

THE WOODROW WILSON SCHOOL'S GRADUATE POLICY WORKSHOP

ECONOMIC POLICY IN MALAYSIA: PATHS TO GROWTH

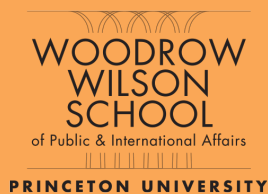
JANUARY 2014

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Acknowledgements

The authors would first and foremost like to thank all the experts who graciously helped us by sharing their insights. We also wish to extend our special gratitude to our professor, Dr. Iqbal Zaidi for his continued support and guidance throughout the research and development of this report. Finally, we wish to thank the staff of the Woodrow Wilson School who made this workshop possible.

Figures

Figure 2.1: Malaysian Real GDP Growth (YoY)

Figure 2.2: Debt to GDP and Government Security Yields

Figure 2.3: Government Debt with Maturity Greater than 5 Years

Figure 2.4: Fiscal Decentralization Trend in Malaysia

Figure 5.1: Housing Price Change vs. Nominal GDP Growth in Malaysia (2009 Q1 - 2013 Q2)

Figure 5.2: Housing Price Changes in the Region

Figure 5.3: Household Debt to GDP Ratio

Figure 5.4: Household Debt to GDP Ratio: Malaysia vs. Selected OECD Countries that experienced housing boom followed by housing bust and large consumption loss

Figure 5.5: Household Debt to GDP in the Region

Figure 5.6: Typical Loan-to-Value Ratios (LTV) of New Housing Loans

Figure 5.7: Loans through Banking System/GDP

Figure 5.8: Housing Price Changes in Different Areas

Figure 6.1: Relationship between GDP per Capita and ECI

Figure 6.2: Services as Percentage of GDP (2005-2011 Average)

Figure 6.2: Service Exports as Percentage of Exports (2005-2011 Average)

Figure 8.1: Industry as Percentage of GDP (2005-2011 Average)

Figure 8.2: Manufacturing Exports as a Percent of Exports (2005-2011 Average)

Tables

Table 5.1: Impaired Loans Ratio in Malaysia

Table 8.1: Regression Results

Table 8.2: Regression Results

Table 8.3: Regression Results

Table 8.4: Regression Results

Boxes

Box 1: Technology and the IMF's Recommendations on Fuel Subsidies

Box 2: Would the Impact of Housing Bust on the Overall Economy Be Limited in Malaysia?

Box 3: Case Study: The Role of Tight LTV Limit in South Korea

Table of Contents

ACKNOWLEDGEMENTS	2
TABLE OF CONTENTS	4
EXECUTIVE SUMMARY	6
MAIN FINDINGS AND RECOMMENDATIONS	6
1. RECENT ECONOMIC CONTEXT	9
2. FISCAL POLICY TRANSITION	9
2.1 MARKET ENFORCEMENT OF FISCAL REBALANCING	10
2.2 FISCAL CONSOLIDATION EFFORTS	12
2.3 DEPLETING NATURAL RESOURCE BASE	13
2.4 POLICY RECOMMENDATIONS	13
2.4.1 BROADENING AND DIVERSIFYING THE ECONOMY	13
2.4.2 IMPROVING PUBLIC MANAGEMENT.....	14
2.4.3 ENHANCING GROWTH THROUGH FISCAL DECENTRALIZATION	15
3. FUEL SUBSIDY RATIONALIZATION	16
3.1 ARGUMENTS FOR FUEL SUBSIDY RATIONALIZATION	16
3.2 POLICY RECOMMENDATIONS	17
3.2.1 USE LESSONS FROM THE PAST TO REFINE THE COMMUNICATIONS STRATEGY.....	17
3.2.2 THE IMPORTANCE OF TIMING	18
3.2.3 MAKE USE OF NATIONAL IDENTIFICATION CARDS TO TARGET SUBSIDY BENEFITS.....	19
3.2.4 LINK INCREASED PRICES WITH TARGETED CASH TRANSFERS	19
3.2.5 MATCH TARGETED CASH PAYOUTS WITH AN EXISTING POVERTY ERADICATION DATABASE	20
3.3 A ROLE FOR SUBSIDIES	21
4. MALAYSIAN FINANCIAL MARKETS & EXTERNAL FINANCE	21
4.1 EVOLUTION OF MALAYSIAN FINANCIAL MARKETS	22
4.2 MALAYSIAN INTEREST RATES' LOW SENSITIVITY TO GLOBAL RISK CYCLES	22
4.2.1 INSIDE THE MALAYSIAN YIELD CURVE – MEASUREMENT AND LIQUIDITY ISSUES	24
4.2.1.1 IDENTIFYING “HIDDEN” SENSITIVITY TO ADVANCED COUNTRY STRESS FACTORS	25
4.2.1.2 DESCRIBING MGS LIQUIDITY PATTERNS AND ITS PREMIUM	27
4.3 FINANCIAL ACCOUNT FLEXIBILITY	28
4.4 MALAYSIAN SAVINGS AND THE CURRENT ACCOUNT	29
4.5 POLICY RECOMMENDATIONS	30
4.5.1 DECENTRALIZING FINANCIAL MARKET PARTICIPATION.....	30
4.5.2 REFORM PENSION FUND SCHEMES.....	30
5. HOUSING BOOM: IMPLICATIONS ON FINANCIAL STABILITY & OVERALL ECONOMY	32
5.1 HOUSING PRICES & ECONOMIC INSTABILITY	32
5.1.1 POSSIBLE HOUSING PRICE TRENDS IN MALAYSIA	33
5.1.2 INCREASED VULNERABILITY TOWARDS HOUSING PRICES	34
5.1.3 POTENTIAL IMPACT OF A HOUSING MARKET DECLINE	34
5.2 POLICY RECOMMENDATIONS	39

5.2.1 MAXIMUM LTV REGULATION ON FIRST AND SECOND MORTGAGES	39
5.2.2 AREA-SPECIFIC REGULATION: MORE EFFECTIVE IMPLEMENTATION OF TIGHTER LTV	40

6. EXPORTS **42**

6.1 MOVING UP THE EXPORT GOOD VALUE CHAIN	42
6.2 PROSPECT FOR SERVICE EXPORTS AS PATH TO ECONOMIC GROWTH	44
6.3 MALAYSIA'S COMPARATIVE DISADVANTAGE IN SERVICES	45
6.4 FINANCIAL SERVICES EXPORT PROSPECTS	47
6.5 POLICY RECOMMENDATIONS	47
6.5.1 NATURAL RESOURCE-BASED RESEARCH INSTITUTES	48
6.5.2 APPRENTICESHIPS AND LABOR-MANAGEMENT PARTNERSHIPS	48

7. STRUCTURAL HEADWINDS TO LONG-TERM GROWTH **48**

7.1 INEQUALITY	48
7.2 EDUCATION	49
7.3 LABOR AND CAPITAL OUTFLOWS	50
7.4 RECOMMENDATIONS	50
7.4.1 ADDRESSING EXISTING INEQUALITIES	51
7.4.2 IMPROVING THE EDUCATIONAL STRUCTURE	51
7.4.3 KEEPING MALAYSIA'S BEST	52

8. APPENDICES **52**

8.1 THE NEW ECONOMIC POLICY AND MALAYSIA'S ETHNIC POLITICS	52
8.2 SERVICE EXPORTS AND WEALTH	54

Executive Summary

This paper examines Malaysia's economy from the perspective of several medium to long-term policy domains that have consequences for the country's economic performance. We divide the sections of the report into policies areas with outcomes that are likely to have economic relevance on growth and stability within 3-5 years and longer-term structural issues. In the former, medium-term category we selected the following areas based on their relatively high relevance to the overall economy and the existence of feasible policy levers for the Malaysian authorities: (1) fiscal policy; (2) subsidy reform; (3) capital markets and the balance of payments; and (4) the housing market. A number of important linkages tie these areas of the economy together. Subsidy reform is a contentious subset of fiscal policy, meriting its own discussion and policy analysis. Similarly, Malaysian financial markets have ties with the housing market, which we identify as a possible vulnerability warranting a closer look.

Following our coverage of these selected medium-term developments, we provide analysis and policy recommendations on longer-term, structural issues related to growth in the following two categories: (1) the structure of exports in Malaysia and (2) political economy of ethnicity-based policies. Malaysian authorities' policy options in these areas have a material impact on the path of growth in decades to come. However, this report leaves out numerous other important determinants of stability and growth in favor of a more detailed look into some features of the economy that we were able to grapple with given time constraints.

Main Findings and Recommendations

We characterize the Malaysia's economic position related to the above policy spheres by making the following observations:

- Malaysia's government debt-to-GDP ratio has increased significantly since the global financial crisis (GFC) due to substantial discretionary fiscal stimulus.
- The Malaysian government has maintained robust access to bond market financing at reasonable rates, and it primarily borrows in its own currency.
- The dependence of the Malaysian economy on commodities-related exports increased from 2001 to 2008, which provided a tailwind to growth during the commodities boom but now poses a risk to longer-term growth.
- The current state of play on fuel subsidies features an interplay between ratings agencies' calls for action on the fiscal balance and the government's tricky political calculations.
- Despite the large and growing presence of foreign investors in the Malaysia's bond market, Malaysia has stood out among financially open peer countries for its ability to withstand external shocks with relatively low bond market volatility.
- Malaysia's open capital account and deepening capital market liquidity have improved the sophistication of the country's financial system, but a handful of state-linked investment companies maintain a major role in price determination and credit allocation.
- House prices in Malaysia have risen sharply in recent years, and housing loans and total household debt have increased rapidly over the same period.

- Although prospects for a housing bust in Malaysia remain uncertain, the high recent growth rate and the level of household debt in Malaysia suggest reason for caution when considering the impact of stress on household balance sheets if home prices fall or income growth slows.
- In terms of composition, well over half of Malaysia's exports have consisted of manufactured goods in recent years, and it should take advantage of the situation to focus on future movement up the value chain.
- Malaysia has relatively complex exports given its income level, implying that the complexity of its export basket will help it grow: where it falls on the value chain is an asset, not a liability.
- The persistence of ethnicity-based affirmative action policies (or Bumiputra policies) since the enactment of the New Economic Policy (NEP) in 1971 are widely believed to be generating inefficiencies and limiting the potential growth of the Malaysian economy.

Based on these findings, we make the following recommendations:

Fiscal Policy Transitions

1. Broaden and Diversify the Economy: In response to the reality of dwindling reserves, Malaysia must be diversify its underlying portfolio of economic growth towards investments that expand its growth potential, such as: infrastructure, industrial technology, human capital and improving the legal and regulatory framework.
2. Improve Public Management: Future fiscal policy should take into account potential room for trimming operating expenditures and minimizing the government's footprint in the corporate sector in order to open the path for increased private investment.
3. Enhancing Growth through Fiscal Decentralization: Given the positive impact of decentralization on growth and the fact that it allows for spending structures to shift closer to the actual beneficiaries, fiscal decentralization may be employed as an effective tool to enhance targeting of low-income communities for subsidy transfers.

Fuel Subsidy Rationalization

4. Refine the Communications Strategy: Develop a communication strategy that articulates the costs of fuel subsidies in various mediums (e.g. radio, television, town halls) with particular attention to Sarawak and Sabah.
5. Make use of National Identification Cards: Link subsidies to My-Kad, Malaysia's national identification cards.
6. Simultaneously Increase Prices & Targeted Transfers: The government must increase cash transfers for the poor timed with the increase in prices. Providing targeted transfers addresses the loss aversion bias that makes subsidy rationalization difficult.
7. Match Targeted Cash Payouts with Existing Poverty Eradication Database: Incorporate the existing eKasih databases for targeted cash transfers that simultaneously occur when subsidy cuts occur.

Malaysian Financial Markets & External Finance

8. Decentralize Financial Market Participation: A reduced role of the state in Malaysian financial markets could support the performance of Malaysian capital markets in funding projects higher up the risk-return spectrum.
9. Reform Pension Fund Schemes: To support the decentralization of financial market participants, the government can make changes to increase the flow of savings towards private fund managers.

Housing Boom: Implications on Financial Stability

10. Introduce a maximum loan-to-value (LTV) regulation on first and second mortgages: To prevent a severe and protracted downturn that could be caused by a housing bust, the Malaysian government should introduce maximum LTV on first and second mortgages in addition to the current regulation on third mortgages.
11. Area-specific Regulation regarding Tighter LTV: Since housing markets in different areas can move independently, the Malaysian government should review the feasibility of introducing the “speculative zone designation system”, which has been implemented in Korea and has enabled tighter LTV regulations to be applied specifically to individual zones.

Exports

12. Natural Resource-Based Research Institutes: The government should partner with industry to create technical institutes around natural resource products that have long been part of the country’s export mix.
13. Apprenticeships and Labor-Management Partnerships: Malaysia should partner with major industries — including multinational corporations—to develop training programs to “skill up” existing workers as the beginning of a major commitment to technical training.

Structural Headwinds to Long-Term Growth

14. Addressing Existing Inequalities: Instead of being a passive victim to the socioeconomic shifts at play, the current government should proactively adjust itself to the changing nature of inequality.
15. Improving the Educational Structure: The government should take steps to elevate the importance of its diverse heritage to reverse the incentive structures that have drawn minorities out of Malaysia society.
16. Keeping Malaysia’s Best: Beyond the structural changes to the education system outlined above, skilled minorities should be incentivized to stay in Malaysia through increased opportunities to serve in the civil service and leveling the private sector playing field.

1. Recent Economic Context

Malaysia's economy has performed well in recent years with output growth averaging over 5 percent since 2010, and the government has taken steps to consolidate its fiscal position after an increase in public debt following the GFC. The country's stable financial system has provided an environment conducive to growth, and Malaysian credit markets have been notable for their resilience through ups and downs in global financial risk cycle. Additionally, Malaysia's long-running current account surplus has moved closer to a more sustainable balance as higher investment growth has coincided with a declining savings rate.

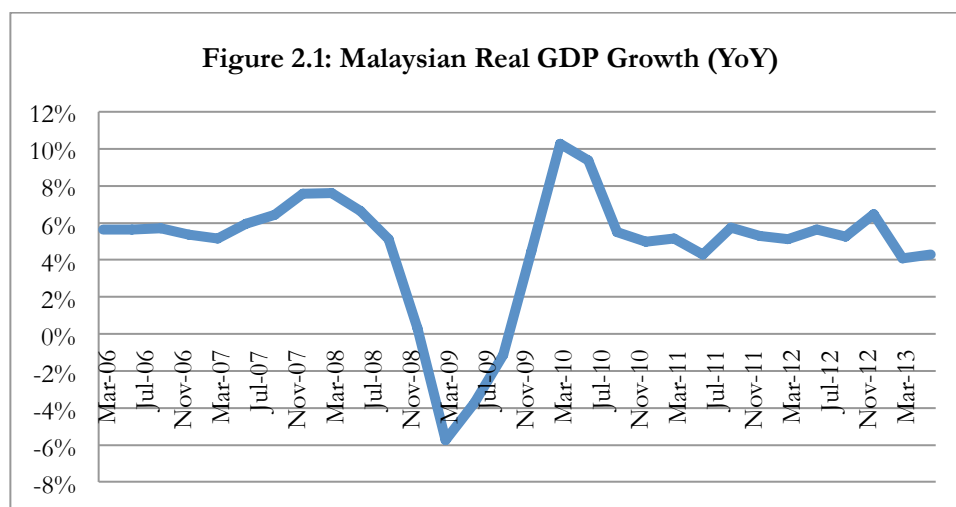
While Malaysia's growth and economic rebalancing has been exemplary, some policy areas of concern remain. Malaysia's past success insulating its bond market from fluctuations in global risk appetite is not guaranteed in the future, especially if domestic savings continues to fall and advanced country rate rises lead to more volatile capital flows. Additionally, real estate price rises point to potential future financial sector and household wealth stability concerns and have spurred macro prudential policy responses. In the longer-term, structural issues including ethnicity-based affirmative action policies and the large role of the government in both the business sector and financial markets may require adjustment as Malaysia develops towards its 2020 goal of becoming a high-income country.

2. Fiscal Policy Transitions

Malaysia's government debt-to-GDP ratio has increased significantly since the GFC, as the government undertook substantial discretionary fiscal stimulus during the crisis and economic growth moderated after the initial recovery (see Figure 2.1). Given that Malaysia is a highly commodity dependent economy and dividends from the state oil company make up a significant share of state revenues, part of the increase in debt-to-GDP can be attributed to lower oil prices after the boom that culminated in 2008.¹ The government's latest Fiscal Policy Committee has recognized that the drop in the current account of the balance of payments (BOP) coupled with continued fiscal deficits pose medium-term risks to the economy.²

¹ IMF Article IV Consultation – Malaysia (2012)

² Press Release, Prime Minister's Office of Malaysia (2013)



Source: Bank Negara Malaysia Statistics (BNM)

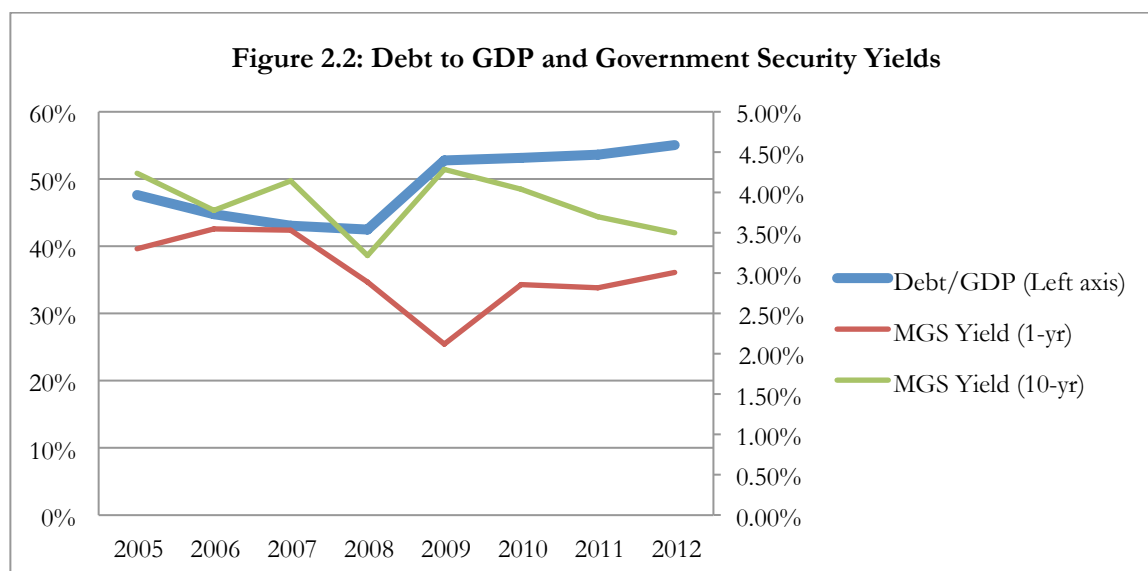
The government has taken steps to lower subsidies and expand the tax base in order to improve the state's financial position. Further, public investment that prioritizes non-import-intensive projects should limit the risk of near-term fiscal deficit.³ However, substantial fiscal consolidation in the next 12 months may be harder to achieve due to the falling prices of key commodity exports.⁴ Given the current economic environment, fiscal cuts could lower GDP growth forecasts and thus reduce tax revenue in coming months. The following section elaborates on three key aspects of Malaysia's fiscal landscape: dependence on financial markets, persistence of fiscal consolidation, and a depleting natural resource base. The section concludes with three recommendations to address these trends: diversifying the economy, improving public management, and boosting growth through fiscal decentralization.

2.1 Market Enforcement of Fiscal Rebalancing

Financial markets can play a role in limiting government deficits by limiting the extent to which they provide financing at an acceptable rate to a borrowing government. Malaysia has had relatively uninterrupted access to financing at reasonable rates (see Figure 2.2), thanks to the relative insulation of its local bond market to domestic and external shocks (see section 4 for further analysis of Malaysia's financial markets). While the relatively low yields on Malaysian government debt signifies strong investor confidence, among many other domestic and external factors, this pattern is subject to change and should continue to be addressed by the government's commitment to reducing the deficit and debt-to-GDP level.

³ Fitch Ratings (2013)

⁴ Fitch Ratings (2013)



Source: BNM Statistics

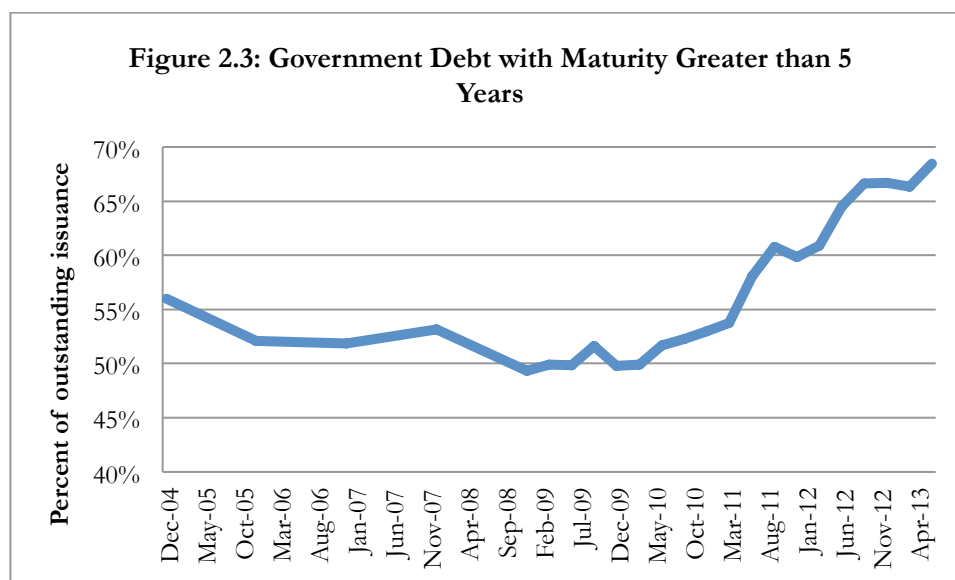
Malaysia's high savings rate partially explains the relative easy access to credit. Government-linked pension funds intermediate a large portion of the savings. To forestall a problem in government financing rates, these funds could move into the government securities market by selling their foreign holdings or cutting back on credit to other areas of the local economy. The stable local banking system has also acted as a buffer, stepping in to increase their holdings of government bonds as foreign investors fled in the GFC.⁵

The maturity of the debt is another factor to consider in looking at the potential for stress in the government's ability to finance its deficits. Excessive dependence on short-term debt can help minimize debt payments in the short-run but leaves the government vulnerable to rollover risk and greater volatility in interest payments should investor sentiment deteriorate. In this respect, Malaysia has had success in prudently managing debt issuance. The government has had relatively strong access to medium and long-term bond market financing, and since the GFC significantly increased its focus on extending the maturity structure (see Figure 2.3). The government has recently explored even longer maturity levels with a 30-year bond issue in September 2013. While the auction for over \$750 million in MYR-denominated bonds succeeded, the offering failed to attract foreign investors, calling into question the government's ability to finance such long-dated debt without the support of government-sponsored asset managers.⁶⁷

⁵ Asia Bonds Online, Market Data

⁶ "Malaysia Debuts Longest Bonds in Funding Push," Bloomberg, September 2013

⁷ "Foreigners Stay Away from Malaysia 30-Year Bond, Wall Street Journal, September 2013



Source: BNM. Includes issuance of securities only. A relatively small portion of loan debt with unknown maturity structure is excluded from the total.

Despite this stability in the government's access to finance, the high level of government debt and recent pressure from credit ratings agencies raise reasons for caution. Fitch Ratings revised Malaysia's outlook from "stable" to "negative" in July 2013, stating that "prospects for budgetary reform and fiscal consolidation to address weaknesses in the public finances have worsened" and assessed that it would "be difficult for the government to achieve its interim 3 percent FY deficit target for 2015 without additional consolidation measures."⁸ Recent steps announced by the government to reduce fuel subsidies and limit certain imports were not enough to change Fitch's assessment.

2.2 Fiscal Consolidation Efforts

A two-pronged approach focused on (1) cutting down expenditures by rationalizing subsidies and reducing inefficiencies and (2) tax reforms to increase the revenue base, would be best suited to address the government's long-run deficit situation. Recent fiscal consolidation efforts take into account some of these measures, specifically the recent passage of the Goods and Services Tax (GST) that is expected to replace the previous Sales and Service Tax (SST) with a more efficient and far-reaching tax system. A hike in the real property gains tax and expenditure cuts, including reductions in fuel and sugar subsidies, have also been enacted. Despite these measures, the fiscal balance remains a concern, and the moderating path of overall debt levels remains dependent on a relatively positive growth outlook.

In light of these consolidation efforts, it is prudent to be wary of possible negative distributional effects arising from fast-paced fiscal consolidation efforts to diminish the deficit. Such distributional effects could include higher inequality, decreasing wage income shares and increasing long-run unemployment.⁹ In a recent IMF working paper¹⁰ examining the short and long term distributional effects of fiscal consolidation, fiscal adjustments have typically had significant distributional effects, although tax-based adjustments have typically

⁸ "RPT-Fitch Revises Malaysia's Outlook to Negative; Affirms IDRs at 'A-'/'A'," Reuters, July 2013

⁹ Ball, Laurence. Furceri, Davide. Leigh, Daniel & Loungani, Prakash (2013)

¹⁰ Ball, Laurence. Furceri, Davide. Leigh, Daniel & Loungani, Prakash (2013)

produced smaller effects than spending adjustments. In the context of Malaysia, the government is seeking an improvement in the fiscal balance through both tax and expenditure reforms. Due to this reason, it is important for the government to weigh the distributional effects of consolidation against the longer-term benefits that consolidation might bring.

2.3 Depleting Natural Resource Base

Oil and gas production have been at the heart of Malaysia's economic growth since the discovery of oil in the country in the early 1900s. Since then, hydrocarbon revenue provided Malaysia with strong incentives to develop a robust oil and gas sector. Under the management of Petronas, the oil and gas production industries in Malaysia have prospered through the creation of opportunities for local companies to expand and build their capacities across all parts of this industrial value chain.

In terms of size, oil and gas production contributed to 10.4%¹¹ of Malaysian GDP in 2012, though the precise percentage has varied between 16-22% since the early 2000's. Growth in oil and gas production, the long-term rise in energy prices, and complementary expansion of downstream value addition industries have further expanded this sector.¹² The Malaysian economy's dependence on commodities-related exports increased from 2001 to 2008, when the price of oil, rubber and palm oil commodity exports increased between three- and four-fold.¹³ The government expanded commodity exports at the expense of high-tech manufacturing that led to a decline in Malaysia's comparative advantage in electronics. It is important to note that in recent years, the current account would have been in deficit had it not been for net commodity exports.¹⁴

Given such a high dependence on commodities, it is crucial to prepare for the impact of depleting natural resources in the country, in addition to the potential slower economic growth from delays in energy related investments or sudden volatilities in gas and oil prices. Production has been declining since its peak of 862,000 bbl/d in 2004 due to the maturing of most of Malaysia's offshore fields. Based on current extraction rates, Malaysia's crude oil and natural gas reserves are expected to last for 20 years and 34 years.¹⁵

2.4 Policy Recommendations

The following section addresses some of the most pressing challenges that could arise given the transitions outlined above. Specifically, this section recommends that the Malaysian government: broaden and diversify the economy, improve public management, and consider employing fiscal decentralization as a means for economic growth.

2.4.1 Broadening and Diversifying the Economy

Given the high levels of dependency of the fiscal revenue on volatile oil and gas receipts, the Malaysian government introduced the GST to help broaden the revenue base. However, the GST will only address part of the public deficit. Reducing the deficit in the long term and ensuring growth prospects requires taking

¹¹ Emerging Markets Direct (2012)

¹² Economic Transformation Programme – A Roadmap for Malaysia (Chapter 6)

¹³ Economic Monitor Report, Page 11

¹⁴ Economic Monitor Report, Page 11

¹⁵ Othman, Jamal & Jafari, Yaghoob (2011)

more concerted efforts for economic diversification. This would ensure that the current income from the sale of one type of asset (the depletion of natural capital) is converted into other forms of capital (assets) that are capable of generating as much income as the natural capital that is being replaced.

Future fiscal policy should take into account the maturation of Malaysia's natural reserves. In response to the reality of dwindling reserves, Malaysia must diversify its underlying portfolio of economic growth towards investments that expand its growth potential, such as: infrastructure, industrial technology, human capital and improving the legal and regulatory framework.¹⁶ Section 6 delves deeper into the specific industries in which the Malaysian economy could successfully diversify.

2.4.2 Improving Public Management

The large size of the public service sector in Malaysia suggests potential room for trimming operating expenditures of the government. In 2012 Malaysia has highest ratio of civil servants to the Malaysian population in the Asia Pacific at 4.68 percent; consequently, wages to civil servants composed a full third of government spending.¹⁷ Think tanks in Malaysia, such as the Center for Policy Initiatives, expand further on the need to curtail the public sector by highlighting that the allocated expenditure of RM264 billion in the recently released 2014 Budget demonstrates the lack of attention paid to public issues of wastage of funds, over-expenditure, and excesses in government spending.¹⁸ The Center further argues that the country could gain significant savings if the government were to push a 15 per cent reduction in size of the existing civil service, which currently costs some RM60 billion in wages annually.¹⁹

In addition to its large civil service, the government also has a controlling stake in major decisions, which includes appointment of management positions, contract awards, strategy, restructuring and financing, acquisition and divestment in several government-linked corporations (GLC).²⁰ With the government's large controlling stake in the GLCs, these organizations have historically been accorded preferential treatment, crowding out private investment. Based on recent research from the Asian Development Bank, such preferential treatment allows the GLCs to profitably increase investment in sectors where they already have a significant presence. State-owned firms are also less credit constrained than private firms, which are further crowded out by higher borrowing by foreign firms. This has led to a reluctance at the end of the private sector firms to invest in sectors where GLCs dominate, indicating a negative relationship between the share of GLCs in a sector and the rate of investment by private firms.²¹

In light of this analysis, future fiscal policy should take into account the benefits of minimizing the government's footprint in the corporate sector in order to open the path for increased private investment, which has been sluggish since the Asian Financial Crisis. Such measures would improve the prospects of successful diversification into new sectors and increased operational efficiency in the long run.

¹⁶ Malaysia Economic Monitor (2013)

¹⁷ "Putrajaya defends bloated civil service, says providing jobs" Syed Jaymal Zahid (2013)

¹⁸ "No need to downsize civil service" Joseph Sipalan (2013)

¹⁹ "No need to downsize civil service" Joseph Sipalan (2013),

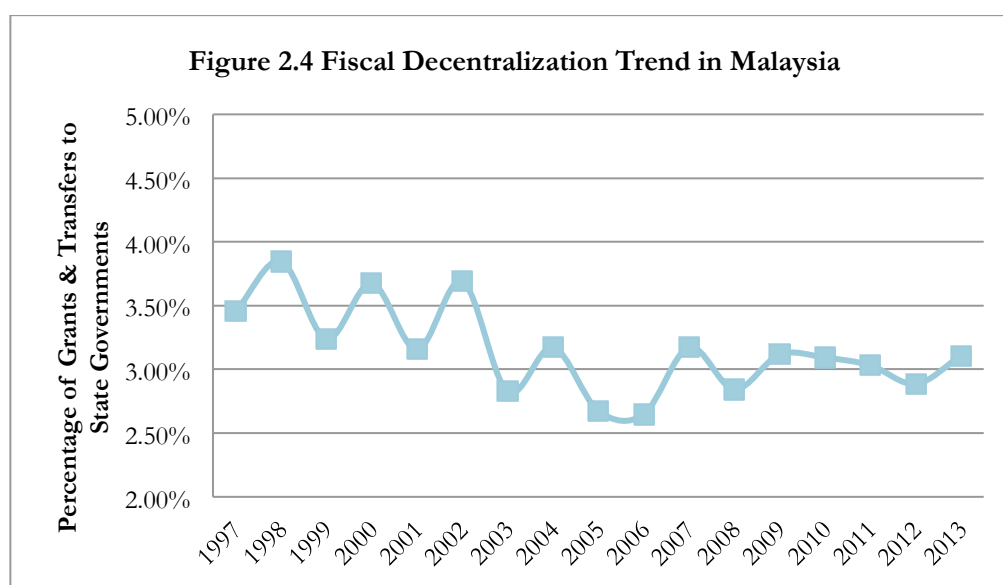
²⁰ Menon, Jayant & Hee Ng, Thiam (2013) Page 8

²¹ Menon, Jayant & Hee Ng, Thiam (2013) Page 9

2.4.3 Enhancing Growth through Fiscal Decentralization

The Malaysian government has plans to increase the number of targeted subsidies in the country, as part of the process to ease the burden of subsidy rationalization on low-income communities. Targeted support measures for vulnerable groups can help the more deeply affected segments of society to cope with subsidy reforms. In fact, greater reliance on targeted social expenditures aimed at vulnerable households has been identified as a possible source of reduction income disparities.²² However, recent experiences in developing countries using targeted programs have demonstrated the effects of poor targeting of low-income communities, which has only exacerbated the fiscal deficit situation further. Part of the declining effectiveness of targeted subsidies may be attributable to the source of such spending often being the central governments, whereas the targeting is carried out using local and provincial government. In such circumstances, there may be a case for fiscal decentralization in order to allow for better targeting of low income communities and bringing public spending closer to the local resources.

The econometric analysis of the effects of fiscal decentralization (see Appendix 8.3) on GDP growth may highlight a case for a greater degree of fiscal decentralization in Malaysia. Historically, Malaysia has witnessed declining central-to-state government transfers over the past several years as depicted in Figure 2.4.



Econometric analysis with fixed effects for country and time on a panel of 38 countries from 1995-2011 reveals that higher levels of local government spending at all levels is associated with higher GDP growth. The positive point estimate of fiscal decentralization taken as a measure of local government spending to central government spending, is significant for this sub sample of countries, highlighting a positive relationship between fiscal decentralization and economic growth. As far as GDP growth is considered a proxy for economic development, fiscal decentralization may augment the growth process, as depicted by the positive and significant relationship evident in the econometric analysis.

Given the positive impact of decentralization on growth and the fact that it allows for spending structures to

²² Balakrishnan, Ravi. Steinberg, Chad & Syed, Murtaza. (2013)

shift closer to the actual beneficiaries, fiscal decentralization may be employed as an effective tool to enhance targeting of low-income communities for subsidy transfers. More specifically, decentralization could act as an important political structure through which the interests of social groups can be reconciled and improve the targeting of transfers and subsidies. Decentralized targeting systems can also help improve operational inefficiencies by lowering the cost of targeting by tapping into local knowledge.

3. Fuel Subsidy Rationalization

Fuel subsidy rationalization plays an important role in improving Malaysia's fiscal balance, and progress on this area of reform provides a visible indicator of the government's overall commitment to keeping debt at sustainable levels. Government fuel subsidies stand out as a ripe area for reform, although political hurdles on this issue remain challenging. Fuel subsidies make up about 2.7 percent of GDP, and energy subsidies constitute about 55 percent of total subsidy expenditure, equivalent to 8.5 percent of total government expenditures in fiscal year 2013, according to IMF staff estimates.²³ The following section elaborates on how fuel subsidies distort markets, generate deadweight losses, and ineffectively assist the vulnerable. The section concludes with specific recommendations to enhance the rationalization process for various stakeholders involved.

3.1 Arguments for Fuel Subsidy Rationalization

Despite general recognition by the Malaysian government that fuel subsidy reform must be accomplished, the path forward comes fraught with potential errors that could jeopardize subsidy rationalization. Regional neighbors such as Indonesia pursued rationalization with significant resistance that led to riots (see Section 3.2.4 for a lengthier discussion). Failure to develop a rationalization plan would be a significant set back to improving efficiency of Malaysia's fuel markets.

The current state of play on subsidies features an interplay between ratings agencies' calls for action on the fiscal balance and the government's tricky political calculations. Partially to avoid potential downgrades from credit rating agencies, Prime Minister Najib Razak reduced subsidies in September 2013. Prime Minister Razak estimated that the decrease in fuel subsidies would "save the government an estimated RM 1.1 billion (\$336 million) this year and another RM 3.3 billion in 2014."²⁴ However, the increases failed to impress the Fitch rating agency, which characterized the announced measures insufficient.²⁵

Energy Sector Context: Malaysia faces declining oil production, while facing increasing consumption. The country's oil production has declined from its peak at 862,000 barrels per day in 2004 to below 600,000 in 2013 as a result of maturing fields while consumption has steadily increased, according to Malaysian and other data collection authorities.^{26,27,28} This will pose a challenge for the government's budget plans. Housed in the

²³ International Monetary Fund (2013).

²⁴ Channel News Asia, 2 September (2013)

²⁵ Fitch (2013)

²⁶ United States Energy Information Administration (2013).

²⁷ Joint Oil Data Initiative Database (2014)

²⁸ Bank Negara Malaysia Statistical Bulletin, November 2013

Prime Minister's office, the Economic Planning Unit (EPU) and the Implementation and Coordination Unit (ICU) manage energy policy in Malaysia.²⁹

The Prime Minister also influences energy policy on oil extraction through the appointment process to the company board of Petroliaam Nasional Berhad (Petronas), which “holds exclusive ownership rights to all oil and gas exploration and production projects in Malaysia, and is responsible for all licensing procedures.”³⁰ Petronas also plays an important role in Malaysia's budget, being the “single largest contributor to Malaysian government revenues, about 45 percent, by way of taxes and dividends.”³¹ However, with declining production, Petronas has also decreased its exports to the Asia Pacific region. Malaysia's petroleum exports export dropped by almost 40 percent between 2000 and 2010.³²

3.2 Policy Recommendations

In light of the benefits of fuel subsidy rationalization, we identify the following steps that would enhance the government's ability to execute on this policy priority:

- Develop a communication strategy that articulates the costs of fuel subsidies in various mediums (e.g. radio, television, town halls) with particular attention to Sarawak and Sabah.
- Incrementally cut subsidies by 10 sen in 6 stages for a total subsidy cut of 60 sen to bring the fuel prices to world prices.
- Link subsidies to My-Kad, Malaysia's national identification card.
- Incorporate the existing eKasih database for targeted cash transfers that simultaneously occur when subsidy cuts occur.
- Avoid announcing a schedule of cuts to prevent artificial shortages from occurring (i.e. hoarding).

Policy solutions to address fuel subsidy rationalization draw from the IMF's recent comprehensive study on energy subsidies, and apply the lessons learned to Malaysia. Specifically, these experiences take into consideration the political challenges in significant energy subsidy reforms. Prime Minister Najib Razak survived internal party elections for the United Malays National Organization (UMNO) and beat back an attempt by former Prime Minister Mahathir Mohamed's son to claim a party vice presidency position on October 20, 2013. However, Prime Minister Najib remains in a weakened position after the elections in May 2013, where Prime Minister Najib's coalition Barisan Nasional (National Front) claimed a slimmer majority in the nation's history. This weakened position constrains meaningful and sustainable reform.

3.2.1 Use Lessons from the Past to Refine the Communications Strategy

Malaysian and foreign attempts to reform energy subsidies demonstrate the need for an extensive communication strategy before announcing fuel subsidy rationalization. Malaysia attempted fuel subsidy rationalization on January 8, 2010, announcing that non-Malaysian citizens could no longer purchase fuel at subsidized prices.³³ The subsidy rationalization would have reduced the budget deficit for fiscal year 2010 to

²⁹ United States Energy Information Administration (2013).

³⁰ EIA 2013

³¹ Ibid.

³² Ibid.

³³ Asia Pulse (2010)

5.6 percent of GDP versus the 7.4 percent of GDP in fiscal year 2009.³⁴ However, by early March 2010, the government had walked back from its attempts to fuel subsidy reform. The Malaysian government halted subsidy rationalization for electricity and food as well. Subsidy rationalization stopped as the government stated that it needed to “engage with the public.”³⁵ Malaysia’s early 2010 flirtation with subsidy reform demonstrated the importance of and need for developing an extensive public relations campaign that educates Malaysians about fuel price subsidy rationalization well before any announcement.

The government did not develop a communication strategy prior to the announcement of reforms. Moreover, the subsidy reform plan also became a part of Prime Minister Najib's larger goal of tackling other budget items, including the introduction of a general services tax and increasing real estate taxes (for a further discussion on Malaysian real estate, including taxation, see Section 5). Further, the government discussed reforming Bumiputra rights. All of these policy announcements occurred months before a parliamentary by-election on April 25, 2010, compounding the political headwinds to these reforms. With little stakeholder engagement prior to the announcements and poor political timing, these policies would inevitably fail.

After the by-election, with the government in a more firm political position, the Najib premiership pushed forth with smaller subsidy cuts on July 25, 2010 (RM 5 cents per liter) and again in December 2010 (RM 5 cents per liter). Despite the absence of a public relations campaign, the subsidy cuts—amounting to about a 2.8 percent increase in prices—proved to be a wiser public relations decision rather than a wholesale overhaul of the fuel subsidy program. Notably, non-Malaysian could still purchase subsidized fuel.

The Malaysian government can draw lessons from countries that embarked on successful fuel subsidy reforms. For example, Iran launched “an extensive public relations campaign to educate the population on the growing costs of low energy prices, and on the benefits expected from the reform.”³⁶ Further, the Iranian government dispelled the notion that energy subsidies primarily served the poor, and instead “emphasized that the reform would benefit poor households, which could receive cash benefits, while in the past these households had not benefited much from the cheap energy that was mostly consumed by the richer groups.”³⁷ Given UMNO’s reliance on voters from rural, poorer households, a communication strategy that emphasizes the inequality resulting from the fuel subsidies could prove politically beneficial for the party. The strategy can also draw from Ghana’s successful fuel energy reform in 2005, where the government made public a poverty and social impact assessment, and “discussed in a dialogue with the various stakeholders, including trade unions. The government also explained how resources freed from subsidizing energy products would partly be reallocated to social priorities.”³⁸ These examples demonstrate that deliberate and extensive communications with the public can mitigate the resistance to fuel subsidy reforms.

3.2.2 The Importance of Timing

Subsidy rationalization is probably more feasible if implemented incrementally. Malaysia’s current accounts surplus, status as a net exporter of crude oil, and the lack of an impending budget crisis means that the government can afford to slowly increase prices. The Malaysian government has adopted a gradual, albeit

³⁴ Reuters (2010), “Update 2.”

³⁵ Reuters (2010), “Malaysia plans.”

³⁶ IMF (2013), Case Studies.

³⁷ Ibid.

³⁸ Ibid.

inconsistent approach thus far, raising prices by 2.7 percent in July 2010, 2.7 percent in December 2010, and 10.5 percent in September 2013. Adopting 10 sen increases in 6 rounds over a period of several months would dampen the shock of increased pump prices, and reduce pressures on inflation.

The government should avoid announcing increases ahead of time and avoid establishing a set schedule. While intuition may suggest that a schedule of increases would mitigate opposition to rationalization, a schedule may generate artificial fuel shortages in advance of the increases. The potential for long lines at the fuel pump coupled with hoarding by individuals would negatively affect the subsidy rationalization program. However, given the sudden announcement that fuel prices will rise, a communication strategy plays an even more central role in preparing the public for increases.

3.2.3 Make use of National Identification Cards to Target Subsidy Benefits

The government should use national identification cards (IC) used by all Malaysian citizens to implement the price increases. The government would use the national identification numbers and link it to tax returns to set the price of fuel appropriate to the income of the household. By establishing a tracking system linked to the ICs, the Malaysian government would allow low-income Malaysians to benefit from lower prices, while preventing the wealthy (who could afford to pay market prices) from benefitting from lower prices. This would increase the efficiency of the subsidy system until the entire subsidy program can be phased out.

Under the current subsidy regime, any person in Malaysia can exploit the fuel subsidies. Foreigners can pay lower fuel prices in Malaysia than in neighboring countries. As a consequence, Singapore imposed its “three-quarter tank” rule, which requires that all cars with Singaporean license plates to have at least three-quarters of its fuel tank filled before departing Singapore for Malaysia at the causeways.³⁹ Subsidized fuel prices also attract smugglers who illicitly export petroleum to other countries. For example, the Anti-Smuggling Unit based in Malaysia’s northern province of Kedah recently prevented a man from smuggling 27,300 liters (equivalent to 7,212 gallons) to Thailand.⁴⁰ The Anti-Smuggling Unit valued the fuel at RM54,600 (approximately \$17,200). While it is difficult to precisely measure the losses from subsidizing smuggled fuel, Malaysian government officials estimated in 2005 that annual losses could be about \$175 million.⁴¹ Linking the subsidy to IC holders would deter smuggling by preventing non-IC holders from purchasing discounted fuel and tracking fuel consumption.

The government attempted to implement a similar policy in May 2010, but it canceled its plans. The 2010 plan would have required that all non-Malaysian citizens pay market prices at the pump (since non-Malaysians would not have an IC) and imposed a dual price structure for Malaysians.⁴²

3.2.4 Link Increased Prices with Targeted Cash Transfers

The government should increase cash transfers for the poor timed with the increase in prices. Providing targeted transfers addresses the psychological loss aversion bias that makes subsidy rationalization difficult. Opponents to subsidy rationalization overstate the importance of low prices that benefit the economically

³⁹ Singapore Customs (2012)

⁴⁰ New Straits Times (2013)

⁴¹ Greenlees (2005).

⁴² Asia Pulse, 2010.

vulnerable. According to Malaysia's Performance Management Delivery Unit, only 29 percent of fuel subsidies actually benefit the poor, with the remainder of the benefits captured by the wealthy. ⁴³

Loss aversion plays a critical role in preventing meaningful fuel subsidy reform. With loss aversion, a person perceives “greater (dis)utility for outcomes that are encoded as losses relative to a reference point than for outcomes of the same magnitude by encoded as gains relative to a different reference point.”⁴⁴ This psychological bias makes it difficult for reformers to tackle fuel subsidy rationalization in large part because the public overweighs the “loss” associated with the subsidy reduction, and under weighs the “gain” associated with an improved fiscal balance. The introduction of a cash transfer would balance out the perceptions of reform.

3.2.5 Match Targeted Cash Payouts with an Existing Poverty Eradication Database

The Malaysian government can use existing resources to target the transfers to the most needy using the existing database, eKasih. The government operates eKasih, a database system that collects information on applicants to Malaysia's poverty eradication programs. Eligibility depends on the poverty line income (PLI), currently set at RM 1000 in rural areas and RM 1500 in urban areas.⁴⁵ This extensive database allows the Malaysian government to provide targeted cash transfers on the day that the government announces subsidy cuts for fuel. In addition to voluntary applicants, non-governmental organizations and civil society organizations also contribute to the eKasih database, making it a powerful tool to identify those in need of a cash transfer as fuel price increases occur.⁴⁶

Box 1: Technology and the IMF's Recommendations on Fuel Subsidies

In *Energy Subsidy Reform: Lessons and Implications*, the IMF provides a roadmap for countries engaged in fuel subsidy rationalization. These lessons provide the groundwork for developing reform strategies in Malaysia.

However, these recommendations specific for Malaysia include the role of technology in assisting in fuel subsidy reform, notably absent in the IMF's discussion. The national identification cards (equipped with microchips) and the e-Kasih database demonstrate the untapped potential that technology can have on implementing targeted cash transfer for the most needy. Correctly identifying the most needy in a community can go a long way in mitigating political opposition and creating a sustainable path toward successful fuel subsidy rationalization.

Cash transfers function as a more effective tool than subsidies in large part due to the distortion in prices under the subsidy regime. By the lowering the price for fuel that consumers pay, the substitution effects lead to consumers buying more fuel rather than other goods (in the simplest models), and the income effects lead to higher consumption of both goods overall. However, a targeted cash transfer to the poor would only have an income effect, allowing an optimal bundle that fits the needs of the household (absent the substitution effect), and increasing the welfare of the household. By eliminating subsidies and implementing a targeted cash transfer, the government will allocate limited resources to its intended audience of low-income Malaysians.

⁴³ Jala (2010)

⁴⁴ Weber (2012).

⁴⁵ Federal Development Office of Pahang State (2011).

⁴⁶ Government Transformation Program (2011).

The failure to address loss aversion may lead to undesirable consequences with Indonesia providing the strongest example. As a part of an IMF-supported adjustment program, the Suharto regime increased prices of “kerosene by 25 percent, of diesel fuel by 60 percent, and of gasoline by 71 percent.”⁴⁷ The increased prices led to widespread demonstrations against the Suharto government, which contributed to its fall. In contrast, the Indonesian government again attempted reform in the mid-2000s, and mitigated the loss aversion effect by instituting unconditional cash transfers through its Bantuan Langsung Tunai program.⁴⁸ While protests occurred, IMF staff note that these protests paled in comparison to the protests during the major increase in prices during the Asian Financial Crisis. The absence of a mitigation mechanism serves as a warning that fuel subsidy reforms without appropriate measures to address inequities will raise serious political obstacles.

3.3 A Role for Subsidies

Despite the overwhelming need to reform fuel subsidies in Malaysia, opponents to reform may give policymakers pause in implementing fuel subsidy rationalization. These arguments suggest that subsidies assist in development. For example, Joerg Spitzzy with the Organization of the Petroleum Exporting Countries (OPEC) argues that for resource-abundant economies, providing energy subsidies to consumers could be a simple way of improving conditions for their populations as a transitional process.”⁴⁹ While Malaysia does not belong to OPEC, its reliance on its petroleum revenues raise the specter that Spitzzy’s argument may hold. However, Spitzzy’s argument falls short on several measures. Firstly, the proposed recommendations do not eliminate subsidies without an appropriate substitute for development and addressing poverty. Targeted cash transfers to Malaysia’s vulnerable populations would replace the gradual phasing of subsidies, addressing any issues of equity in development. Secondly, Spitzzy fails to account for the rent captured by the upper echelons of society, which benefit handsomely from below market prices. Finally, Malaysia’s fiscal balance remains a crucial factor in the country’s performance. Energy subsidies contribute to Malaysia’s persistent deficit. Opponents who claim that subsidy rationalization could harm economic growth should be subject to closer scrutiny before delaying urgently needed fuel subsidy reforms.

4. Malaysian Financial Markets & External Finance

Malaysia’s deep and liquid government bond market stands out as an area of strength providing the government with a comparatively reliable source of financing at attractive rates, and the government’s ability to sell long-maturity debt counts as a positive factor lowering rollover risk. Beyond government debt, the corporate credit market is one of the largest among comparable countries in the region relative to GDP, and its markets have continued to grow in sophistication and depth in recent years. The country is also notable for achieving both a high degree of financial openness and remarkable stability in its bond market, which may provide some insulation of the domestic economy from shifts in global risk sentiment. Malaysian financial markets are also characterized by the presence of a handful of government-linked entities that have a significant role in price and liquidity formation. We argue that Malaysia’s success engendering stable and liquid capital markets has enabled space for a gradual loosening and decentralization of government influence

⁴⁷ IMF, Case Studies, 22.

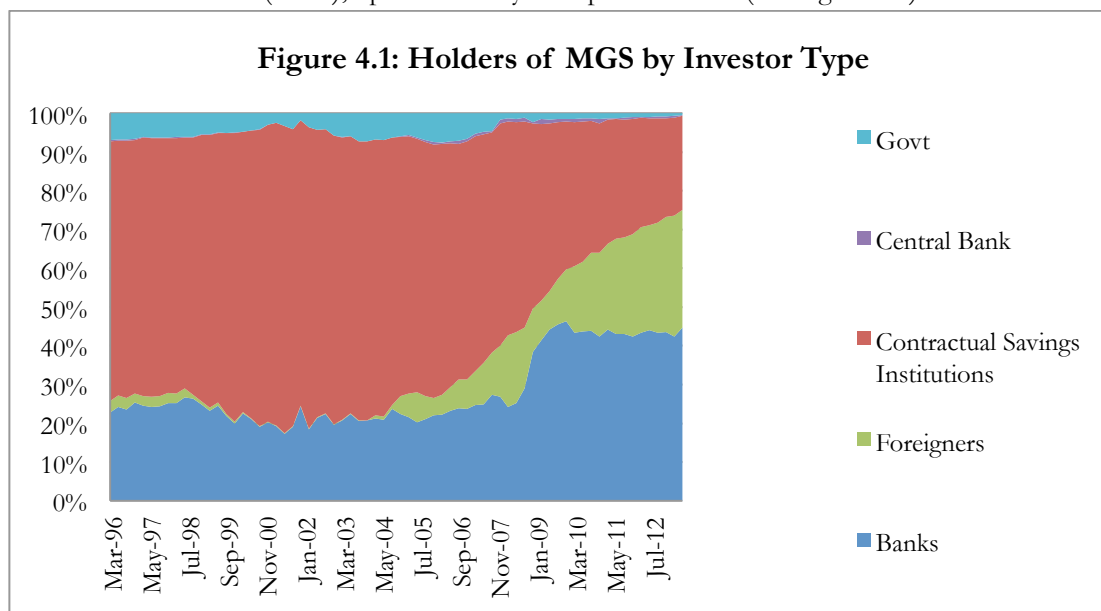
⁴⁸ IMF, Case Studies, 23.

⁴⁹ Joerg Spitzzy, “Energy Subsidies – an OPEC Perspective,” *Oxford Energy Forum*, The Oxford Institute for Energy Studies, Issue 88, May 2012.

in Malaysian markets, which could foster improved performance of Malaysian capital markets in supporting economic activity.

4.1 Evolution of Malaysian Financial Markets

Following the Asian Financial Crisis, Malaysian authorities largely closed its capital markets and pegged the currency to the US dollar. After gradually liberalizing its capital account in the following years, Malaysia experienced large and volatile flows from foreigners, a large portion of which have taken the form of portfolio investment in debt. Foreign investors now make up a major portion of the holders of Malaysian government debt securities (MGS), up from nearly zero prior to 2005 (see Figure 4.1).



Source: Asian Bonds Online

Capital markets offer a major source of government and corporate financing in Malaysia, providing an important substitute to credit intermediated through the banking system.^{50,51} Malaysia's bond market development has been strong in several respects in addition to its sheer size and liquidity: concentration of issuers and size of each issuance relative to firms' balance sheets have both decreased.⁵² More companies are finding that bond markets provide a convenient and flexible form of financing over time, and investors are able to choose from a wider menu of investments and can directly price risk across the corporate sector.

4.2 Malaysian Interest Rates' Low Sensitivity to Global Risk Cycles

For most emerging market economies, risk appetite reversals tend to cause interest rate spikes, and those spikes can spill over into the banking system and real economy. Global cycles in risk aversion determine periods of capital outflows from emerging markets, and the strength of these forces is typically even greater than local factors like GDP growth and fiscal stress.⁵³ Despite the large and growing presence of foreign

⁵⁰ Felman (2011)

⁵¹ Ibrahim (2005)

⁵² Felman (2011)

⁵³ IMF WEO (2013)

investors in the Malaysia's bond market, Malaysia has stood out among financially open peer countries for its ability to withstand such shocks with relatively low bond market volatility.⁵⁴

The spillover effects of fluctuating interest rates and monetary policy in advanced economies on emerging market bond yields and volatility can complicate local monetary policy transmission channels used by central banks in developing countries.⁵⁵ In this respect, Malaysia performs relatively well: Malaysia's central bank policy rate appears to have had one of the lowest sensitivities to changes in the U.S. Federal Funds rate from 2000 to 2013, second only to China, according to a Bank for International Settlements study.⁵⁶ Further, a 2013 IMF analysis found that Malaysian markets had the most muted reaction to series of domestic and external stress factors.

A number of characteristics of Malaysia's bond market have likely contributed to its relative stability. First, the presence of deep-pocketed domestic financial institutions with long-term investment horizons, including the Employees Provident Fund (EPF), likely helps soften the impact of foreign sentiment fluctuations.⁵⁷⁵⁸ In addition to the EPF, Bank Negara Malaysia's (BNM) flexible management of the exchange rate has probably contributed to stability in the market. While BNM has generally stepped in when capital flow shifts were large (see Figure 4.2), they appear content to allow minor fluctuations to occur without intervention, consistent with the managed float exchange rate regime. Exchange rate adjustments essentially shift some of the burden off of the interest rate to accommodate inflows and outflows.

Second, substantial and increasing bond market trading volume is a likely factor in limiting dislocations. To the extent the sustained increase in trading volumes reflects the presence of many informed market participants who actively and frequently react to market conditions, higher volumes likely reflect investors' ability to transfer risk in the Malaysian market at fair prices. Liquidity growth has been supported by numerous and long-running efforts by the authorities to enhance the functioning of the secondary market.⁵⁹⁶⁰ While bond market trading has increased proportionally to debt outstanding, it is unclear whether volume growth has been sufficient to accommodate the more rapid run-up in foreign owned debt.⁶¹ Continued efforts to improve market depth would limit disruptive effects of disorderly shifts in foreign investor sentiment.

⁵⁴ IMF Financial Stability Report (2013)

⁵⁵ Felman (2011)

⁵⁶ He (2013)

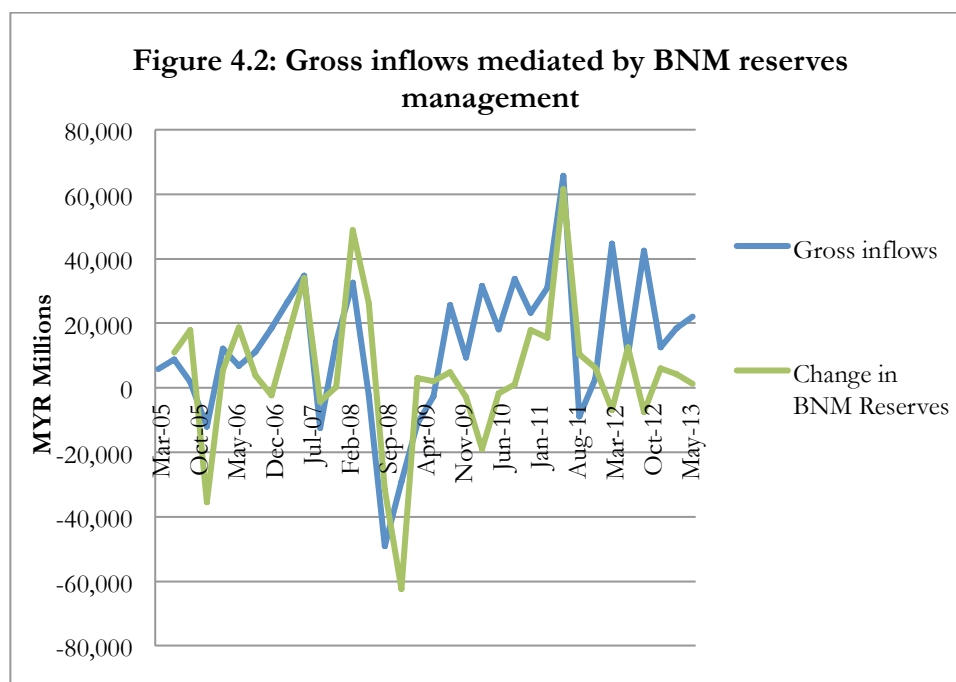
⁵⁷ IMF WEO (2013)

⁵⁸ IMF Financial Stability Report (2013)

⁵⁹ Bank Negara Malaysia (2011)

⁶⁰ Ibrahim (2005)

⁶¹ Asian Bonds Online (2013)



Source: Bank Negara Malaysia Statistics (BNM)

Third, underlying fundamentals of the Malaysian economy, including the strength of the banking system and the current account surplus, have likely been part of the story. Domestic banks stepped in en masse during the GFC to purchase Malaysian Government Securities (MGS) while foreigners fled. The presence of healthy banks willing and able to step into markets at attractive rates should continue to help minimize the magnitude of rate increases through future periods of volatility.

4.2.1 Inside the Malaysian Yield Curve – Measurement and Liquidity Issues

While most research into the sensitivity of Malaysia's fixed-income markets focuses on benchmark rates, investors face the practical difficulty of investing in individual bonds. This task introduces questions of how well actual bond prices match the yields quoted for on-the-run securities. Additionally, the question of liquidity risk and liquidity premium adds to the need for a deeper look inside the set of bonds that make up this market, especially considering the potential issue of investor base concentration that could reduce trading activity.

To conduct this analysis we used MGS market data and the Nelson-Siegel⁶² model to fit model yield curves from early 2009 to late 2013 and describe how actual prices behaved relative to the model's predicted values. This includes analysis of the model's goodness of fit, the evolution of model errors over time, and systematic deviations from the model that appear to be related to the liquidity premium.

Malaysia's government bond market contained 114 securities⁶³ with original maturities of greater than 6 months between 1 March 2009 and 15-December 2013. Price, maturity, and coupon data provide the

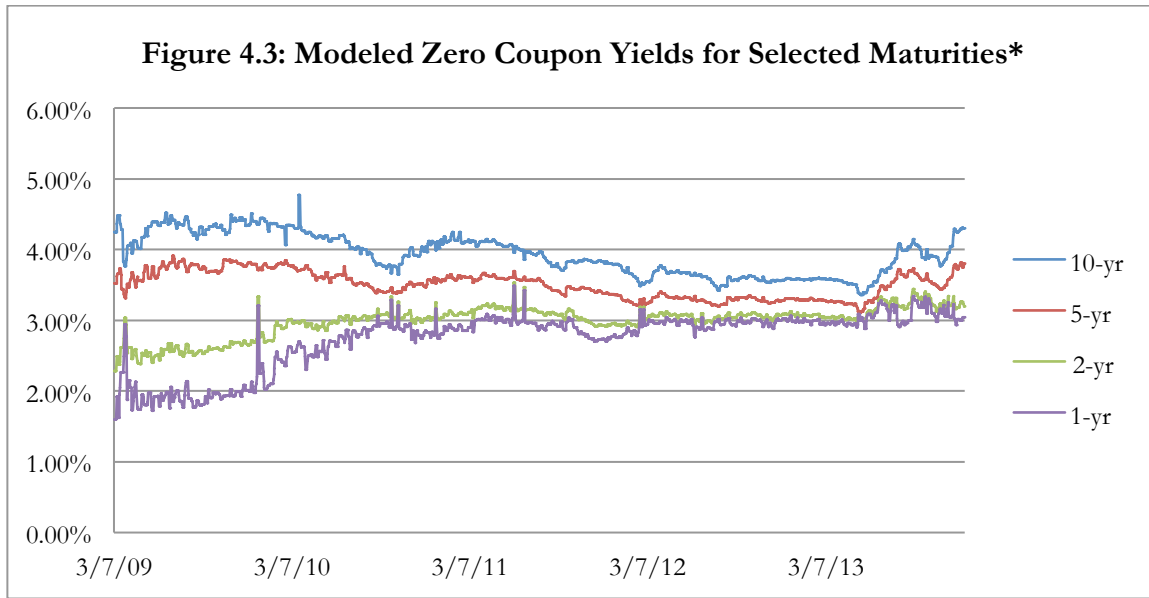
⁶² Nelson and Siegel (1987)

⁶³ The analysis only includes bonds for which price data was readily available through Bloomberg.

ingredients needed to fit a model yield curve using the Nelson-Siegel model, T represents the time until maturity, and the θ and λ parameters describe the shape of the yield curve across the T axis:

$$y_{NS}(0, T) = \theta_0 + (\theta_1 + \theta_2) \cdot \frac{1 - \exp(-T/\lambda_1)}{(T/\lambda_1)} - \theta_2 \cdot \exp\left(\frac{-T}{\lambda_1}\right)$$

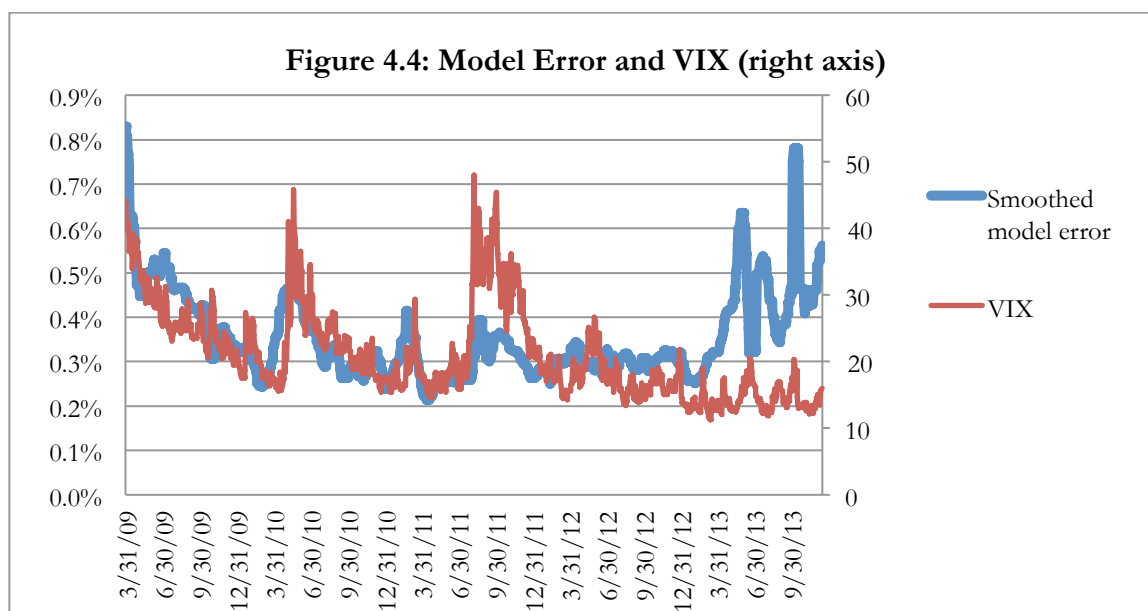
Fitted parameters provide a distinct yield for cash flows of any maturity for every day of data, along with a measure of the pricing error. Parameter values are fixed based on an optimization algorithm minimizing the average squared pricing error for bonds that traded on a given day. The resulting parameters provide a modeled yield for any desired maturity (see Figure 4.3). Roughness in the fitted yields reflects occasional liquidity events that lead to price deviations from fair value, the different sets of bonds that happened to trade on a given day, and time lags between the last trades in various bonds on the same day.



* Time series are smoothed by taking the median model values over rolling 5-day periods.

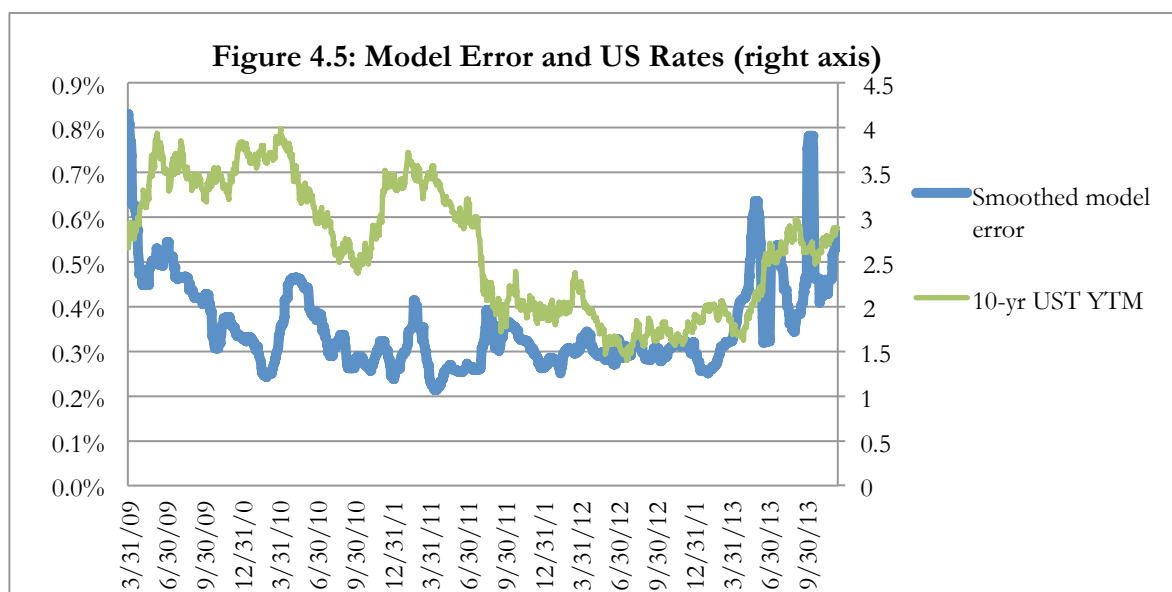
4.2.1.1 Identifying “Hidden” Sensitivity to Advanced Country Stress Factors

Despite other research finding that benchmark Malaysian yields appear to have surprisingly low sensitivity to advanced country financial factors, the quality of pricing in the overall market tends to show strong sensitivity to these variables. Figure 4.4 illustrates the relationship between model errors and a measure of expected near-term volatility in the US stock market, the VIX index.



* Model error is the average squared deviation between modeled and actual prices smoothed by the median of the past 20 daily observations to remove less economically meaningful fluctuations in daily squared errors.

While the relationship between VIX and model error appears to miss the Spring 2013 increase in model error, another prominent factor, US interest rates, seems to be a likely candidate to explain the move. Many researchers have noted the sensitivity of emerging market financial volatility and increases in US rates. Plotting the US Treasury ten-year yield against our smoothed model error (Figure 4.5) appears to fill in the gap left by VIX in explaining the extent of model error.



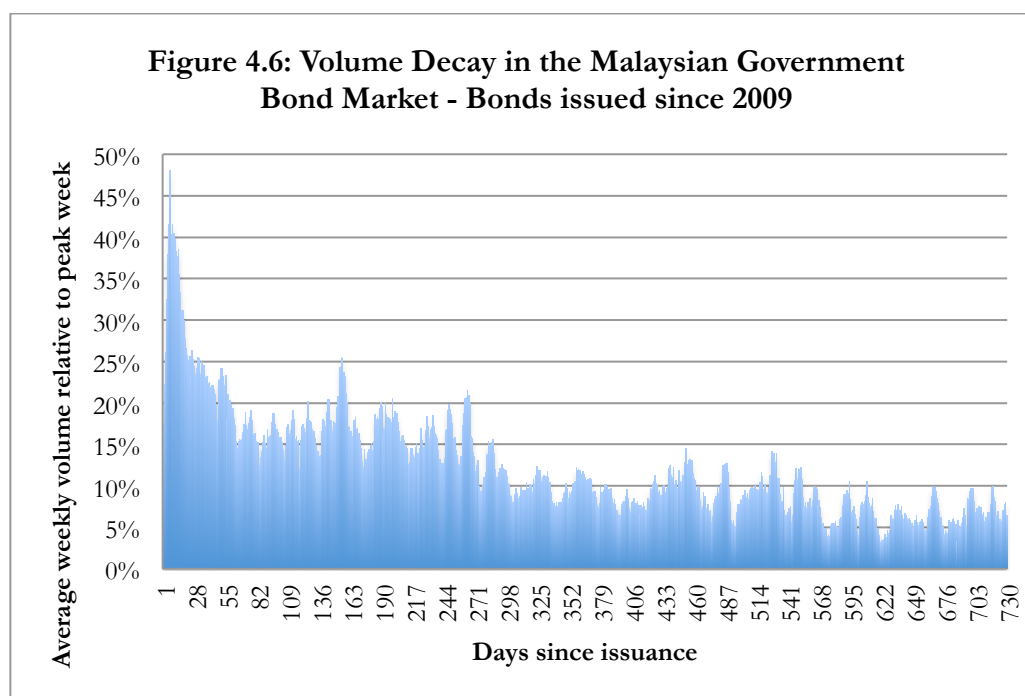
The strong relationship between model error and these selected US financial market indicators suggests investors in the Malaysian bond market should be wary of overestimating the potential diversification benefit offered by the Malaysian bond market. If prices in the Malaysian market become erratic precisely when

global stress factors increase, then investors may find themselves unable to transact at what they believe are fair prices based on their observations of benchmark rates.

4.2.1.2 Describing MGS Liquidity Patterns and its Premium

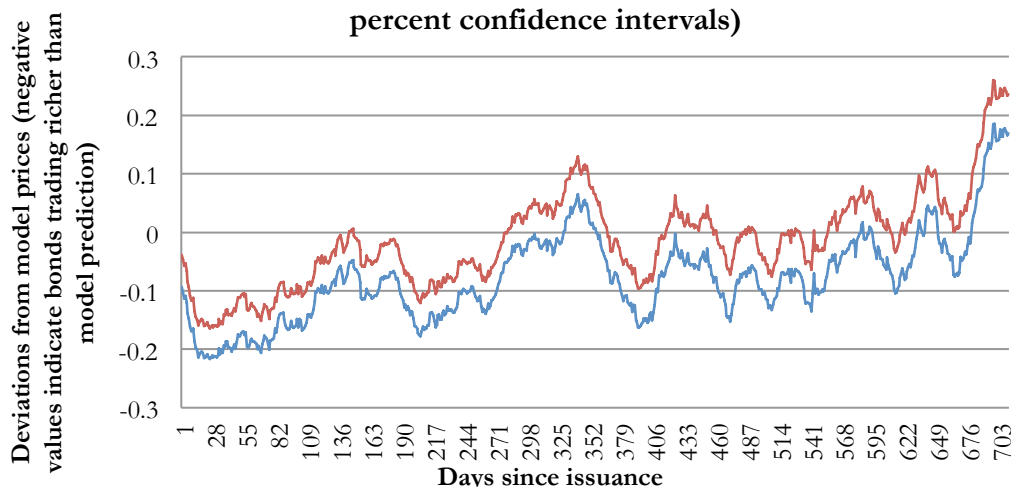
Liquidity in off-the-run Malaysian government bonds can be relative spotty, with many bonds trading infrequently, and investors in the market need to be aware of potential risks associated with getting into and out of positions. Volume data were not available for almost half of the securities used for the yield curve-fitting model, but volume information was available for 51 bonds issued since March 2009. This smaller dataset enables analysis of the changing liquidity profile of bonds as they go off the run.

The amount outstanding of individual securities varies, making liquidity comparisons across bonds more difficult than simply comparing nominal value traded. The following chart (Figure 4.6) depicts the liquidity pattern for bonds by comparing rolling one-week total volumes against the highest observed seven-day trading period for that bond. While this is just one of many possible ways of looking at liquidity, the pattern is relatively clear.



The price of liquidity can be measured by observing the average direction of model price errors as bonds age in the market. Bonds in the dataset fewer than 90 days from their issue date had an average of approximately 14 basis points of richness relative to model prices while bonds approaching 2 years since the issue date develop cheapness relative to model prices on average. The premium and discount on new and old bonds, respectively, was statistically significantly different than zero. Figure 4.7 plots rolling averages of the premium and discount to modeled prices over the lifespans of the bonds (lower values in the chart denote richness of actual bond prices).

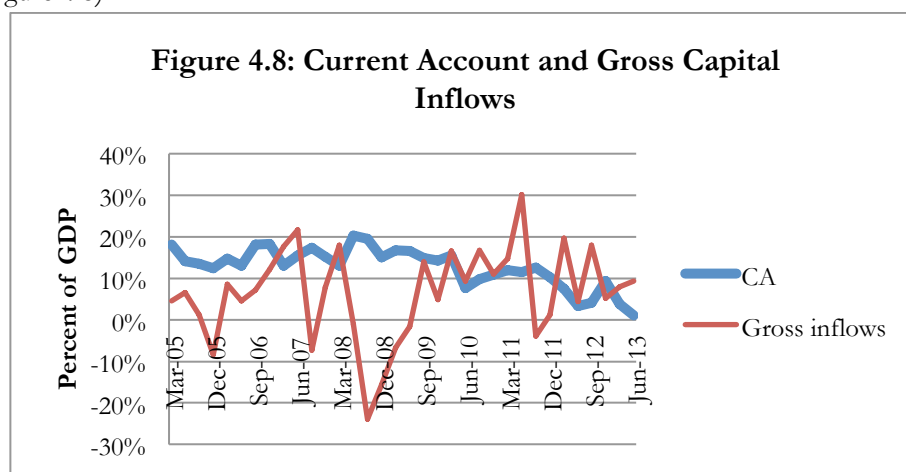
Figure 4.7: Evolution of the "Freshness" Premium* in Malaysian Government Bonds Issued since 2009 (Upper and Lower 95 percent confidence intervals)



* Premium equals the mean of model prices minus observed prices over the trailing 20-day period, per 100-ringgit face value. The chart plots rolling trailing 20-day averages adjusted up and downward by the 95 percent confidence interval for the mean.

4.3 Financial Account Flexibility

There are two ways a country can deal with a reversal in gross capital inflows: the current account balance can shift, reflecting disruptions to trade, or elements of the financial account can adjust. Recent empirical research suggests the latter adjustment mechanism, through the financial account, could be less harmful for the economy.⁶⁴ The actions of domestic financial institutions can play a major role in determining the extent of financial resiliency when external conditions become volatile. Malaysia appears to perform very well in this respect (see Figure 4.8).⁶⁵



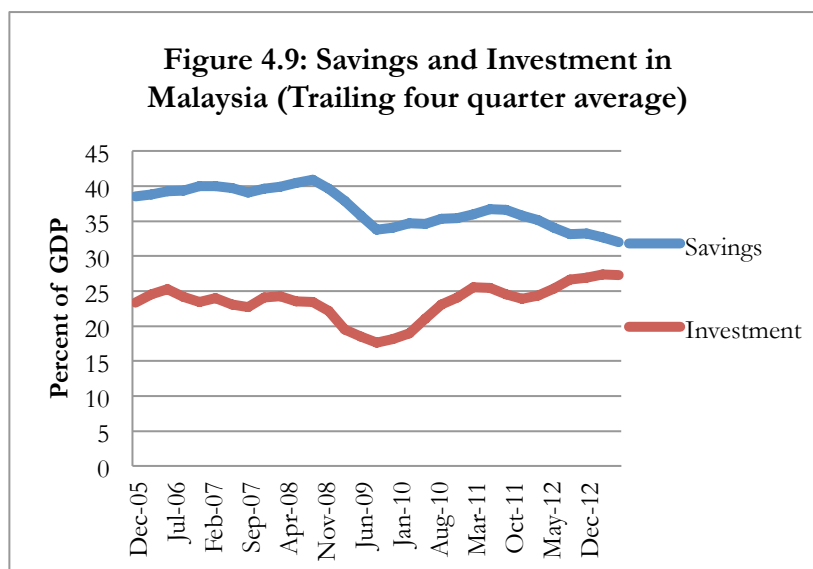
Source: BNM

⁶⁴ IMF World Economic Outlook (2013)

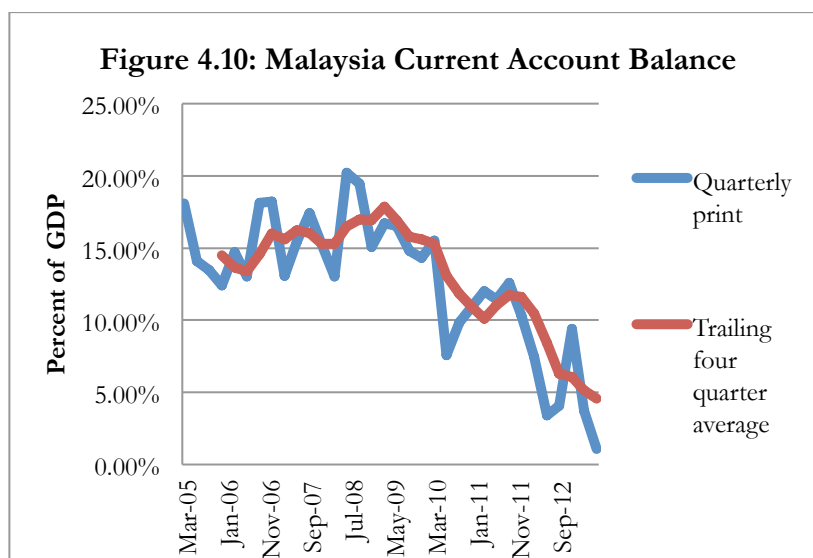
⁶⁵ Ibid

4.4 Malaysian Savings and the Current Account

The investment rate in Malaysia fell sharply following the Asian Financial Crisis and remained relatively low for over a decade, leading to a large current account surplus as savings rates remained high. Since mid-2011, a steady rise in investment coupled with a declining savings rate has nearly closed the current account gap (see Figures 4.9 and 4.10).



Source: BNM



Source: BNM

While the rebalancing appears to be a promising development from the perspective of a potentially more appropriate investment rate, the current account surplus appears to have provided a cushion during times of external stress. Under the assumption that domestic savings tends to be a somewhat tight bound on investment in emerging market countries, then the drop in savings could end up stifling investment. Many

other emerging market countries in Asia have displayed a strong link between investment and savings rates, although the relationship has loosened since the Asian Financial Crisis.⁶⁶ While Malaysian investment has been able to evolve somewhat independently from domestic savings, the country's rebalancing could ultimately relink the evolution of investment and savings rates, with potential implications for interest rates and access to financing for Malaysian corporations.

4.5 Policy Recommendations

The appropriate path of Malaysian capital market policy should take into account its record of low volatility, which suggests room for liberalization, and the reduction in the current account surplus buffer, which suggests reason for caution. Additionally, the potential for masked susceptibility to global risk factors identified within the MGS yield curve imply potential benefits from stimulating more active trading among a broader set of market participants across the entire capital market. The following recommendations err on the side liberalization with a view towards fostering a higher growth in the long-term. The primary aim of the selected reforms is to improve Malaysia's performance in financing higher risk and higher return investments. They center on downsizing the government's role in domestic financial markets and fostering the development of a private investment management industry ready and willing to finance projects that will activate dormant potential in Malaysia's private sector.

4.5.1 Decentralizing Financial Market Participation

A reduced role of the state in Malaysian financial markets is both an explicit goal of Malaysian authorities and can support the somewhat different goal of the government's Economic Transformation Program to reduce the role of GLCs in the corporate sector more broadly. The competitiveness of GLCs will impact overall economic performance and the returns of government-linked investment companies (GLICs), such as the EPF. As discussed in Section 2, the capital markets participation of potentially inefficient GLCs could limit the ability of purely private companies to access credit at reasonable rates.⁶⁷

While bond market access is improving, it remains inaccessible for most non-investment grade corporations, potentially contributing to their relatively lower investment rate.⁶⁸ Without decentralization of the control of Malaysian savings, credit may continue to go disproportionately towards large, safe corporations leaving the potentially highly vibrant--but riskier--investments unfunded.

4.5.2 Reform Pension Fund Schemes

To support the decentralization of financial market participants, the government can make changes to increase the flow of savings towards private fund managers (as opposed to the EPF). First, the rate of mandatory saving is potentially inefficiently high. By pegging mandatory investment at approximately 24 percent for the combined contributions of employees and employers, we are unable to see how private decision-making could result in an equilibrium involving lower savings rates or higher investment in SMEs. Currently, savings that could possibly be flowing to higher risk-higher return investments are flowing almost

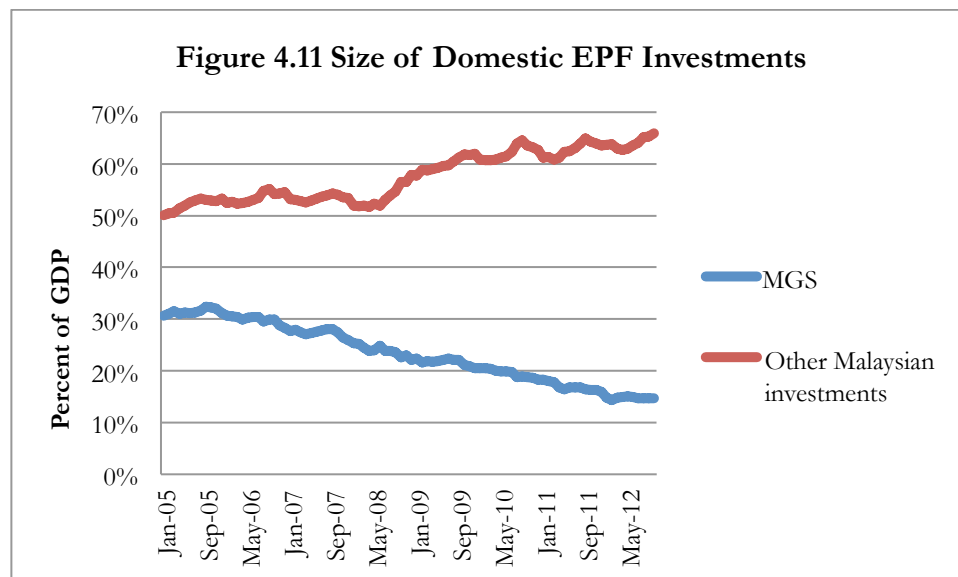
⁶⁶ Own calculations, data source: IMF World Economic Outlook

⁶⁷ Menon (2013)

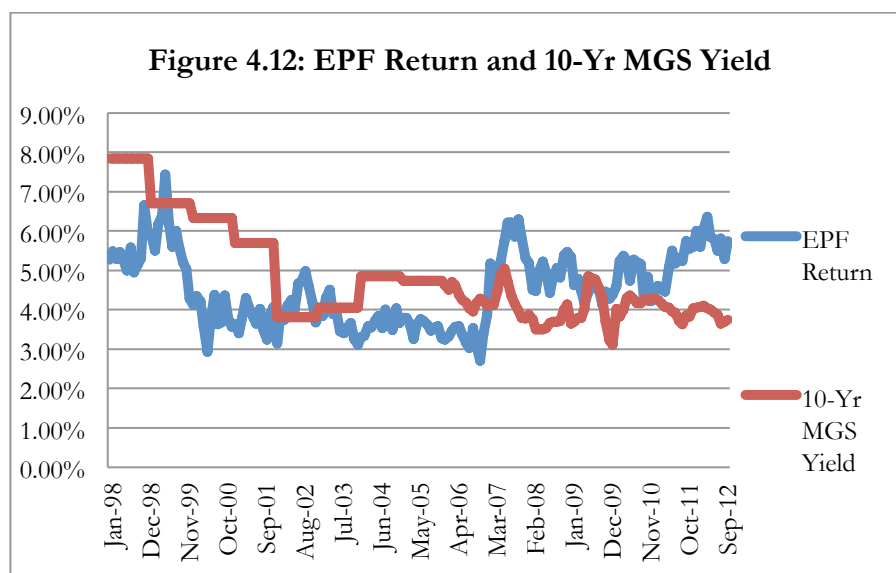
⁶⁸ Asian Development Bank (2013)

exclusively to the EPF, which may be less well equipped to closely match individual preferences due to its mandate to manage funds to satisfy an average of preferences across its accountholder base.

The EPF has made some progress in moving up the risk-return spectrum, but much work remains in the broader pension fund system. As foreign investors poured money into the country, they primarily invested in relatively liquid markets, and the EPF responded by selling to them at a relatively steady rate since 2005 except for a brief pausing during the GFC. As Figures 4.11 and 4.12 show, this development coincided with an improvement in EPF return on assets to above the 10-year MGS yield, whereas it had been below the 10-yr yield until 2005, despite the downward trend in yields over the period. The move out of MGS and into corporate lending inside and out of Malaysia should continue to enhance and diversify the EPF's returns. Still, it remains unclear whether nominal returns below six percent are consistent with overall risk preferences, and shifting funds towards private management would enable more customization of portfolios to account holder preferences. Additionally, broadening of the asset management industry would probably support trading volumes, liquidity, and financial analysis that would lead to better capital market functioning and support for the real economy.



Source: BNM



5. Housing Boom: Implications on Financial Stability & Overall Economy

While the potential inefficiency of Malaysia's capital markets caused by the excessively centralized market may present a headwind to growth, the rapid increase in housing loans driven by the recent housing boom is likely to impact Malaysian economic performance mainly through its potential consequences for financial stability. House prices in Malaysia have risen sharply in recent years, and housing loans and total household debt have increased rapidly over the same period. This combination of a housing boom and high household debt could cause financial instability and an ensuing economic downturn in case of an unanticipated decline in housing prices and household incomes. To minimize the danger of a severe downturn triggered by a housing bust, the Malaysian government should tighten the current maximum loan-to-value ratio (LTV) from 70% on third mortgages to 90% on first and 80% on second mortgages. In addition, the government should consider introduction of a "speculative zone designation system," which enables tighter LTV to be applied only to overheated target areas.

5.1 Housing Prices & Economic Instability

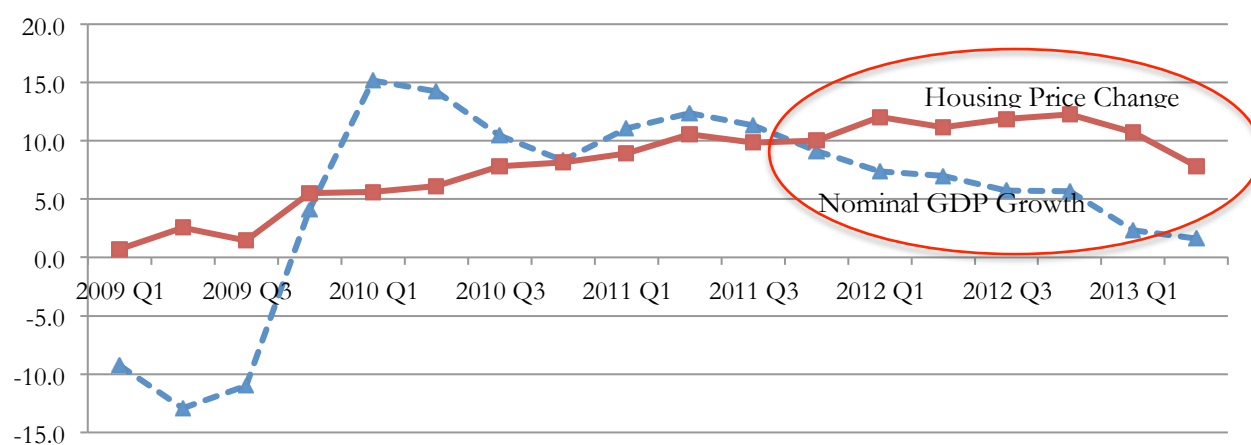
Housing price drops are often associated with financial and macroeconomic instability. The real estate market impacts the economy through the following channels: (1) the decline in home prices tends to reduce consumption through its impact on household wealth; (2) large scale housing loan insolvency causes banking crisis and credit contraction, which further reduces consumption; (3) finally, a decrease in housing demand is followed by decrease in residential investment and construction activities, which again hurts the overall economy. When a negative income shock accompanies the housing market slowdown, the impact is especially strong.

5.1.1 Possible Housing Price Trends in Malaysia

A comparison between the steep rise in Malaysian housing prices with Malaysian income growth or with house prices in other countries suggests a possible reversal in the real estate market at some point.

Since the fourth quarter of 2011, housing prices in Malaysia have risen more rapidly than income growth (Figure 5.1). While the average annual housing price change between the fourth quarter of 2011 and the second quarter of 2013 is 10.8%, the average annual nominal GDP growth rate was 5.5%. The gap between the two continued to grow until the first quarter of 2013. A recent finding⁶⁹ that, starting in 2010, previous housing prices have begun to determine current housing prices is also interpreted as an early sign of a housing bubble.

Figure 5.1. Housing Price Change vs. Nominal GDP Growth in Malaysia (2009 Q1 - 2013 Q2)

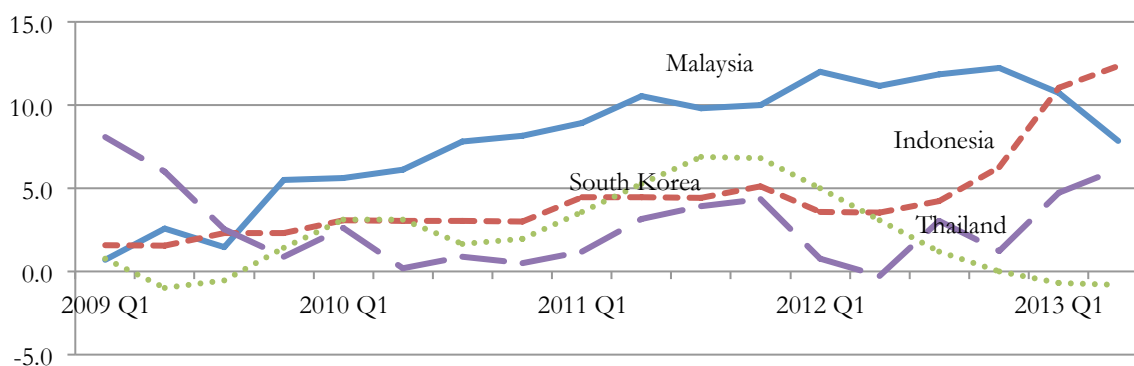


Sources: Bank Negara Malaysia (BNM), Bank for International Settlements (BIS) Property Statistics

Compared to other housing markets in the region, the recent housing boom in Malaysia is more noticeable. While housing price in Malaysia rose 9.5% per annum between 2010 Q1 and 2013 Q2, the rates in Indonesia, Korea, and Thailand remained at 5.1%, 2.9%, and 2.3% (Figure 5.2), respectively. The rates in the OECD countries that experienced housing booms before the Great Recession were between 6% and 13% during the overheated period.⁷⁰

⁶⁹ Bank Negara Malaysia, March 2013, *Financial Stability and Payment Systems Report 2012*, Chapter 1, Box Article, "Developments in the Housing Market and Implications on Financial Stability"

⁷⁰ Average rate of rise between 2006-2007: Ireland 13.3%, U.S 11.3%, New Zealand 10.7%, France 9.4%, U.K. 8.6%, Greece 8.5%, South Korea 7.6%, Finland 6%. (The rates of Ireland and the U.S. are calculated from the data between 2005-2006, because they experienced housing bust one year earlier than the other countries); Source: BIS Property Price Statistics.

Figure 5.2. Housing Price Changes in the Region

Source: BIS Property Price Statistics

5.1.2 Increased Vulnerability towards Housing Prices ⁷¹

Higher household debt usually exacerbates economic downturns when housing markets decline. One major reason is that as debt grows, the proportion of lower income borrowers increases, and their marginal propensity to consume is higher than other groups. This implies that a negative asset price shock to the economy consisting of heavily indebted households leads to larger decrease in consumption compared to other economies with lower household debts. Another important mechanism is that high leverage enhances repayment risk and results in financial instability in case of reductions in income or housing prices. The effect of fire sales and the inefficiencies of foreclosures are also pointed out as other reasons for the relationship between the level of household debt and the extent of recession. A recent empirical study shows that this relationship was verified during the Great Recession that began in 2008.⁷²

5.1.3 Potential Impact of a Housing Market Decline

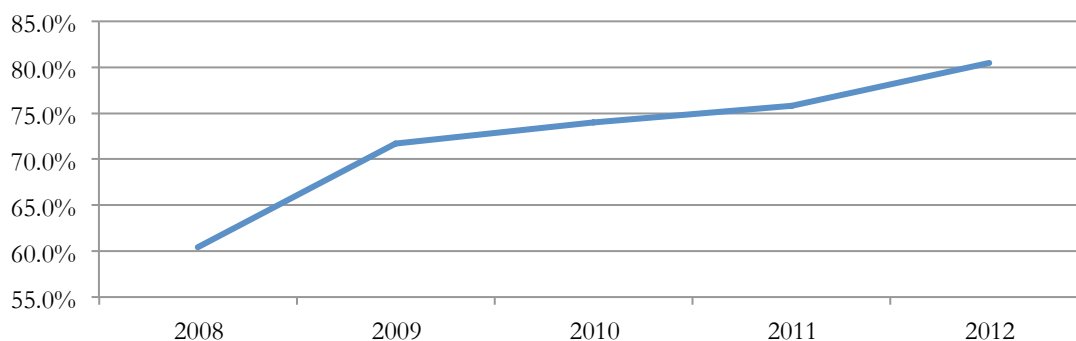
While the prospects for a housing bust in Malaysia remain uncertain, the high recent growth rate and the level of household debt in Malaysia suggest reason for caution when considering the impact of stress on household balance sheets if home prices fall or income growth slows

The household debt to GDP ratio in Malaysia has increased sharply from 60.4% in 2008 to 80.5% in 2012 (Figure 5.3). Despite the introduction of macro-prudential measures such as the introduction of a maximum LTV of 70% for third homes in 2010, the rate of increase has not slowed.

⁷¹ International Monetary Fund (2012) Chapter 3

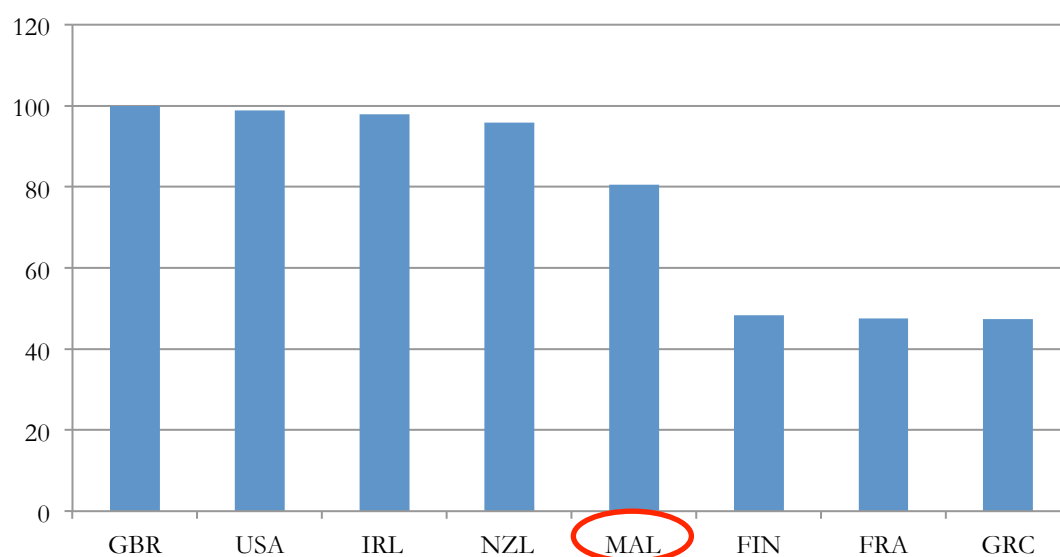
⁷² Ibid.

Figure 5.3. Household Debt to GDP Ratio



Source: BNM, Financial Stability and Payment Systems Report 2012

Figure 5.4. Household Debt to GDP Ratio: Malaysia vs. Selected OECD Countries that experienced housing boom followed by housing bust and large consumption loss

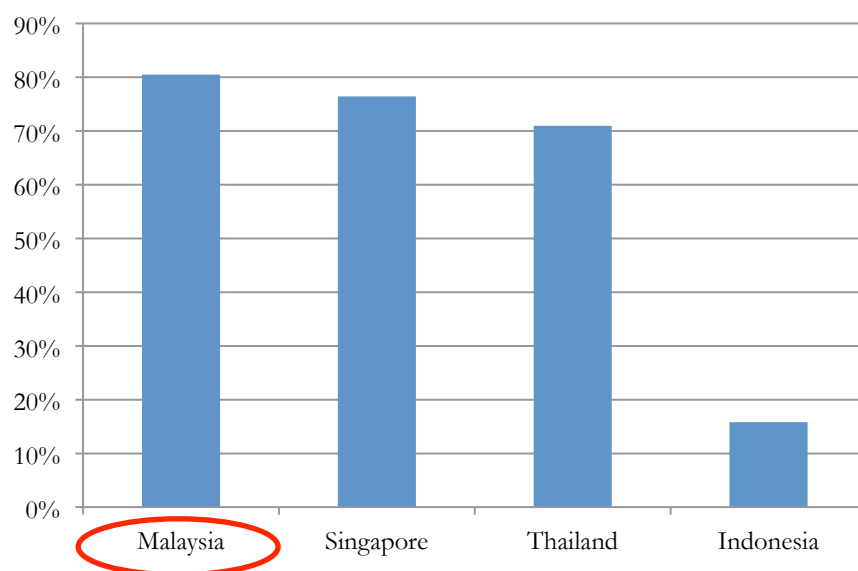


Source: BNM, Financial Stability & Payment Systems Report 2012; OECD, 2009, Economic Surveys: Denmark

Note: Compared countries are those who experienced large consumption loss in 2010 (-5% or more) and rapid rise in housing price between 2006 and 2007 (+6% or more, the rates of the U.S. and Ireland are calculated from the data from 2005 and 2006). Household debt to GDP ratio of Malaysia is the value at the end of 2012. The ratios of other countries are the values at the end of 2007 (right before the Great Recession). Consumption loss data is from IMF, April 2012, *World Economic Outlook*, Chapter 3, "Dealing with Household Debt", p.92.; Housing price data is from BIS Property Statistics.

Compared to the countries that experienced serious consumption loss during the Great Recession, household debt to GDP ratio of Malaysia, 80.5%, is high (Figure 5.4). Neighboring countries in the region also show lower household debt to ratios. Singapore stands at 76%, Thailand 71%, and Indonesia 16% (Figure 5.5).

Figure 5.5. Household Debt to GDP in the Region

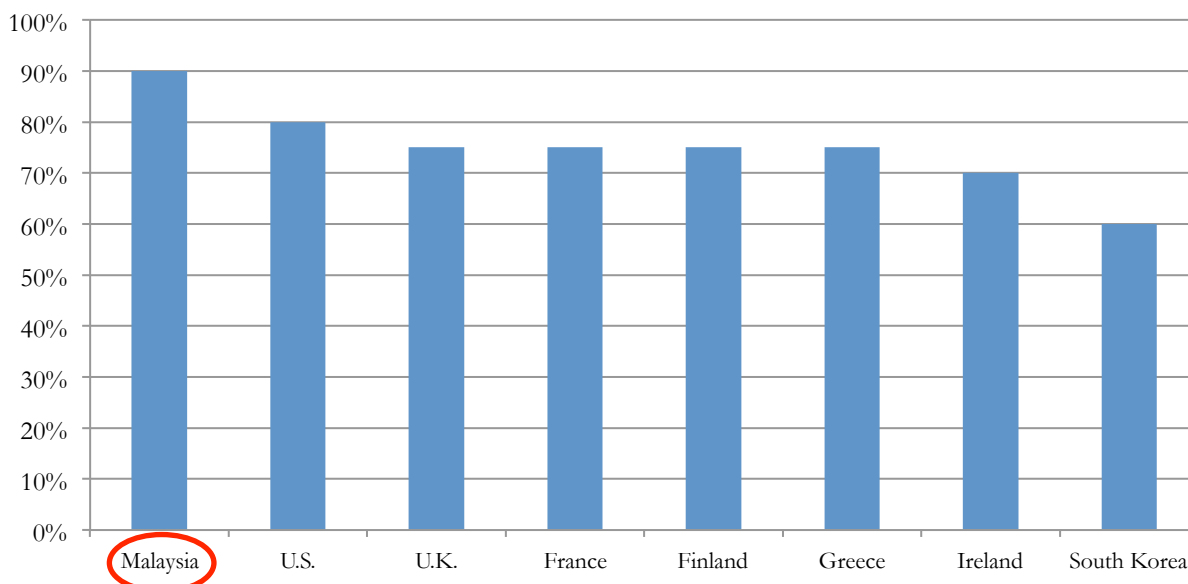


Source: BNM, Financial Stability and Payment System Report 2012; MSA, Financial Stability Review 2012; Standard Chartered, "Asia leverage uncovered", July 2013.

Note: The value in Malaysia is at the end of the fourth quarter of 2012; Singapore (2012 Q3); Thailand (2012 Q4); Indonesia (2012 Q4)

In addition, the typical LTV in Malaysia of a new housing loan stands at 90%, which is higher than the typical LTV in the countries that experienced housing market slowdown and consequent economic instability (Figure 5.6). Considering the fact that mortgage loans are major driving forces of recent household debt growth and the housing loan outstanding is as large as 35% of GDP, the current LTV is excessively high.

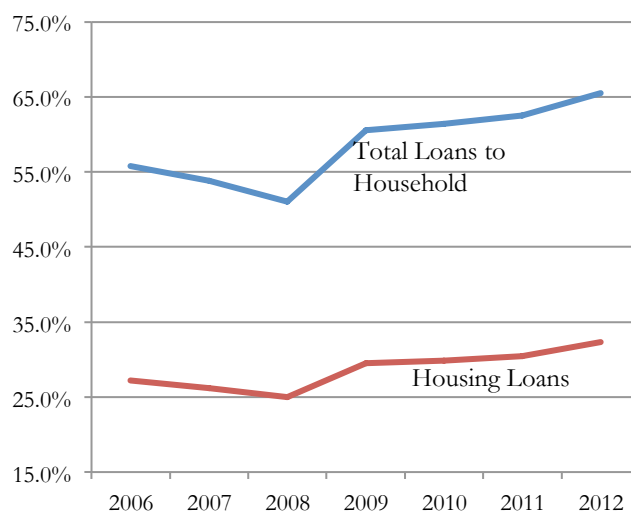
Figure 5.6. Typical Loan-to-Value Ratios (LTV) of New Housing Loans



Source: <http://www.imoney.my/home-loan> IMF, World Economic Outlook, April, 2008, Chapter 3, “The Changing Housing Cycle and the Implications for Monetary Policy”; Financial Supervisory Service of Republic of Korea, “Banking Supervision Regulations”

Note: The ratio of Malaysia represents the current market situation. The ratios of other countries are surveyed before the Great Recession. The average annual rates of rise in housing price before the Great Recession in the selected OECD countries above were between 6% and 13%. (See footnote 59.)

Figure 5.7. Loans through Banking System / GDP



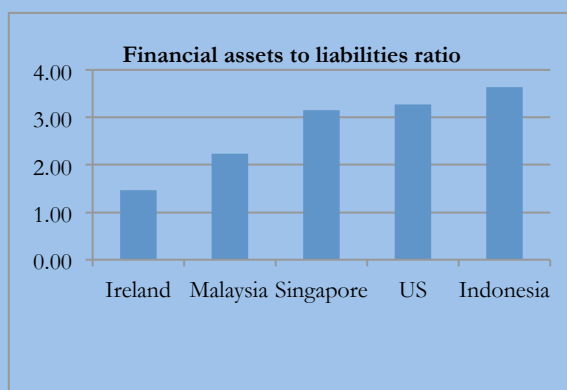
Source: BNM, Monthly Statistics Bulletin

Box 2. Would the Impact of Housing Bust on the Overall Economy Be Limited in Malaysia?

Some researchers argue that the impact on the overall economy of a possible decline in housing prices in Malaysia will be limited because Malaysians do not use housing loans to boost their consumption and a significant portion of the loans are for civil servants with stable income. However, recent data show that the Malaysian economy could be vulnerable to a possible housing market slowdown.

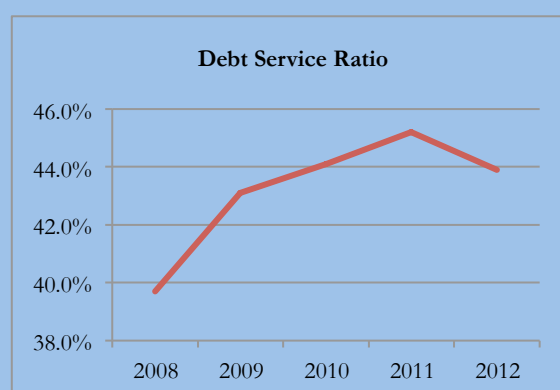
First, consumption and housing prices in Malaysia are positively correlated, and the current relationship is stronger than that in the past. While the correlation between real private consumption growth at quarter t and real housing price growth at quarter $t-1$ is 0.14 during the period 2001 Q2 to 2013 Q2, it rose to 0.41 during the period 2010 Q1 to 2013 Q2.

In addition, household balance sheet and cash flow are not strong enough to limit the impact of a possible large decline in housing price. The financial assets to liabilities ratio in Malaysia at the end of 2012, 2.24, is lower than that of the U.S. in 2008. The debt service ratio is high at 43.9%, and it has risen rapidly in recent years. In this context, if the housing market slowdown is accompanied by decrease in income or increase in interest rate, the impact could be serious.



Source: Central Bank of Ireland, Quarterly Financial Accounts for Ireland, Aug 2013; BNM, Financial Stability & Payment Systems Report 2012; Singapore Department of Statistics, Quarterly Household Sector Balance Sheet Oct 2012; FRB, Financial Accounts of the U.S. 2Q 2013; Bank Indonesia, Financial Stability Review, March 2012

Note: Ireland (2007), Malaysia (2012), Singapore (2012 2Q), U.S. (2008), Indonesia (2011)



Source: BNM, Financial Stability & Payment Systems Report 2012

Note: A recent research on DSR of Asian countries points out that change in DSR due to increase in interest rate is highest in Malaysia among 8 countries including Singapore and South Korea (Standard Chartered, July 2013)

Finally, since the proportion of loans from the Treasury Housing Loans Division to total housing loans is only 9.9%⁷³, it is not evident that a significant portion of housing loans in Malaysia are for civil servants and therefore have no repayment risk.

⁷³ Bank Negara Malaysia (2013a) Annex p.26. The lending rate of the loan is around 0.3%p lower than the rate of the typical housing loans from commercial banks.

5.2 Policy Recommendations

5.2.1 Maximum LTV regulation on first and second mortgages

To prevent severe and protracted downturn caused by housing bust, the Malaysian government should introduce maximum LTV on Malaysians' first and second mortgages in addition to the current regulation on third mortgages. However, the risk of unintended housing market hard landing due to the new regulation should also be avoided. Considering both cases, the appropriate level for the new LTV limit is 80% for second mortgages and 90% for first loans.

Since normal banks already apply 90% maximum LTV to most borrowers, genuine first homebuyers' access to finance will not be restricted by the new regulation. Meanwhile, aggressive and careless loan providers, excessively indebted homebuyers, and speculative investors could be regulated effectively. The necessity of LTV regulation on first and second mortgages is demonstrated by the continued rapid growth of housing loans and total household debt despite the Malaysian government's earlier macro-prudential measures in 2010, including the introduction of 70% maximum LTV regulation on third mortgages.

After implementing tighter LTV regulation, the government should continue to carefully monitor the housing market and financial sector, and further tighten or loosen the regulation based on the observations on the responses of the market.

While some analysts insist that the risk of household debt and housing loans is not serious because the impaired loans ratios (Table 5.1) are low, a decline in housing prices or a slowdown in income growth could abruptly reverse the recent trend of decreasing ratios.

Table 5.1. Impaired Loans Ratio in Malaysia

Ratio (%)		2010	2011	2012
Loans for Purchase of Residential Properties		3.2	2.3	1.9
Total Household Debt		2.3	1.8	1.5

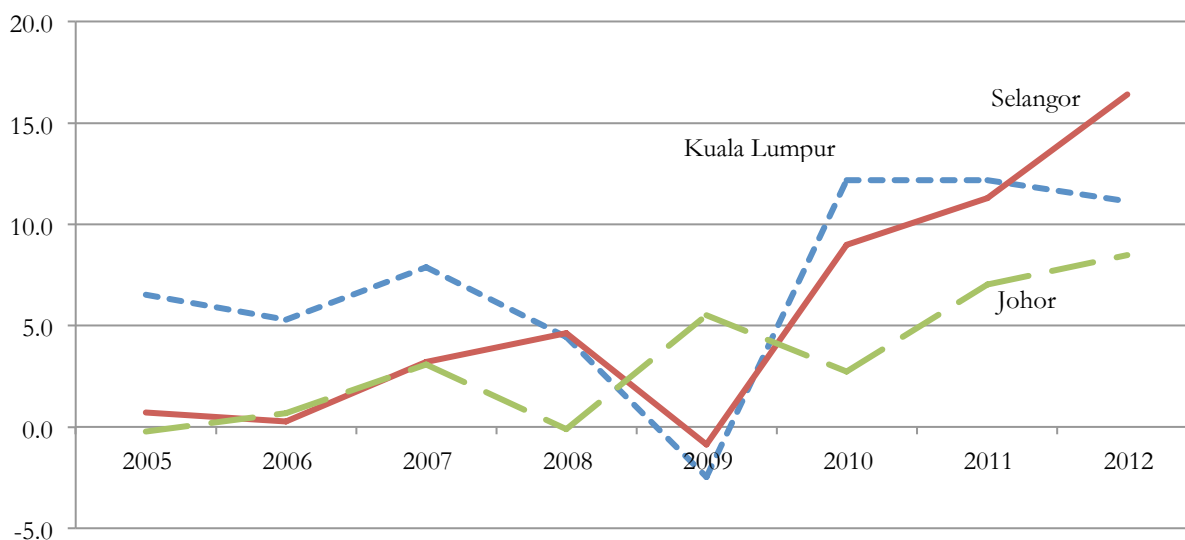
Source: BNM, Financial Stability & Payment Systems Report 2012

Note: The ratios are calculated based on loans through banking system only.

5.2.2 Area-specific regulation: More Effective Implementation of Tighter LTV

Since housing markets in different areas move differently, the Malaysian government should review the feasibility of introducing the “speculative zone designation system,” as implemented in Korea, enabling tighter LTV regulations to be applied specifically to the zone.

Figure 5.8. Housing Price Changes in Different Areas

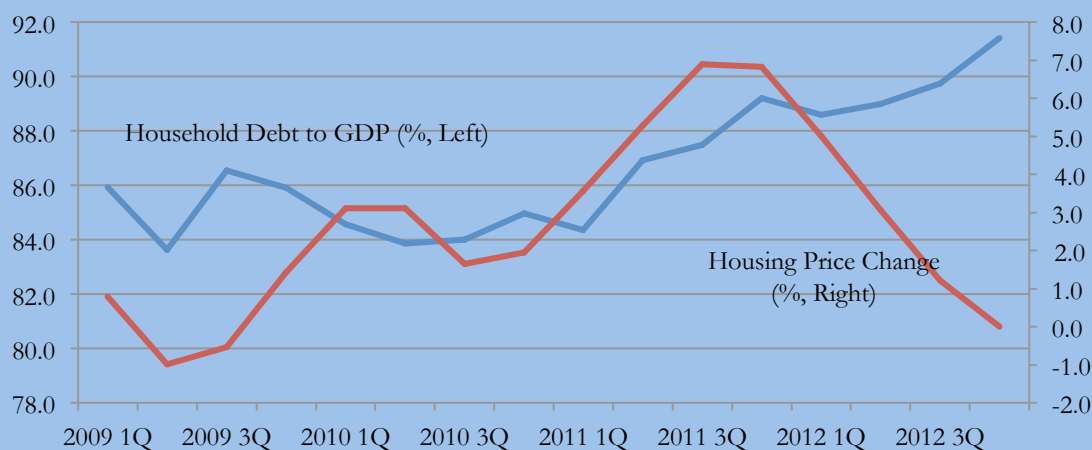


Source: BNM, Monthly Statistics Bulletin

The development of housing price and the extent of regulatory need vary among areas. Therefore, it is important for the government to have a policy tool with which it can flexibly respond to temporary and localized housing market overheats or excessive loan competition. For example, if the government had implemented nationwide tighter regulation at the end of 2012, it would have moderated the overheated housing market in Selangor while causing a rapid drop in Kuala Lumpur housing prices. The different market situations by area may be one explanation why the Bank Negara Malaysia has not implemented major additional macro-prudential measures since Nov 2010.

Box 3. Case Study: The Role of Tight LTV Limit in South Korea

Although South Korea experienced rapid rise in housing price (7.6% per annum, 2006-2007) and held large volume of household debt (83.9%, 2008), the impact of the housing market slowdown during the Great Recession on its financial stability was limited.



Source: BIS Property Price Statistics, Federal Reserve Bank of St. Louis

Many researchers believe that the impact on the financial stability and the overall economy was limited because of the tight maximum LTV. In addition, since different LTV limits were applied to different locations, types of housing, and structure of loans, the regulation was implemented effectively and flexibly. If the Malaysian government considers additional macro-prudential measures, the LTV limit combined with the area-specific regulation, which was introduced in Korea in 2003, would be worth studying.

Maturity		Speculative Zones		Speculation-ridden areas		Other areas	
		APT	Others	APT	Others	APT	Others
Shorter than 3 yrs.		50%	40%	50%	50%	60%	60%
3 - 10 yrs.		60%	40%	60%	60%	60%	60%
Longer than 10 yrs.	Higher than \$0.6mil. value	60%	40%	60%	60%	60%	60%
	Lower than \$0.6 mil. value	60%	60%	60%	60%	60%	60%

Source: Financial Supervisory Service of Republic of Korea, "Banking Supervision Regulations (2007)"

Note : "Speculative Zone" is designated by Finance Minister, and higher tax rates apply to the real property gain.

"Speculation-ridden area" is designated by Land Minister, and resale of ownership of a lot is prohibited.

6. Exports

Malaysia's future growth path is a key determinant in its ability to bear its significant public debt burden, and the country's growth rate relies on more than just avoiding fiscal and financial crises in the near term—it also needs to identify and implement development strategies. Exports are at the center of any Malaysian growth plan given its smallness and openness: exports accounted for 87 percent of GDP in 2012, even as its current account balance moves toward zero.⁷⁴ The decline in net exports should not necessarily cause concern since current account balances for wealthy commodity exporters such as Canada and Chile also hover around zero.

In terms of composition, well over half of Malaysia's exports have consisted of manufactured goods in recent years - most of them intermediate electronic goods such as LEDs and circuit boards that are part of the East Asian export supply chain. Some other manufactured goods like latex gloves are downstream results of Malaysia's natural resources. Fuel—principally oil—is the next biggest single export type with agricultural exports not far behind. Service exports make up less than 15 percent of Malaysia's export basket and well over half is tourism.

This section evaluates whether Malaysia's position in the export good value chain and its small number of high-end service exports represent a constraint on growth. It finds that Malaysia's export basket is already complex and that service exports do not offer a path out of the Middle-Income Trap. Malaysia's current export position is an asset for future growth, not a liability, and it should take advantage of the situation to focus on longer-term challenges toward future movement up the value chain such as education.

6.1 Moving Up the Export Good Value Chain

Both within and outside Malaysia, a considerable consensus exists that a large portion of Malaysia's middle-income challenge is its failure to “move up the value chain” to higher value added good exports. Malaysia's New Economic Model states:

“The historical advantage of exporting low value added electronics, drawing on the availability of low wage, unskilled labor has locked Malaysia into a low-level vicious circle of competition based on costs alone. It is now slowing Malaysia's progress up the value chain to more sustainable, higher value, more advanced technological levels of industrial production.”⁷⁵

A look at international export data, however, indicates that Malaysia does not currently reside in this “low-level vicious circle.” Hausmann, Hidalgo, other researchers at MIT and Harvard have produced an Economic Complexity Index (ECI) that measures where countries' export baskets fall in the value chain.⁷⁶ The ECI measures the probability of a certain good being produced in a certain country—goods likely to be produced in advanced countries are more “complex”—then assigns a score to countries based on the complexity of their export baskets.

⁷⁴ All data are from the 2012 World Bank World Development Indicators unless otherwise indicated.

⁷⁵ National Economic Advisory Council, “New Economic Model for Malaysia Part 1,” 2010, p. 42.

⁷⁶ Hausmann, Hidalgo, et al.

These findings imply that Malaysia's principal obstacle to reaching higher-income status is not export complexity: its exports are already relatively complex, especially for a country with its resource endowments. More important than marginal improvements to Malaysia's short-term value chain position are the long-term constraints that could cause Malaysia to lose its advantageous export position over the next decade such as low private sector investment and education quality.

6.2 Prospect for Service Exports as Path to Economic Growth

The recent growth of service exports among some other emerging Asian economies has left some to wonder if Malaysia is “missing the train” to a source of economic growth that India and the Philippines have ridden with considerable success. Researchers at the World Bank have presented recent evidence that Malaysia would benefit from increasing the role of services in its export basket.

Seeking to “highlight a new channel for promoting rapid economic growth,” they argue that “developing the services sectors hold the greatest promise” since “the range of modern services that can be digitized and traded globally is constantly expanding. India has been a pioneer, but many other emerging markets are finding it easier to generate productivity growth in services than in industry.”

Their argument, however, conflates an economy's service *sector* with its service *exports*. While the overall size of countries' service sectors has a strong correlation with income (see Figure 6.2), the relationship breaks down when you look at service exports (see Figure 6.3), which is the main focus of their work. Exports can contrast starkly with the overall industry breakdown of national output. Seventy percent of Germans work in the service sector, for example, but the same percentage of German exports are manufactured goods.

Figure 6.2. Services as Percentage of GDP (2005-2011 Average)

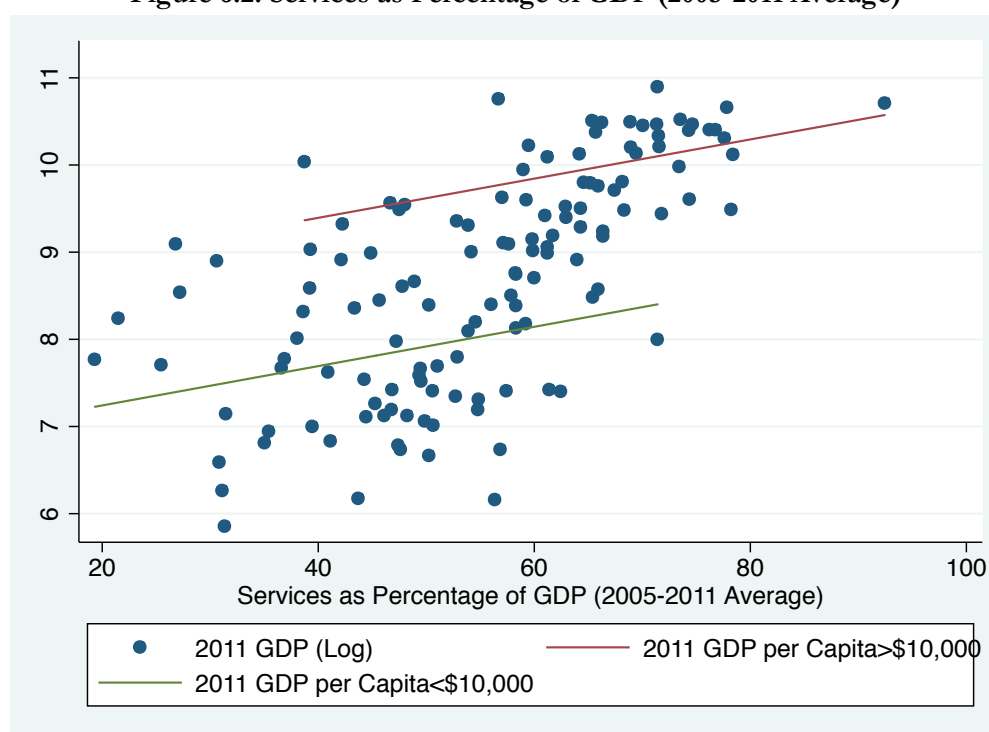
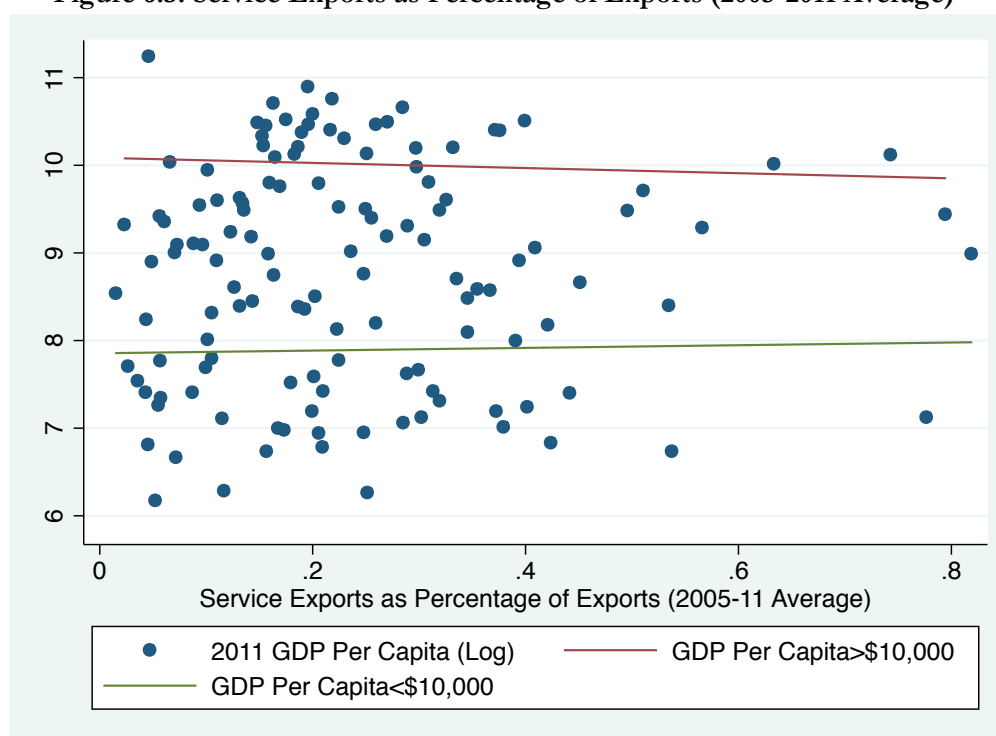


Figure 6.3. Service Exports as Percentage of Exports (2005-2011 Average)



Appendix 8.1 uses regression analysis to explore the weak empirical relationship between service exports and income implied in Figure 6.3. It finds no evidence that service exports—even “modern” ones—enjoy a stronger relationship with income than manufactured exports do. In fact, the evidence points toward a *weaker* relationship for service exports than for manufactured exports. While limits exist to such a cross-country analysis—what matters is the effect of more service exports for a particular country—the same limits apply to *the World Bank’s* hypothesis that service exports offer a path out of the Middle-Income Trap for a broad swatch of countries. Governments seeking to promote certain export sectors should not systematically favor service exports over manufacturing exports without a specific service-oriented comparative advantage.

6.3 Malaysia’s Comparative Disadvantage in Services

The main source of service exports for middle-income countries has been offshoring of developed country employment: this can come from the low end, such as customer service, to the high end, such as law and finance. To evaluate the potential Malaysia service export story, we evaluate Malaysia’s competitiveness compared to potential competitors on three variables that determine a country’s comparative advantage in service exports: English language skills, broader professional skills, and labor costs. The evidence implies that Malaysia is far away from developing a service export comparative advantage.

1. English language skills

Strong English language skills make a country an attractive offshoring destination because they can deal with overseas clients directly. The competition is fierce on this metric, and Malaysia appears to be following behind. Malaysia recently halted a six-year experiment in using English to teach math and science in state

schools since not enough Malaysian teachers have an adequate command of English⁷⁷--70 percent of the nation's English teachers failed an English competency test.⁷⁸ Penang's chief minister recently warned that the decline of English language competency from previous generations threatens Malaysia's competitiveness,⁷⁹ numerous studies point to lack of English language competency as a barrier to economic development,⁸⁰ and it has been a constant concern in the news media.⁸¹

2. Professional Skills

Globally, the number of services that are being exported increases in scope each year. Even if a country does not speak as good of English as India and Philippines do, it is possible to capture a comparative advantage if it has accountants, doctors, lawyers, or other professionals who can perform at a high, internationally competitive level. India, for example, has retained the largest market share in software outsourcing, because of its large number and quality of IT professionals.⁸²

A recent McKinsey Global Institute report estimated the number of young professionals in various countries who had the competency to work at a multinational corporation, a good proxy for the level of skills necessary for offshoring success.⁸³ Both per capita and absolute numbers can matter since the size of a potential sector in relation to its economy is important for the country while certain industries may require large absolute numbers of workers to take hold.

According to the report, Malaysia has 20,000 young professionals (673 per million residents) in finance and accounting who could work at a multinational—compared to 127,000 in the Philippines (1,289 per million), 341,000 in India (300 per million), and 64,000 in Poland (1,662 per million). Malaysia has 14,000 young professionals who could work in analytical positions (491 per million)—compared to 81,000 in the Philippines (822 per million), 371,000 in India (300 per million), and 74,000 in Poland (1,922 per million). Medical services—perennially mentioned as an area for hope⁸⁴—is where the situation is most unrealistic: Malaysia only has 3,000 doctors and 5,000 nurses capable of doing global work—far below countries like India (90,000 and 131,000 respectively) or Poland (22,000 and 47,000 respectively).⁸⁵ For the case of Malaysia, this is especially discouraging since substantial competition in the region already exists from India, Thailand, and Singapore over medicine.⁸⁶

3. Labor costs

Companies outsource abroad principally to lower labor costs. While Malaysia offers much lower labor costs than the developed world does, it already boasts the highest labor costs in Emerging Asia by a large margin according to the IMF.⁸⁷ Malaysian labor costs almost ten times as much as India's and twice as much as the Philippines'. Even more discouraging, the call center industry these countries have dominated appears to be

⁷⁷ de Lotbinière (2009)

⁷⁸ Yen Nie (2013)

⁷⁹ Opalyn Mok (2013)

⁸⁰ Sekharan Nair (2012)

⁸¹ Sta Maria (2011)

⁸² Vivek Wadhwa (2008)

⁸³ McKinsey Global Institute (2005)

⁸⁴ Yusuf and Nabeshima, *Tiger Economies under Threat*, Washington, DC: The World Bank

⁸⁶ Shahid Yusuf and Kaoru Nabeshima (2009)

⁸⁷ IMF World Economic Outlook Database (2013)

more of a path toward middle income than out of middle income: Filipinos make \$300 per month at the entry level in a call center, whereas Indians make \$250.⁸⁸

Malaysia's cost disadvantage is likely even more acute in service exports than in manufacturing or natural resource exports because labor is most or all of the final product value; labor costs make up a larger portion of total costs in accounting, customer service, and law than in car manufacturing. For example, if labor costs only make up 30 percent of a manufactured good's total cost and 80 percent of a service's total costs, then a 10 percent rise in labor costs will drive up the manufactured good's costs by 3 percent and the service good's costs by 8 percent. Exacerbating Malaysia's service competitiveness problems, the relatively low fixed costs of service industries tends to make them more price sensitive and therefore less stable, as demonstrated by the movement of call centers from India to the Philippines in response to cost pressures.

6.4 Financial Services Export Prospects

While service exports may not present an attractive general development strategy for Malaysia, the country appears to possess potential for developing comparative advantage in at least two areas of financial services. The first is Islamic finance, an area where Malaysia stands a real chance of becoming a global leader since it is a stable Muslim country, far away from the geopolitical uncertainty and other political tensions of the Middle East. Malaysia also boasts relatively high levels of education and financial sector development among Muslim countries

The second is potential for Singapore-based financial firms to relocate lower value-added functions to Johor, the region of Malaysia that borders Singapore. Malaysia has the comparative advantage of proximity to Singapore and much lower labor and land costs. The cost of doing business in Singapore continues to rise as it is quite land constrained, providing an excellent opportunity for Malaysia to seize. An instructive example is the trend among major Wall Street firms toward moving less glamorous jobs in IT and HR to Jersey City across the Hudson River to save on real estate costs.⁸⁹ The potential cost savings of relocation from Singapore to Johor are several times higher. On the other hand, different legal systems could pose a constraint on this potential area for sectoral growth and Malaysia may need to consider ways to overcome this constraint such as permitting areas of Johor Bahru to operate under special legal jurisdiction that would facilitate Singaporean offshoring.

6.5 Policy Recommendations

Malaysia's current export basket is an asset, not a liability, for helping it escape the Middle-Income Trap. Export complexity has a strong relationship with future economic wealth and Malaysia's export basket is relatively complex given its current wealth—implying that it could help the country grow. Its goods exports are actually among the most complex for a country with rich natural resource endowments, which require less complex export good baskets. There is also reason to doubt that Malaysia is “missing the boat” on service exports since they appear not to offer a general path out of middle-income status and Malaysia has no comparative advantage in them.

⁸⁸ Bajaj (2011)

⁸⁹ Bloomberg Businessweek (2001)

6.5.1 Natural Resource-Based Research Institutes

A fear about picking winners and losers is that sometimes the winners a country picks end up being long-run losers. Natural resources, however, are likely to remain a part of Malaysia's export mix in the long-term. The government should thus further existing partnerships with industries that have long been part of the country's export mix: palm oil and rubber will likely not disappear anytime in the near future and attempting to move up the value chain in exports that heavily rely on these products represents a good bet. Higher value can also reduce export volatility since the market for commodities is likely more competitive than advanced products. An excellent example of such an approach is the U.S. land grant universities, which provide research and training targeted at their local states' agricultural products.⁹⁰ The ETP already envisions similar partnerships and Malaysia should move ahead with them without delay.

6.5.2 Apprenticeships and Labor-Management Partnerships

Malaysia's educational attainment lags behind other countries in the region, and studies indicate that even Malaysian college graduates often do not receive the STEM and English language training for which companies are looking. Drastic improvements to the educational system will take time to have substantial effects on the labor force and it is especially difficult to determine what works.

Malaysia should partner with major industries—including multinational corporations—to develop training programs to “skill up” existing workers as the beginning of a major commitment to technical training. Workers approved by their employers could cut their hours but would maintain the same income as a combination of the government and company make up the difference. In exchange, the employee would undergo technical and/or English language training to increase her productivity. Firms would choose the workers and help design the curriculum.

This should go hand in hand with a larger effort to create technical education institutes like in Singapore for non-college bound workers. These vocational schools would provide students with real-world skills that could lead to apprenticeships with manufacturing firms and eventual jobs. Critically, producing semi-skilled workers would raise the wages of the least skilled workers (secondary dropouts) by reducing the pool of unskilled workers (a similar if opposite effect to how stagnating education in the U.S. has caused unskilled wages to stagnate⁹¹). The technical education institutes should take the form of a private-public partnership where major firms play a substantial role in developing the curriculum, giving them an opportunity to shape the future labor market to fit their needs.

7. Structural Headwinds to Long-Term Growth

The persistence of ethnicity-based affirmative action policies (or Bumiputra policies) since the enactment of the New Economic Policy (NEP) in 1971 are widely believed to be generating inefficiencies and limiting the

⁹⁰ For more information on the system, see this fact sheet provided by a consortium of U.S. land-grant universities: <http://www.agribiotech.info/resources/land-grant-institution>

⁹¹ Goldin and Katz (2009)

potential growth of the Malaysian economy (See 8.2 for a brief history of the NEP and its relationship with ethnic politics). This section focuses on certain underlying social and political issues that are often overlooked in a purely economic perspective, highlighting how somewhat intangible factors can have an important impact on more concrete outcomes. Three key policy areas central to Malaysia's long-term economic prospects are perhaps equally, if not more so, a product of sociological, political, and historical forces: inequality, education, and labor and capital outflows. While a shift away from the NEP and Bumiputra policies as a whole remains politically elusive, such a shift is necessary should Malaysia seek to make the qualitative jump from being a relatively successful Southeast Asian economy to joining the ranks of Asia's most advanced economies in the long-run.

7.1 Inequality

From the perspective of addressing inequality in Malaysian society, the creators of the NEP in 1971 were prescient in setting 1990 as the policy's expiration date. Malaysia's Gini coefficient consistently fell from the mid-1970s to 1990, hitting a low-point of 0.446. Likewise, during that same period, the urban-rural disparity ratio fell from 2.14 to 1.70, and the Chinese/Malay and Indian/Malay ethnic differentials fell from 2.25 to 1.70 and 1.75 to 1.29, respectively.⁹² Since 1990, however, the gains across these metrics have regressed. The urban-rural disparity ratio has fluctuated between 2.11 and 1.81 in the twenty years since the 1.70 mark in 1990.⁹³ Likewise, with the exception of slight dips during the 1997 Asian Financial Crisis and GFC in 2008, the overall Gini coefficient has risen from the low-point achieved in 1990.⁹⁴

Admittedly, this is consistent with the rise of inequality throughout the world, but what has been unique to Malaysia's economic policy is its institutionalized preference for the poorest among the majority ethnic group while neglecting the poorest among other ethnicities, most notably the Chinese and Indian minorities. While the NEP undoubtedly reduced inequality *among* ethnic groups throughout the 1970s and 1980s, it has helped engender inequality *within* ethnic groups, particularly for the Malay. This has been the more relevant measure of inequality since the 1990s. Abuse of the pro-Malay policies in the NEP over the span of decades has birthed a political elite of privileged Malay that capitalize on the lion's share of its transfers and privileges. Some have labeled this elite the UMNO-Putras, a composite of the acronym for the dominant Malay-centric political party and "Bumiputra" ("sons of the soil" in Malay).⁹⁵ The UMNO-Putras point to a systemic devolution of the NEP into "cronyism and nepotism at the top," no longer focused on improving "the lives of the people at the bottom."⁹⁶ Some have gone so far as to claim that only about five percent of Malays "have been estimated to have actually benefited from these affirmative action programs and those people who were initially more fortunate were the most benefited."⁹⁷

Without shifting Malaysia's approach to addressing inequality as a socioeconomic and regional, vice ethnic, matter, the rent-seeking manipulation of such affirmative action policies will not only exacerbate the stratification of Malaysian society but moreover marginalize important minority groups. Left alone in the long run, such pressures could bring not only economic costs but also threaten political stability and social unity.

⁹² Mat Zin (2012) 240

⁹³ Mat Zin (2012) 240

⁹⁴ Mat Zin (2012) 239

⁹⁵ Faaland (1990) 165

⁹⁶ Ariff (2012) xix

⁹⁷ Sowell (2005) Chapter 3

7.2 Education

A major consequence of the NEP's effort to raise Malay skills and education has been the implicit racialization of education. Squeezed out of public universities by minimum quotas for Malay student enrollment, many Chinese and Indian students have faced a choice between attending private institutions and going abroad.⁹⁸ Currently, Malay leaders head all twenty of Malaysia's public universities.⁹⁹ More than ninety percent of Chinese students are enrolled in Chinese schools, and about fifty percent of Indian students are in Tamil schools, leaving public schools overwhelming Malay.¹⁰⁰ This has fed a vicious cycle of public schools lowering standards to meet Malay student quotas, leading to a degradation of education for all, including the workforce: "The intake of academically poor students in the tertiary sector results in the output of academically poor graduates, many of whom in turn make poor teachers."¹⁰¹ Ironically, while this policy has contributed to an increase in Malay graduates, it has worsened the Malay graduate unemployment rate, precisely because attaining a degree has become a less useful measure of employment qualification.

Short to medium-term changes, such as the increased focus on STEM scholarships and the establishment of technical education institutes outlined in Section 6.5.2, would undoubtedly mitigate the disconnect between the needs of Malaysian industry and the relative shortage of skilled labor. In the long run, however, the more troubling aspect of the education system is not so much its direct economic impact but more so its role as a social institution central to building national unity. While empirically difficult to define and measure, national unity is undoubtedly an important factor for a country's economic potential, particularly for a society as diverse as Malaysia's. Whereas education is often a means to forge national unity, in Malaysia, it increasingly seems to reinforce existing divisions. Minorities excluded from or disadvantaged in such a central social institution will increasingly hamper Malaysia's ability to upgrade its workforce and weaken the incentives for members of such groups to invest in their home society.

7.3 Labor and Capital Outflows

As a direct consequence of Malaysia's education system under the NEP, Malaysia suffers an acute "brain drain" problem because of these dynamics.¹⁰² With Singapore just across the border, and many other countries with large diaspora communities nearby, many Chinese Malaysians have left the country. The proportion of Chinese Malaysians in Malaysia's population has thus fallen significantly since 1970, while the Malay population has increased from just over half to nearly three quarters.¹⁰³ The other side of this coin has been the emergence of a "dependency syndrome" among the Malays: "high expectations for aid and assistance [have] not encouraged self-improvement, self-reliance and enterprise as much as it should."¹⁰⁴ While the NEP envisioned a spillover of skills from more privileged groups to the Malays, the more dominant dynamic has been one in which minority businessmen and investors take on a Malay "sleeping partner"—a phenomenon coined the "Ali-baba syndrome"—to simply gain access to government licenses and contracts without integrating them into their core operations.¹⁰⁵

⁹⁸ Hock & Nagaraj (2012) 223

⁹⁹ Chin (2009) 178

¹⁰⁰ Hock & Nagaraj (2012) 221

¹⁰¹ Hock & Nagaraj (2012) 229

¹⁰² Welsh (2013) 239

¹⁰³ Hill (2012) 40

¹⁰⁴ Navaratnam (2002) 15

¹⁰⁵ Navaratnam (2002) 18

Such inefficiencies also have long-term implications for Malaysian enterprises' ability to generate returns to attract domestic and foreign sources of investment capital.¹⁰⁶ It is worth noting that much of the recent foreign investment in Malaysia has been portfolio investment in Malaysian government bonds, as opposed to foreign direct investment or even portfolio equity flows, through which both foreign technology and activist investor pressure could stimulate growth.^{107, 108} Additionally, weak returns on local investment could be contributing to the persistent outflow of private capital that has been an underlying force in Malaysia's long-running current account surplus.¹⁰⁹

7.4 Recommendations

So long as Malaysia signals to its minority populations that they will always remain on the periphery of a society whose center is reserved only for members of the Malay ethnic group, Malaysian society will continue to face daunting structural obstacles to its goal of becoming a truly advanced economy. Therefore, as it grapples with the concrete policy issues, the Malaysian government must recognize how the path it chooses implicitly signals the kind of society it is working towards—whether it is taking a step deeper into the status quo or towards a less ethnically segmented society, defined less by the legacy of its colonial inheritance and more by a shared hope in Malaysia's progress toward becoming a truly advanced nation.

The May 5, 2013 general election saw an unprecedented shift in Malaysian politics. While the dominant UMNO party managed to maintain its parliamentary majority, for the first time it lost the popular vote to a diverse coalition of parties advocating a non-ethnic approach policymaking. In this shifting landscape, there maybe new opportunities to address some of the more perverse effects the NEP and its successors have had on social institutions critical to Malaysia's economic potential. The specific recommendations below focus on the three pressing areas noted above: inequality, education, and labor and capital outflows.

7.4.1 Addressing Existing Inequalities

The New Economic Model (NEM) announced in 2010 indicated an encouraging shift away from the NEP's ethnocentric approach to addressing inequality by focusing on the "bottom 40 percent," regardless of race. Unfortunately, since the 2013 general election, the ruling party's enthusiasm behind such commitments has diminished amid growing objections from its rural Malay base. As the NEP's ethnocentric paradigm drifts further from the reality of socioeconomic and geographic inequality, however, both the economic and political costs of supporting the old approach will soon begin to outweigh the costs of supporting new initiatives like the bottom 40 percent policy. Instead of being a passive victim to the demographic shifts at play, the current government should proactively adjust itself to the changing nature of inequality. The government should conduct active outreach to the areas that have suffered most deeply from poverty and thus would benefit most from this policy shift to mitigate any potential political blowback.

¹⁰⁶ Montlake (2009) 58

¹⁰⁷ Asia Bonds Online, Market Data

¹⁰⁸ Haver Analytics

¹⁰⁹ BNM Statistics

7.4.2 Improving the Educational Structure

Attempts to roll back ethnic quotas for higher education have been quickly foiled by protests from the Malay community. One such attempt in 2003-2004 ended with the Malaysian Higher Education Minister declaring: “I will continue to ensure Bumiputera students have over 50 percent places in local universities.”¹¹⁰ Instead of portraying any shift as a demotion of Malay standing, changes should be portrayed as an elevation of minorities that have been shut out. The government should take steps to elevate the importance of its diverse heritage to reverse the incentive structures that have drawn minorities out of Malaysia society. Primary education at public schools should incorporate curriculum focused on improving mutual cultural awareness and appreciation among students of different ethnic backgrounds. Further, Chinese and Tamil language should be more proactively offered as second language options for Malaysian students.

7.4.3 Keeping Malaysia’s Best

Reversing both internal and external perceptions of the economic inefficiencies generated by Malaysia’s social divisions will be a generational endeavor, but specific moves can be made in the near-term toward the right direction. Beyond the structural changes to the education system outlined above, skilled minorities should be incentivized to stay in Malaysia through increased opportunities to serve in the civil service and leveling the private sector playing field. Bumiputera quotas should be removed for ethnic minorities competing for government contracts, and a multiethnic, multiparty authority should be created to reward contracts. Additionally, quotas that reinforce “sleeping partner” or “Ali-baba syndrome” arrangements should be eliminated and publicized to increase Malaysia’s competitiveness as an investment environment.

8. Appendices

8.1 The New Economic Policy and Malaysia’s Ethnic Politics

From colonial times, Malaysia has long had a dualistic economy split across ethno-geographic lines. Europeans, Chinese, and Indians were “engaged in the high productivity modern sector of the economy,” in “the rich West coast plain of Peninsular Malaysia.”¹¹¹ These groups enjoyed access to commerce and technology from abroad and housed most of Malaysia’s infrastructure and services. Malays, on the other hand, lived in the poorer Malay Belt, primarily “engaged in the low productivity traditional sectors of peasant agriculture and fishing.”¹¹² Once Malaysia gained independence and the Europeans who had occupied the highest sectors of the economy left, the Chinese and the Indians were better positioned to fill the gap, leaving the Malay at the bottom rungs of the economy.

With this backdrop, in 1957 the newly independent Malaysia enshrined in its constitution economic and social protections as well as symbolic status and privileges, including the national use of the Malay language.

¹¹⁰ Chin (2009)

¹¹¹ Faaland (1990) 7

¹¹² Faaland (1990) 7

Concurrently, in exchange for these provisions, non-Malays were granted federal citizenship and thus political power; additionally they were “assured that they were free to conduct their businesses unimpeded and also to retain their own cultural and linguistic heritage and separateness.”¹¹³ These were the basic terms of the first social contract bounding Malaysian society.

By the 1969 elections, this social contract was broken. As the Chinese and Indian communities consolidated votes against the ruling party, the Malay began to feel that while the non-Malay had gained tremendous political power overnight, the social and economic vision promised to them in the constitution were not being realized. Thus they stood on the brink of being “relegated to a permanent status even of political inferiority, in addition to economic and social inferiority.”¹¹⁴ Indeed, this is what they observed in Singapore, where the Malay “...were driven to near extinction numerically, politically, and economically.”¹¹⁵ The Malays felt they were being pushed into a corner:

It seemed to the Malays that racial harmony could be maintained only if the Malays kept on giving in. Their fight for equality in their own country was not only belittled, they were not even supposed to discuss it, since, it was argued, such discussions would only spoil the climate for private investment, local and foreign. Malay reactions to the humiliations were swift and predictable.¹¹⁶

Victory parades in the days following the election and impassioned calls for the repeal of constitutional Malay privilege by the non-Malay parties intensified this insecurity. Tensions reached the breaking point on May 13, plunging the country into a state of national emergency as hundreds were killed in a rampage of ethnic violence.

The constitution’s primary failure was not in the vision of its social contract but its active application. The constitution laid out the benefits the Malay were to receive in abstract terms, but it did not specify precisely how the Malays were to achieve those benefits. Whereas political rights could be legally guaranteed to non-Malays in an instant, attaining socioeconomic parity for the Malay would be a much more complicated process. Thus, the painful lesson of the 1969 riots was that “to challenge the position of the Malays as entrenched in the constitution, overtly or obliquely, before the Malays could feel economically secure, would be counterproductive.”¹¹⁷ Recognizing this gap, politicians, led by Prime Minister Tun Razak, sought to restore the basic social contract with a more concrete and specific plan to meet Malay expectations. And in 1971, the New Economic Policy was launched.

The NEP sought to reverse the constitution’s passive approach to decreasing the socioeconomic gap between Malays and non-Malays. Achieving economic growth for all was not politically sufficient. There had to be an explicit effort to accelerate growth for the Malay and integrate them “into the main stream of development of commerce and industry,” not just leaving them to become “permanently marginalized in the backward sectors.”¹¹⁸ The NEP was thus recognition that general economic growth alone was no longer politically

¹¹³ Faaland (1990) 17

¹¹⁴ Faaland (1990) 22

¹¹⁵ Faaland (1990) 22

¹¹⁶ Faaland (1990) 13

¹¹⁷ Faaland (1990) 13

¹¹⁸ Faaland (1990) 14

acceptable; redistribution had to be “a parallel or twin objective of equal importance for any acceptable economic policy.”¹¹⁹

The NEP’s emphasis on redistribution over growth would haunt policymakers decades later, but in the 1970s, it seemed to be the only politically viable path forward. Moreover, up to its original 1990 deadline, redistribution significantly reduced ethnic income differentials and occupational profiles.¹²⁰ The redistribution emphasis was comprehensive, broadly spanning economic (preferential subsidies to Malay businesses, targets for Malay ownership of equities) and social institutions (minimum Malay quotas for university admissions).¹²¹

By defining the challenge of development and unity in ethnic terms, the NEP has in some sense turned politics into an ethnic contest for government transfers.¹²² Politics have thus become organized along racial lines, even as the economic differences have evolved away from ethnic groupings and more toward geographic ones. The institutionalization of ethnic politics, however, has delayed adjustment to this reality. The path to political leadership is rife with demonstrations of ethnic loyalty; it thus “not an open competition for the best leaders regardless of race [but rather among] the toughest leaders within each racial group.”¹²³

For Malay politicians, this has meant that anything short of preaching Malay centrality and the NEP’s virtues leads to a quick end to their political careers. Thus, despite the 1990 deadline set for the NEP, it has lived on in various reincarnations: the National Development Policy (NDP), the National Vision Policy (NVP), and the New Economic Model (NEM). These nominal changes have had made little substantive difference, amplifying the NEP’s anachronisms. Underlying all of this is a growing sense of frustration among non-Malays—and many Malays as well—toward the special interests holding the NEP in place at the expense of Malaysia’s economic potential. While a clean break from the NEP remains politically unviable, failure to address its increasingly apparent anachronisms in the long-term will more deeply entrench fundamental limits on Malaysia’s economic potential.

8.2 Service Exports and Wealth

Aaron Flaaen, Ejaz Ghani, and Saurabh Mishra (FGM) of the World Bank have provided the most persuasive case for why Malaysia should work to increase the role of services in its export basket in their paper, “How to Avoid Middle Income Traps? Evidence from Malaysia.”

In this appendix, we seek to answer empirically the most important unanswered question arising from FGM’s paper: whether more service exports are associated with higher wealth, especially for economies in Malaysia’s middle-income danger zone. We find that service sector employment and country wealth have a strong relationship, but service sector exports have little to do with a country’s wealth and much of the evidence points the other way—that manufactured exports continue to offer middle-income countries a path to prosperity.

¹¹⁹ Faaland (1990) 14

¹²⁰ Nelson (2012) 50

¹²¹ Nelson (2012) 50

¹²² Welsh (2013) 238

¹²³ Navaratnam (2002) 16

Models and Data

To evaluate the relationship between economic sectors, export type, and wealth, we adapt Mankiw Romer Weil's (MRW) adaptation of the Solow growth model.¹²⁴ MRW demonstrated that three simple variables—Investment/GDP, population growth, and human capital—explained a good deal of the income per worker dispersion across countries. We “piggyback” on their model by adding our own parameters of interest to their regression so we can evaluate their effect on growth while controlling for variables proven have a strong relationship with wealth. MRW provide a simple yet powerful model with which most macroeconomists are well familiar, allowing the analysis to focus more on sector/export variables.

MRW use the following regression:

$$\ln(1985 \text{ GDP/population ages 15-64}) = \beta \ln(\text{Investment/GDP}) + \beta \ln(n+d+g) + \beta \ln(\text{Secondary School Enrollment \%})$$

Their dependent variable is 1985 GDP per worker and their independent variables are 1960-85 averages. $n+d+g$ is really just a measure of n , working population growth, since they assume $d+g$, depreciation plus productivity growth, is equal to .05 for all countries, making growth exogenous. While there have been important criticisms of MRW's exogenous growth assumption (principally Bernanke and Gurkaynak 2001¹²⁵), we are less interested in the effects of I/GDP or $n+d+g$ than those of our own parameters and simply use them as controls.

All data come from the 2012 World Bank World Development Indicators as our data source, though in many cases the World Bank simply compiled the data from elsewhere. Like MRW, our dependent variable is outcome per worker—this time in 2011. Our dependent variables are 2005-11 averages—we would prefer to have used a longer time span but IFS export data by sector only becomes easily available for a large enough number of countries after 2005. Given how short of a time horizon six years is, the model explains more about wealth than growth—little of the 2011 worldwide income dispersion resulted from 2005-11 events unlike MRW's 1960-85 analysis. We use all countries for which the World Bank provides data except for MRW's group of oil dependent countries plus Qatar.

Sectoral Allocation and Wealth

Rich countries have large service sectors. Figure 8.1 demonstrates the positive relationship between service sectors and income. The industrial sector's declining contribution to output is on full display in Figure 8.2, where it has a very strong relationship with income for poor countries and a very weak one for rich countries. This graph tells part of FGM's Middle-Income Trap story: countries that successfully emerge from the middle-income trap possess large service sectors.

¹²⁴ N Gregory Mankiw, David Romer, and David N Weil, (1992) "A Contribution to the Empirics of Economic Growth," *The Quarterly Journal of Economics*, 107: 2, pp. 407-437

¹²⁵ Ben S. Bernanke and Refet Gurkaynak (2002), "Is Growth Exogenous? Taking Mankiw, Romer, and Weil Seriously," *NBER Macroeconomic Annual* 2001, 16, pp 11-72.

Figure 8.1 Services as a Percentage of GDP (2005-2011 Average)

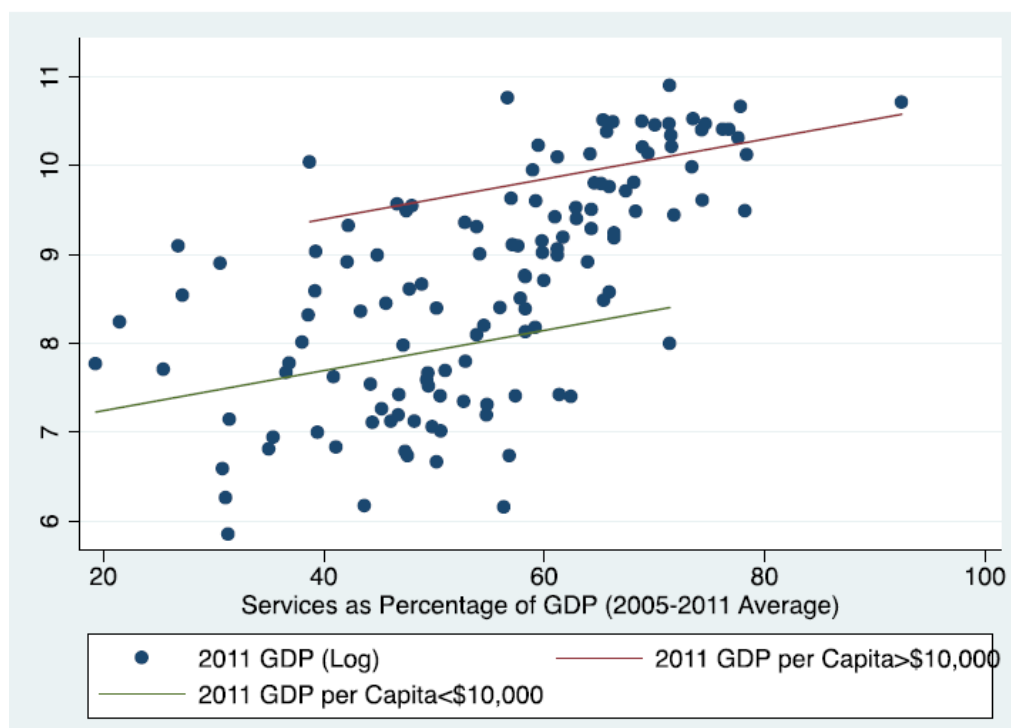
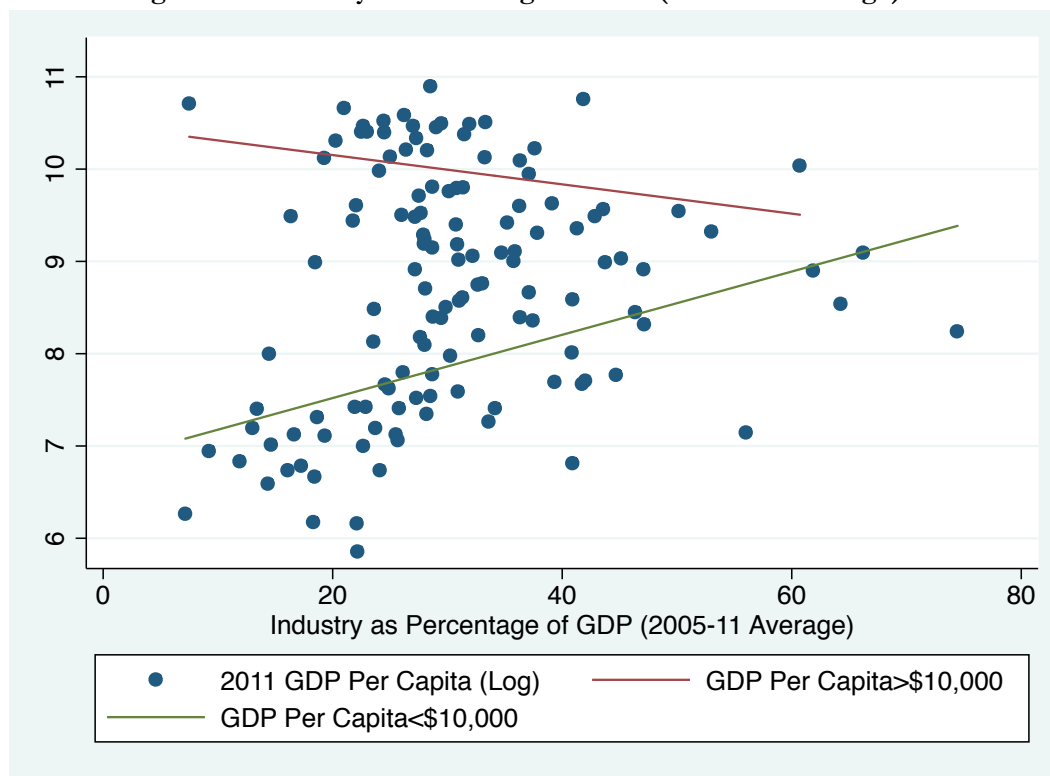


Figure 8.2. Industry as Percentage of GDP (2005-2011 Average)



We examine formally how sectoral output shifts affect GDP per worker. Regression 1a lays out the basic empirical approach: the human capital-augmented MRW regression with two and a half twists.

First, we include a dummy for whether a country had a per-capita income above \$10,000 in 2011 since the patterns for mid-to-high income-countries matter most for Malaysia. Second, we include the percentage of GDP produced by industry and the percentage produced by services. We interact the sectoral parameters as well as secondary school enrollment with the middle-income dummy to produce middle-income specific measures of the relationship. We interact secondary schooling even though it is not a parameter of interest so that the missing relationship between human capital and income for wealthier countries does not show up in the coefficients for the actual parameters of interest.

$$(1a) \quad \ln(2011 \text{ GDP/population ages 15-64}) = \beta_1 \ln(I/GDP) + \beta_2 \ln(n+d+g) + \beta_3 \ln(\text{Secondary School Enrollment \%}) + \beta_4 \ln(\text{Service GDP \%}) + \beta_5 \ln(\text{Industry GDP \%}) + \beta_6 (\text{middle income}) + \beta_7 \ln(\text{Secondary School Enrollment \%}) \times \text{middle income} + \beta_8 \ln(\text{Service GDP \%}) \times \text{middle income} + \beta_9 \ln(\text{Industry GDP \%}) \times \text{middle income}$$

We seek to resolve whether the service sector has a stronger relationship to GDP per worker than the industrial sector for mid-to-high-income countries so the parameter of interest is actually the difference between two sets of coefficients: the sum of the coefficients for the service sector's percent of GDP minus the sum of the coefficients for the industrial sector's percent of GDP. 1b lays out the null hypothesis that interests us:

$$(1b) \quad \beta_4 \ln(\text{Service GDP}\%) + \beta_7 \ln(\text{Service GDP}\%) \times \text{middle income} - \beta_5 \ln(\text{Industry GDP}\%) - \beta_9 \ln(\text{Industry GDP}\%) \times \text{middle income} = 0$$

Column 1 of Table 8.1 displays the results.¹²⁶ Both services and industry have positive and significant coefficients for all countries, but the return for countries above the \$10,000 mark is higher for services than for industry, as FGM predict. The difference, however, is not significant.

Next, we perform a similar analysis for service sector and industrial sector employment as a percentage of total employment instead of GDPs. 2a and 2b lay out the estimation strategy.

$$(2a) \quad \ln(2011 \text{ GDP/population ages 15-64}) = \beta_1 \ln(I/GDP) + \beta_2 \ln(n+d+g) + \beta_3 \ln(\text{Secondary School Enrollment \%}) + \beta_4 \ln(\text{Industry Employment \%}) + \beta_5 \ln(\text{Services Employment \%}) + \beta_6 (\text{middle income}) + \beta_7 \ln(\text{Secondary School Employment \%}) \times \text{middle income} + \beta_8 \ln(\text{Industry Employment \%}) \times \text{middle income} + \beta_9 \ln(\text{Services GDP}\%) \times \text{middle income}$$

¹²⁶ Unlike MRW, we find a *negative* association between investment and output per worker. This is actually a prediction of the Solow model—wealthier countries should encounter a declining marginal product of capital and invest less. Reasons why MRW found different results could include countries' then-smaller capital stocks (producing a higher marginal return to capital) and tighter capital market integration since 1985, allowing wealthier countries' investment dollars to "search for yield" in countries with higher marginal returns to capital. A bivariate analysis provides evidence for this: countries above the \$10,000 mark see declining investment/GDP with higher incomes.

(2b)

Table 8.1. Regression Results	1	2
$\beta_5 \ln(\text{Service Employment \%}) + \beta_9 \ln(\text{Service Employment \%}) \times \text{middle income} - \beta_4 \ln(\text{Industry Employment \%})$	GDP % -1.189 (.176)	Employment % -1.077 (.154)
$\ln(n+d+g)$	-.320 (.268)	.429 (.286)
$\ln(\text{Secondary Enrollment})$.717** (.135)	.714** (.170)
$\ln(\text{Services \%})$.814** (.318)	.182 (.222)
$\ln(\text{Industry \%})$	1.017** (.156)	.505** (.174)
Mid to High	-4.459 (2.771)	-.525 (2.188)
Mid to High x $\ln(\text{Secondary Enrollment})$.903** (.433)	.548 (.430)
Mid to High x $\ln(\text{Services \%})$	-.2617 (1.151)	1.730** (.492)
Mid to High x $\ln(\text{Industry \%})$	-1.088* (.612)	.049 (.323)
Constant	7.210** (1.104)	8.220** (.979)
R2	.898	.896
Observations	119	101
$\ln(\text{Services \%}) + \ln \text{Mid to High} \times \ln(\text{Services \%}) - \ln(\text{Industry \%}) - \text{Mid to High} \times \ln(\text{Industry \%})$.623 (.598)	1.358** (.436)

Column 2 displays the results: industrial employment is significantly associated with income for poor countries while service employment barely has any relationship. The situation, however, reverses itself for mid-to-high-income countries and the difference is significant. Interestingly, the divergence between GDP and employment relationships suggests that productivity may matter more in the industrial sector than in the service sector for wealthier countries as predicted by the Balassa-Samuelson effect: they do not necessarily place more economic activity in the service sector, but they do place more workers there.

What's Good for Sectors is Good for Exports?

Table 8.2. Regression Results	1	2	3
	Services vs. Goods	High-Value Services vs. Goods	ICT Services vs. ICT Goods
$\ln(\text{Investment/GDP})$	-.352** (.163)	-.374** (.169)	-.383** (.164)
$\ln(n+d+g)$	-.087 (.236)	-.164 (.251)	.030 (.232)
$\ln(\text{Secondary Enrollment})$	1.269** (.125)	1.234** (.128)	1.257** (.127)

ln (Service Exports %)	-.064 (.079)	-.093 (.084)	-.094 (.075)
ln (Manufacturing Exports%)	.008 (.442)	-.010 (.044)	.049 (.031)
Mid to High	-1.286 (1.857)	.346 (1.780)	-1.440 (1.516)
Mid to High x ln (Secondary Enrollment)	.567 (.392)	.282 (.381)	.6174* (.321)
Mid to High x ln (Service Exports %)	.060 (.101)	.335** (.123)	.063 (.089)
Mid to High x ln (Manufacturing Exports %)	.122* (.073)	.101 (.076)	.040 (.042)
Constant	4.205** (.841)	4.167** (.903)	4.752** (.873)
R2	.889	.898	.898
Observations	113	105	105
ln (Service Exports %) + ln Mid to High x ln (Service Exports %) -ln (Manufacturing Exports %) - Mid to High x ln (Manufacturing Exports %)			
	-.133* (.078)	.151 (.128)	-.120* (.065)

Service sector growth is associated with the development from a middle-to-high-income economy. But is this relationship true for service exports? A simple look at the trend implies not much of a relationship. Figures 8.2 and 8.3 suggest that GDP per capita possesses a weaker relationship with service exports than with manufacturing exports for mid-to-high income countries, precisely the opposite of FGM's hypothesis. For a more rigorous analysis, we load the export types into the adjusted MRW model we used for sectors. This time the parameters of interest are the percentage of a country's exports that are in services or manufacturing.

Figure 8.2. Manufacturing Exports as a Percent of Exports (2005-2011 Average)

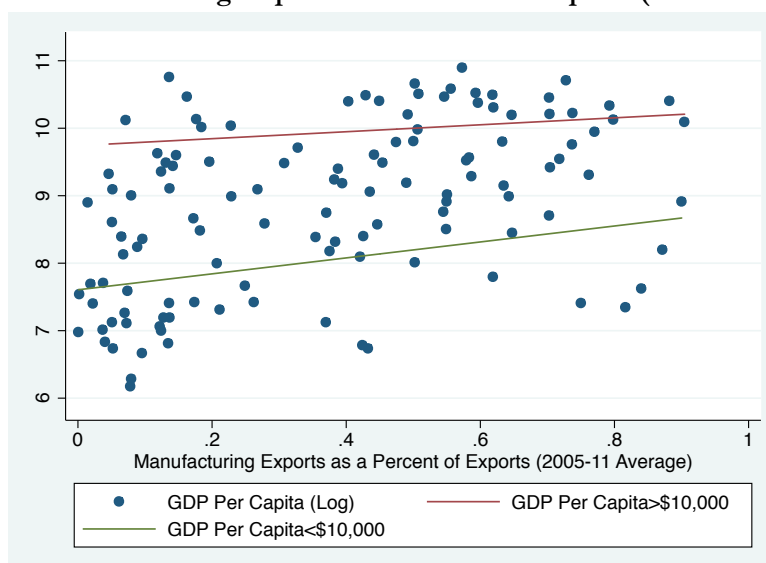
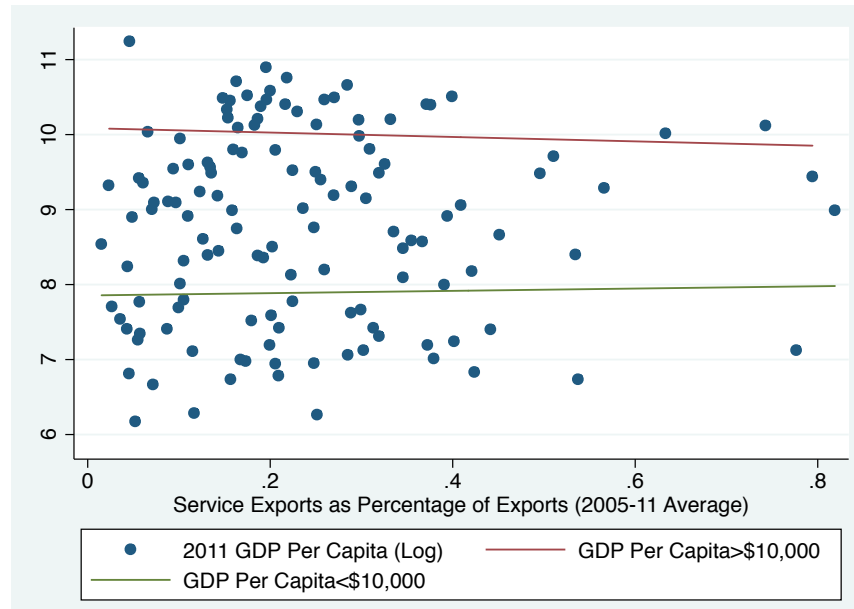


Figure 8.3. Service Exports as a Percent of Exports (2005-2011 Average)



- (3a) $\ln(2011 \text{ GDP}/\text{population ages 15-64}) = \beta_1 \ln(I/\text{GDP}) + \beta_2 \ln(n+d+g) + \beta_3 \ln(\text{Secondary School Enrollment \%}) + \beta_4 \ln(\text{Service Exports \%}) + \beta_5 \ln(\text{Manufacturing Exports \%}) + \beta_6 (\text{middle income}) + \beta_7 \ln(\text{Secondary School Enrollment \%}) \times \text{middle income} + \beta_8 \ln(\text{Service Exports \%}) \times \text{middle income} + \beta_9 \ln(\text{Manufacturing Exports \%}) \times \text{middle income}$
- (3b) $\beta_4 \ln(\text{Service Exports \%}) + \beta_8 \ln[(\text{Service Exports \%}) \times \text{middle income}] - \beta_5 \ln(\text{Manufacturing Exports \%}) - \beta_9 \ln(\text{Manufacturing Exports \%}) \times \text{middle income}$

The pattern from the scatter plots comes through quite clearly in these regressions. Column 1 of 8.2 compares all service and manufacturing exports. Service exports in fact have a weaker relationship with wealth than do manufactured exports in countries above the \$10,000 mark—contrary to FGM. Column 2 provides the analysis most favorable to service exports—now using only “modern” service exports and all manufactured goods. The direction is now the “correct” one implied by the pro-service export theory, but it is not significant. It is also an unfair comparison because countries that produce modern good exports also produce modern services. Column 3 provides an “apples-to-apples” comparison by comparing Internet, Computer, and Technology (ICT) goods with services. Again, the difference is not significant and the direction is “incorrect.”

Lessons

Causality is an obvious question when interpreting large cross-country regressions—does the export basket mix cause wealth or does wealth cause the export basket mix? Or does a third factor cause both? This analysis assumes that the export basket mix causes wealth, but so too do FGM by calling on Malaysia to increase services in its export basket mix to escape the Middle-Income Trap. If the causal pattern works in another direction, then there is also no evidence for FGM’s thesis that service exports are the path to high-income status. This analysis thus assumes the only causal relationship whereby service exports could help countries escape the Middle-Income Trap and finds the evidence wanting.

Bibliography

- Ariff, Mohamed. (2012). Preface. Malaysia's Development Challenges: Graduating from the Middle, xix.
- Asian Bonds Online (2013). Market Data. Retrieved from various time series available at <http://asianbondsonline.adb.org/malaysia/data.php>
- Asia Bonds Online, Market Data, Retrieved from <http://asianbondsonline.adb.org/regional/data.php>
- Asia Pulse (2010), "Briefing - Asia Energy - Jan 8, 2010."
- Asian Development Bank (2013). "Asia Bond Monitor September 2013."
Retrieved from http://asianbondsonline.adb.org/documents/abm_sep_2013.pdf?src=spotlight
- Balakrishnan, Ravi. Steinberg, Chad & Syed, Murtaza. June 2013 "The Elusive Quest for Inclusive Growth: Growth, Poverty, and Inequality" IMF Working Paper, Asia and Pacific Department, Page 21
- Ball, Laurence. Furceri, Davide. Leigh, Daniel & Loungani, Prakash (2013) "The Distributional Effects of Fiscal Consolidation", IMF Working Paper Series, II, 4
- Bajaj, V. "A New Capital of Call Centers." The New York Times. November 25, 2011. Retrieved from http://www.nytimes.com/2011/11/26/business/philippines-overtakes-india-as-hub-of-call-centers.html?pagewanted=all&_r=0
- Bank Indonesia. (2012). Financial Stability Review. Retrieved from <http://www.bi.go.id/en/publikasi/perbankandanstabilitas/kajian/Documents/f40f6b04200d499b86e35b15aa86def3FinancialStabilityReviewNo18March2012.pdf>
- Bank Negara Malaysia. (2013a). Annual Report 2012.
Retrieved from http://www.bnm.gov.my/files/publication/ar/en/2012/ar2012_book.pdf
- Bank Negara Malaysia. (2013b). Financial Stability and Payment Systems Report 2012.
Retrieved from http://www.bnm.gov.my/files/publication/fsps/en/2012/fs2012_book.pdf
- Bank Negara Malaysia (2011). "Financial Sector Blueprint 2011-2010 – Chapter 2: The Financial Sector that Best Serves the Malaysian Economy," 2011. Retrieved from http://www.bnm.gov.my/files/publication/fsbp/en/04_Financial_Sector.pdf
- Bank Negara Statistics (2013). Retrieved from various time series available at <http://www.bnm.gov.my/index.php?ch=statistic&lang=en>
- Bloomberg, September 2013, "Malaysia Debuts Longest Bonds in Funding Push." Retrieved from <http://www.bloomberg.com/news/2013-09-25/malaysia-debuts-longest-bonds-in-funding-push-southeast-asia.html>
- Bloomberg, 26 September 2013, "Malaysia Debuts Longest Bonds in Funding Push"
Retrieved from <http://www.bloomberg.com/news/2013-09-25/malaysia-debuts-longest-bonds-in-funding-push-southeast-asia.html>
- Bloomberg Businessweek, October 28 2013. "Jersey City: 'Wall Street West.'" (2001).
Retrieved from: <http://www.businessweek.com/stories/2001-10-28/jersey-city-wall-street-west>

- Board of Governors of the Federal Reserve System. (2013). Financial Accounts of the United States. Retrieved from <http://www.federalreserve.gov/releases/z1/current/z1.pdf>
- Central Bank of Ireland. (2013). Quarterly Financial Accounts for Ireland. Retrieved from http://www.centralbank.ie/polstats/stats/qfaccounts/Documents/ie_qfa_publication_tables.xls
- Channel News Asia (2013), "Malaysia to cut fuel subsidies." Retrieved from <http://www.channelnewsasia.com/news/asiapacific/malaysia-to-cut-fuel/799552.html>.
- Chin, James. (2009). The Malaysian Chinese Dilemma: The Never Ending Policy (NEP). Chinese Southern Diaspora Studies, Volume 3, 171-178.
- de Lotbinière, M. (2009). "Malaysia drops English language teaching." The Guardian. July 10. Retrieved from <http://www.theguardian.com/world/2009/jul/10/malaysia-tefl>.
- Economic Transformation Programme – A Roadmap for Malaysia, "Powering the Malaysian Economy with Oil, Gas and Energy", 6, 168.
- Emerging Markets Direct, 2013, "Malaysia Oil & Gas Industry 1H13" Retrieved from <http://www.emergingmarketsdirect.com/asia/malaysia-oil-gas-industry-1h13/>
- Faaland, Just, et al. (1990). Growth and Ethnic Inequality: Malaysia's New Economic Policy (NEP), 7-165.
- FAQs. (2011). Federal Development Office of Pahang State. Government of Malaysia. Retrieved from <http://www.phg.icu.gov.my/faq6e.html>
- Felman, Joshua et al (2011). "Asean5 Bond Market Development: Where does it stand?" IMF Working Paper. Retrieved from <http://www.imf.org/external/pubs/ft/wp/2011/wp11137.pdf>
- Fitch Ratings, 2012 "Malaysia's Fiscal Policy Shift Faces Tough Road Ahead." Retrieved from https://www.fitchratings.com/gws/en/fitchwire/fitchwirearticle/Malaysia%27s-Fiscal-Policy?pr_id=801032
- Fitch Ratings, 03 Sep 2013, "Malaysia's Fiscal Policy Shift Faces a Tough Road Ahead." Retrieved from https://www.fitchratings.com/gws/en/fitchwire/fitchwirearticle/Malaysia's-Fiscal-Policy?pr_id=801032
- Goldin, C. & Katz, L. (2009). "The Race between Education and Technology." Cambridge: Harvard University Press.
- Greenlees, D. (2005). "Asia oil subsidies bring windfall to smugglers." *The New York Times*. Retrieved from http://www.nytimes.com/2005/09/26/business/worldbusiness/26iht-smuggle.html?pagewanted=all&_r=1&>
- GTP 2.0. (2011). Raising Living Standards of Low Income Households. Government Transformation Program, Performance Management Delivery Unit, Government of Malaysia. Retrieved from http://www.pemandu.gov.my/gtp/Raising_Living_Standards_of_Low_Income_Households-@-GTP_2@0_Raising_Living_Standards_of_Low_Income_Households.aspx.
- Hausmann, R., Hidalgo, C., Bustos, S., Coscia, M., Chung, S., Jimenez, J., Simoes, A., Yildirim, M. The Atlas of Economic Complexity. Harvard Center for International Development. Retrieved from: http://atlas.media.mit.edu/media/atlas/pdf/HarvardMIT_AtlasOfEconomicComplexity_Part_I.pdf

- He, Dong and Robert McCauley (2013). "Transmitting Global Liquidity to East Asia: Policy rates, bond yields, currencies and dollar credit." Bank for International Settlements. Retrieved from <https://www.bis.org/publ/work431.pdf>
- Hill, Hal. (2012). Malaysian Economic Development: Looking Backward and Forward. Malaysia's Development Challenges: Graduating from the Middle, 40.
- Hock, Lee Kiong & Nagaraj, Shyamala. (2011). The Crisis in Education. Malaysia's Development Challenges: Graduating from the Middle, 221-229.
- International Monetary Fund. (2013). "Malaysia: Article IV Consultation." IMF Country Report No. 13/51. Washington, D.C.
- Jala, Dato S.I. (2010). "Opening Presentation" Performance Management Delivery Unit. Government of Malaysia, Presentation.
- Joseph Sipalan, October 26, 2013, "No need to downsize civil service"
Retrieved from <http://www.themalaymailonline.com/malaysia/article/no-need-to-downsize-civil-service-says-khairi#sthash.zfdvAvNa.dpuf>
- Krishnan, Sekharan Nair. (2012). "Malaysian Graduates English Adequacy in the Job Sector." Asian Social Science. 8:4. Retrieved from <http://ccsenet.org/journal/index.php/ass/article/view/15971>.
- Ibrahim, Muhammad bin and Adrian Wong (2005). "The Corporate Bond Market in Malaysia." Bank Negara Malaysia. Retrieved from <http://www.bis.org/publ/bppdf/bispap26p.pdf>
- International Monetary Fund. (2012). World Economic Outlook
Retrieved from <http://www.imf.org/external/pubs/ft/gfsr/2012/02/pdf/text.pdf>
- International Monetary Fund. (2013). World Economic Outlook. Chapter 4
Retrieved from <http://www.imf.org/external/pubs/ft/weo/2013/02/pdf/text.pdf>
- International Monetary Fund. (2008). World Economic Outlook: Housing and the Business Cycle.
Retrieved from <http://www.imf.org/external/pubs/ft/weo/2008/01/pdf/text.pdf>
- International Monetary Fund. (2012). World Economic Outlook: Growth Resuming, Dangers Remain. Retrieved from <http://www.imf.org/external/pubs/ft/weo/2012/01/pdf/text.pdf>
- Malaysia Article IV Consultation (2012), IMF Country Report No.13/51
- Malaysia Economic Monitor Report, June 2013 "Harnessing Natural Resources", Page 11-40
- Mat Zin, Ragayah Haji. (2012). Poverty Eradication and Income Distribution. Malaysia's Development Challenges: Graduating from the Middle, 239-240.
- McKinsey Global Institute, June 2005. "The Emerging Global Labor Market: Part II—The Supply of Offshore Talent in Services." Retrieved from <http://kdi.mscomalaysia.my/static/reports/TheSSofOffshoreTalentinServices.pdf>
- Menon, Jayant & Hee Ng, Thiam, April 2013 "Are Government-Linked Corporations Crowding out Private Investment in Malaysia?" ADB Economics Working Paper Series No. 345, Page 8-9

- Mok, O. (2013), "Rusty language skills blunting Malaysia's edge, says Penang CM." *The Malay Mail*, October 10. Retrieved from: <http://www.themalaymailonline.com/malaysia/article/rusty-language-skills-blunting-malaysias-edge-says-penang-cm>
- Monetary Authority of Singapore. (2012). Financial Stability Review. Retrieved from http://www.mas.gov.sg/~media/resource/publications/fsr/FSR%202012_Final.pdf
- Montlake, Simon. (2009). Najib Walks the Malaysian Tightrope. *Far Eastern Economic Review*, 58.
- National Economic Advisory Council. (2010). New Economic Model for Malaysia Part 1. Retrieved from <http://www.epu.gov.my/epu-theme/pdf/nem.pdf>
- Navaratnam, Ramon V. (2002). Malaysia's Economic Sustainability: Confronting New Challenges amidst Global Realities, 15-18.
- Nelson, Charles R., and Andrew F. Siegel. "Parsimonious modeling of yield curves." *Journal of business* (1987): 473-489.
- Nelson, Joan M. (2012). Political Challenges in Economic Upgrading: Malaysia Compared with South Korea and Taiwan. *Malaysia's Development Challenges: Graduating from the Middle*, 50.
- New Straits Times (2013), "Diesel smuggling foiled." Retrieved from <http://www.nst.com.my/nation/general/diesel-smuggling-foiled-1.362067>
- Organisation for Economic Co-operation and Development. (2009). Economic Surveys: Denmark. Retrieved from http://www.oecd-ilibrary.org/economics/oecd-economic-surveys-denmark-2009/households-debt-and-net-wealth_eco_surveys-dnk-2009-graph1_12-en
- Othman, Jamal & Jafari, Yaghoob, 8. February 2011, "Accounting for Depletion of Oil and Gas Resources in Malaysia", National University of Malaysia, MPRA Paper No. 29037, Page 3
- Press Release, September 2 2013, Prime Minister's Office of Malaysia Retrieved from http://www.pmo.gov.my/?menu=news&news_id=11945&page=1731&news_cat=4
- Reuters, 30 July 2013, "RPT-Fitch Revises Malaysia's Outlook to Negative; Affirms IDRs at A-/A" Retrieved from <http://www.reuters.com/article/2013/07/30/fitch-revises-malaysias-outlook-to-negativeUSFit66566620130730>
- Reuters (2010). "Update 2 – Malaysia backs away from unpopular fuel price hikes." Retrieved from <http://uk.reuters.com/assets/print?aid=UKSGE62307M20100304>
- Reuters (2010), "Malaysia plans new economic growth." Retrieved from <http://uk.reuters.com/article/2010/03/18/malaysia-economy-idUKLNE62H00A20100318>
- Singapore Customs, Government of Singapore Government, (2012) "Three-quarter Tank Rule." Retrieved from: <http://www.customs.gov.sg/leftNav/trav/Three-quarter+Tank+Rule.htm>
- Singapore Department of Statistics. (2012). Quarterly Household Sector Balance Sheet. Retrieved from http://www.singstat.gov.sg/publications/publications_and_papers/household_sector_balance_sheet/ip-e41.pdf

- Sowell, Thomas. (2005). *Affirmative Action Around the World: An Empirical Study*, Chapter 3
- Spitz, J. (2012). "Energy Subsidies – an OPEC Perspective." *Oxford Energy Forum*, The Oxford Institute for Energy Studies. Issue 88
- Sta Maria, Stephanie. (2011). Poor English Skills Bad for Economy. Free Malaysia Today News. Retrieved from <http://www.freemalaysiatoday.com/category/nation/2011/01/18/poor-english-skills-bad-for-economy/>
- Standard Chartered. (2013). Asia Leverage Uncovered. Retrieved from <http://www.standardchartered.com/en/resources/global-en/pdf/Research/Asia-leverage-uncovered.pdf>
- Syed Jaymal Zahid, November 18, 2013, "Putrajaya defends bloated civil service, says providing jobs." Retrieved from <http://www.themalaymailonline.com/malaysia/article/putrajaya-defends-bloated-civil-service-says-providing-jobs>
- United States Energy Information Administration (2013), "Malaysia – Analysis."
- Wadhwa, V. (2008). "India: Toward High-End Outsourcing." Bloomberg Businessweek. Retrieved from <http://www.businessweek.com/stories/2008-12-16/india-toward-high-end-outsourcingbusinessweek-business-news-stock-market-and-financial-advice>
- Wall Street Journal, 30 September 2013, "Foreigners Stay Away from Malaysia 30-Year Bond" Retrieved from <http://online.wsj.com/news/articles/SB10001424052702303918804579106903155928262>
- Weber, E.U. (2012). "Doing the Right Thing Willingly" in E. Sharif (eds) *The Behavioral Foundations of Public Policy*. Princeton: Princeton University Press
- Welsh, Bridget. (2013). Trauma and Triumphalism in Malaysia. *Current History*, Volume 112, 239.
- Yen Nie, Y. (2013). "Malaysia's English language crisis." The Straits Times. October 12. Retrieved from <http://www.stasiareport.com/the-big-story/asia-report/malaysia/story/malaysias-english-language-crisis-20131012#sthash.KZdD1bHs.dpuf>
- Yusuf, S. & Nabeshima, K. *Tiger Economies under Threat*. Washington, DC. The World Bank. Retrieved from: <http://www.fticonsulting.com/global2/critical-thinking/fti-journal/china-plus-one.aspx>