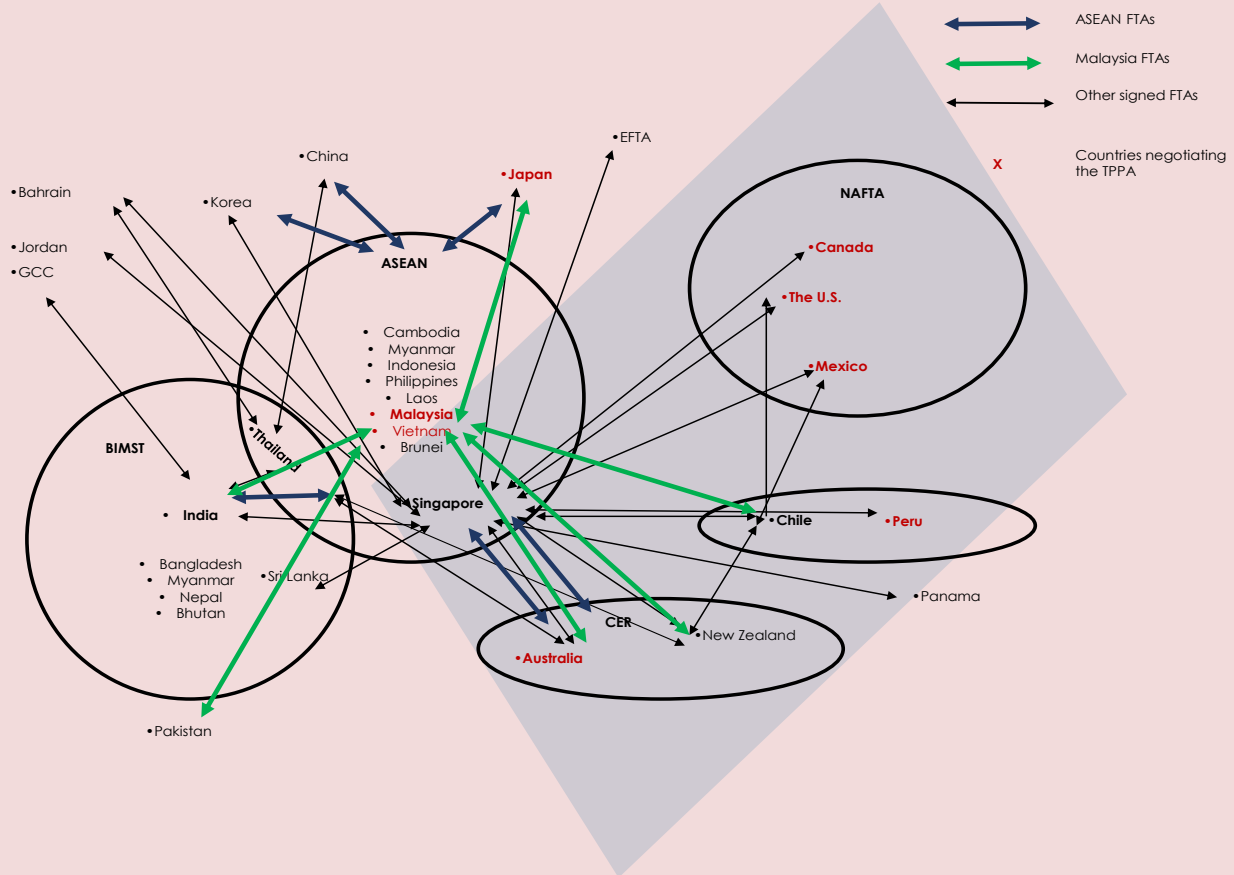
Source: Haddad, M., C. H. Hollweg, and A. Portugal-Perez (2014).

173. Malaysia can better utilize trade agreements to catalyze the implementation of domestic reforms in important areas. One such example are provisions related to better transparency in government procurement. While these reforms may be difficult to implement due to political unpopularity, it could be argued that locking them via trade agreement provisions would accelerate their implementation. However, such a strategy would have to take place within the context of a wider domestic reform policy and strategy, as well as more comprehensive international trade strategy (see Box 15).

Box 15. Malaysia's overlapping trade agreements

- Malaysia appears to be transitioning to a phase in its international trade policy by committing to agreements that contain provisions which go above and beyond those committed to at the WTO and its current FTAs (WTO-plus)
- One reason why Malaysia might accede to a WTO-plus agreement such as the TPPA would be to 'lock-in' or strengthen current domestic reforms
- However, international examples illustrate that for governments to successfully utilize trade agreements to 'lock-in' domestic policy reforms, the sequencing of such strategies matter and success is more likely when regulatory reforms are already in train
- Malaysia should also be aware of its place in the ever more complex 'laksa bowl' of RTAs (Figure 142), whereby not only its own bilateral and multilateral commitments and preferences matter, but also those among its trading partners

Figure 142. Malaysia's position in the 'laksa bowl'



Over the past two decades, the international trading system has witnessed the emergence of a plethora of trade agreements with 583 regional trade agreements (RTAs)[42] notified at the WTO as at 31 January 2014, with 355 being in force. This is more than a four-fold increase compared to 124 notified to the General Agreement on Tariffs and Trade (GATT), the precursor to the WTO, between 1948 and 1994. Malaysia too, has not spared itself from partaking of the 'laksa bowl'[43] of ever more complex trade commitments.

Since becoming a member of GATT in 1957 and thereafter the WTO in 1994, the intricacies of Malaysia's trade commitments have progressively increased, beginning with its first foray into bilateral Free Trade Agreements (FTAs): the Japan-Malaysia Economic Partnership Agreement (JMEPA), signed in 2004. Following this, Malaysia signed FTAs with Pakistan (2007), Chile (2010), India (2010) and Australia (2012), all of which have come into force. At the regional level, Malaysia has signed regional-level FTAs with Australia and New Zealand (AANZFTA), Korea, China and India. International trade policy in Malaysia has therefore undergone two shifts. Firstly, the transition from membership of GATT to the WTO which marked the liberalization of Malaysia's trade beyond trade in goods, given that WTO agreements under the Single Undertaking encompass not only trade in goods (GATT), but also services (General Agreement on Trade in Services, or GATS), and intellectual property rights protection (The Agreement on Trade Related Aspects of Intellectual Property Rights, or TRIPS). In addition, Malaysia is also a signatory to the Trade-Related Investments Measures (TRIMs) agreement, which governs cross-border investments in manufacturing amongst WTO members. Finally, in December 2013 Malaysia along with other WTO members signed a Trade Facilitation Agreement which contains provisions for cooperation between customs and other appropriate authorities on trade facilitation and customs compliance issues. Beginning with the Japan-Malaysia Economic Partnership Agreement (JMEPA), Malaysia embarked onto a second phase, that of bilateral free trade agreements (FTAs), which contain market access commitments beyond those it had agreed to at the WTO, but still based on the WTO template of trade in goods and services, IPR protection and trade-related investment measures.

Malaysia seems to be transitioning to a third phase in its international trade policy by committing to agreements that contain provisions which go above and beyond those committed to at the WTO and its current FTAs. These include not only the Trans-Pacific Partnership Agreement (TPPA), but also the Regional Comprehensive Economic Partnership (RCEP) agreement, which is a comprehensive RTA between ASEAN member countries and the six states with which ASEAN has existing FTAs (Australia, China, India, Japan, Korea and New Zealand). In addition, Malaysia had begun preliminary negotiations with the European Union for a bilateral FTA, although this has been put on hold to make way for TPPA negotiations.

Of these, it is the TPPA that has courted the most controversy, not only in Malaysia, but also in other countries still negotiating accession to the TPP[44]. These are Australia, Canada, Japan, Mexico, Peru, Vietnam, and the U.S. Recently, South Korea and Taiwan have also expressed interest in the TPPA. Despite the potential opportunities afforded by the TPPA in opening up market access beyond WTO commitments, there remains several points of contention, the crux of which lie in various WTO-plus commitments demanded by the developed countries in the TPPA negotiations, namely the U.S., and to a certain extent, Australia, Canada and New Zealand. Although the draft text being negotiated is not publicly available (another point of controversy), it is widely presumed that the baseline for the TPPA will be based on the current 'template' of US-based FTAs, which contain such commitments.

These commitments include:

- Investor-State Dispute Settlement (ISDS), which gives the right to foreign investors to enter into dispute proceedings with governments under certain conditions
- 'Negative-listing' of services liberalization commitments, in which sectors that have not been specifically exempted from market access commitments are deemed to be liberalized. Malaysia's current services

[42] Defined by the WTO as reciprocal trade agreements between two or more partners. These include free trade agreements (FTAs) at the bilateral and regional levels.

[43] Jagdish Bhagwati coined the term 'spaghetti bowl' to describe the criss-crossing of various uncoordinated, trade preference arrangements and agreements, which result in different preferential trade barriers, often for similar goods and services, experienced by one country with multiple PTAs. (Bhagwati 1995)

[44] The Trans-Pacific Partnership (TPP) currently being negotiated is a proposed expansion of the 2005 Trans-Pacific Strategic Economic Partnership Agreement (TPSEP or P4), an RTA among Brunei, Chile, New Zealand, and Singapore.

market access commitments are based on the GATS format of 'positive-listing', i.e., only sectors committed to in the agreement are deemed liberalized.

- Extensive agreements on competition policy and government procurement: while Malaysia had earlier agreed to in-principle Competition Policy provisions in the JMEPA as well as FTAs with Australia and New Zealand, the competition policy commitments in the TPPA are projected to supersede those contained in Malaysia's competition law. In particular, these provisions will not exempt state-owned enterprises (SOEs). Meanwhile, the government procurement agreement will subject each member's government procurement policies to the legal provisions of the TPPA. This potentially means that Malaysia (as well as other countries) cannot restrict access to the country's government procurement markets to local vendors, and will have to make such contracts more transparent.
- TRIPs-plus commitments: these are foreseen to circumscribe the right for member countries to develop *sui generis* IPR protection measures, i.e., measures concomitant with their level of development, which is enshrined in the TRIPs Agreement. US-based FTAs however, have typically pushed for harmonization towards its own IPR standards, such as longer copyright and patent protection periods, as well as stronger 'data exclusivity' provisions. Amongst others, these are said to have an implication on public health by potentially restricting the availability of cheaper generic medicines.

One reason why countries on Malaysia's development trajectory would accede to a WTO-plus agreement such as the TPPA would be to 'lock-in' or strengthen current domestic reforms, particularly those that are difficulty to implement due to (real or perceived) political impediments. For instance, Malaysia may want to strengthen its on-going unilateral liberalization of its services sector by committing to horizontal behind-the-border measures contained in the trade agreement. This also has the effect of making 'u-turns' in policy more difficult, particularly so if applied in tandem with the aforementioned ISDS provisions. This also applies to provisions relating to transparency as well as liberalization of government procurement.

However, international examples illustrate that for governments to successfully utilize trade agreements to 'lock-in' domestic policy reforms, the sequencing of such strategies matter. Overall, there is evidence pointing to the fact that domestic regulations need to be enacted first before acceding to international agreements that consolidate such reforms. Furthermore, trade negotiators may sometimes over-estimate the extent to which they may liberalize sensitive sectors. Not following such a sequence may result in domestic confrontations that may affect the terms of the agreement (VanGrasstek, 2011), or result in "regulatory overshooting", when liberalizing a sector before domestic regulatory institutions have been set up. This has occurred in the financial sectors of developing countries such as Vietnam, when 'allowing new entry in banking without creating a mechanism to sift the sound institutions from the dubious led to disruptions that have had a durable effect on the development of the financial sector' (Hoekman and Mattoo 2013). In addition, a paper by the US International Trade Commission (2006) found that there has generally been no systematic pattern of improved governance in the US' various trade partners linked to trade negotiations with the latter.

Finally, Malaysia should also be cognizant of its place in the 'laksa bowl' of RTAs - it should not only consider the preferential treatment it obtains from its current and future FTA partners, but also the system of preferences that those countries enjoy from their FTAs, which may either erode or augment the benefits of its own FTAs (Figure 142).

Source: Intan (2010)

Appendix: Glossary and data sources

Concepts	Definition	Notes
Country position in the global economic space	The methodology is used to identify cluster of countries with similar characteristics. The multidimensional comparison is made by using the following indicators as coordinates: export basket composition; GDP per capita; population; human capital; and physical capital. Countries in the list are ranked by degree of similarity.	
Intermediate products trade	The share of intermediate goods on imports (or exports) of a country: This measure helps to highlight the ability of a country to participate in GVC. For example intermediate imports play a crucial role in defining countries' capacity to export.	Intermediate products are identified using the BEC classification. See Box 0-2 for a detailed description.
Intermediate Imports embodied in Exports (as a per cent of total intermediate imports)	This reflects the share of intermediate imports that are used (indirectly and directly) in producing goods and services for export, as a per cent of total intermediate imports (by import category).	The indicator provides a measure of the importance of intermediate imports to produce goods and services for export and their role as a source of international competiveness. *Source:* OECD-Tiva
Domestic Value-Added embodied in gross exports	Domestically sourced value-added as a per cent of gross exports.	This measure illustrates how much value-added is generated domestically for a given unit of exports. *Source:* OECD-Tiva
Foreign Value-Added embodied in gross exports	Equivalent to 1 minus Domestic VA embodied in gross exports.	This is the measure of Vertical Specialization VS introduced by Hummels et al. (2001) and then formalized by Koopman et al. (2011). It captures the country GVCs position as a user of foreign inputs (upstream links, i.e. backward participation).
Re-imported Domestic Value-Added	Domestic value-added that was exported in goods and services used to produce the intermediate imports of goods and services used by the industry in question.	
Direct Industry Value-Added	Direct contribution made by an industry in producing a good or service for export.	
Indirect Domestic Value-Added	Indirect contribution of domestic supplier industries made through domestic (upstream) transactions.	
Domestic value added embodied in third countries' exports	The percentage of exported goods and services used as imported inputs to produce other countries' exports.	Country as supplier of intermediate goods and services used in other countries' exports (downstream links, i.e. forward participation). In the literature known as VS1 specialization index (Hummels et al 2001).
GVC participation index	Defined as the combination of VS (backward participation, upstream links) and VS1 (forward participation, downstream links)	Capture the integration of a country in the GVC considering it as user of foreign inputs and supplier of intermediates. Koopmans et al (2011).
Revealed comparative advantage (RCA)	The sector's share of exports in total country exports relative to the sector's share of exports in total world exports.	Rather than using gross exports, the measure is constructed using domestic value added embodied in gross exports. A country is said to have a comparative advantage in the sector if the RCA measure is above 1.
Upstreamness	The production line position of an economy's exports or imports, calculated first for each industry then weighted by the importance of the industry for exports or imports.	The larger the upstreamness measure, the more upstream the industry, or the further from final demand. An upstreamness measure of 1 indicates that all output is channeled to final use.
Domestic length of value chain	Difference between import upstreamness and export upstreamness.	
Structural integration / eigenvector centrality	A measure of the centrality of country *i* relative to the overall structure of the network. This can be computed from the buyer's or seller's perspective.	It is the most representative measure of the network, which captures the strength of the links and their closeness/proximity.
Clustering	A measure of how much the neighbors of country *i* are themselves connected.	A measure of the transitivity of the network. It captures whether country *i* is strong because it trades a lot with other countries that are also strong.

Source: Authors

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