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THE STATE OF HOUSEHOLDS 2018

Different Realities

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Our website (www.KRInstitute.org) has interactive versions of all the charts in this report, where the underlying data can also be downloaded. If you are reading this on the PDF version, the charts link directly to our website.

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The key to progress and prosperity lies not in satisfaction with what we have already achieved but in a firm determination to make even greater efforts in the future.

Tunku Abdul Rahman Putra Al-Haj
First Malaysia Plan, 1965

EXECUTIVE SUMMARY

Introduction

The overall economic story of Malaysia since Independence is one of significant progress and achievement in which millions of Malaysians are now much better off compared to the generations before them. The narrative of our development, seen from this long-term perspective, is mostly determined and almost singular – an ensemble performance of progress.

But as we shorten the time horizon of our perspective, move closer towards the present and look deeper into the nuances of the diversity that exist – the coherence of this narrative begins to splinter into a multiplicity of smaller stories, reflecting the diverse economic realities of almost seven million Malaysian households and the challenges they face. In the third instalment of the State of Households, we explore these smaller stories of the present and tie them back to the long arc of our economic development in the past and as we move into the future.

The publication is divided into three parts;

- **Part One—State of Households: *Different Realities:*** an analysis of the state of households anchored on the latest release of the Household Income and Expenditure Survey 2016 by the Department of Statistics Malaysia (DOS);
- **Part Two—The Malaysian Workforce: *A Changing Landscape:*** the broader changing landscape of the workforce, and
- **Part Three—Malaysia's Development Journey: *Past, Present and Future:*** the overall economic transformation of the country and how the welfare of all households in Malaysia is ultimately and intrinsically tied to it.

Part One—State of Households: *Different Realities*

Not all households have the same experience. The assessment is in three key sections:

a) Household incomes
b) Household expenses, based on income-levels
c) An overview assessment on the changing contour of household income distribution and inequality since the 1970s.

Households in the vast majority of districts earn less than the national median household income of RM5,228 in 2016. Highly urbanised and populated

districts have higher median household income. Indeed, the average household income level in Greater Kuala Lumpur is almost twice as high as the rest of the Malaysia.

A firm understanding of the reasons underpinning the diversity in household incomes is essential. **No more than 10% of the differences in household income in different parts of the country could be explained by either demography or degree of economic participation.** By contrast, urban households earn on average 80% more than rural households, and households with household heads with higher education and high-skill levels have household incomes three to four times more than those with no formal education or those in low-skilled jobs.

In 2016, households with income below RM2,000 spent 94.8% of their incomes in consumption items listed in the household expenditure survey. Conversely, households above RM15,000 monthly income spent only 45% of their incomes in 2016. Worryingly, for households earning below RM2,000, the income remaining after accounting for inflation is only RM76 in 2016, reducing from RM124 in 2014. This highlights that households earning below RM2,000 are potentially very vulnerable against economic shocks or emergencies. Between 2014 and 2016, households with income level below RM5,000 are cutting back on actual consumption of food despite spending more money on it given high food inflation. For richer households, the shifts are more lifestyle oriented – from expenditure on food at home to food away from home, and on cultural and entertainment services.

We end this part of the publication by providing a long-term perspective of the changing trends in inequality and by touching briefly on how the standard measure of inequality in Malaysia could be improved to better reflect our economic reality. Overall, it is important to recognise that while conventional measures of inequality have improved, there are reasons to believe why this improvement in statistics has not trickled down to perceptions on the ground. **For example, even when measured income inequality has improved, the absolute gaps in household income between the different income classes have continued to increase—in the past two decades, the actual differences in household income, adjusted to inflation, have almost doubled between the top 20% households versus the middle and bottom 40% households, respectively.**

Part Two—The Malaysian Workforce: *A Changing Landscape*

On women in the workforce, over the years, gender gap remains evident in labour force participation, unemployment, pay and senior positions held by men and women, although most of these disparities have improved since 2010. Particularly, three key findings stand out from our analysis. **Firstly, women shoulder a disproportionate share of housework, hindering their participation in the labour force.** In 2017, 58.0%, or 2.6 million women stayed out of the labour force for housework, compared to 3.2%, or 69,800 men.

Secondly, women outside the labour force are mostly educated and of prime-working age (ages 25 to 54). Specifically, two million prime-age women are outside the labour force, compared to 0.2 million men. **Thirdly, one-third of the increase in women's labour force between 2010 and 2017 is due to the rise in own account workers (i.e., self-employment).** Given the more vulnerable nature of self-employment, striking a balance between preserving economic opportunities and ensuring economic security for women hence becomes the challenge moving forward.

In summary, much needs to be done to empower women economically. We found that raising women's employment levels by 30% would not only raise Malaysia's GDP by around 7% to 12%, but also serve as a potential remedy for an ageing population by alleviating the burden of labour force participants providing to the rest of the population by around 30%, provided that the gender gap is closed in the next 12 years.

Next is the issue of immigration and its broader economic impact. Between 2010 and 2017, the number of foreign workers increased from 1.7 million to 2.2 million, constituting 15.5% of total employed persons in Malaysia. Most foreign workers are from Indonesia (although the proportion has greatly reduced over the years), working in urban areas, concentrating in agriculture, construction, and manufacturing sectors, and engaging in low-skilled and semi-skilled jobs. More notably, two important developments can be observed between 2010 and 2017. For Malaysians, our country has produced more tertiary-educated workers than those of any other education level, yet most jobs created are in the semi-skilled categories. This points to a possible significant mismatch between native labour demand and supply. For foreign workers, low-skilled occupations have witnessed the highest increase in foreign workers

among all occupations, signalling that foreign workers have not been occupying the same occupational space as native workers.

On the economic impact of foreign workers employment, most empirical studies found no significant effects on labour market outcomes. We summarise the three factors leading to the small impact of immigration. The first is the low degree of substitutability between foreign workers and natives—which means both groups do not compete directly in the labour market. The second is that immigration leads to more economic activities, thereby expanding employment opportunities broadly across the labour market. The third is task specialisation. As foreign workers fill the bottom hierarchy of the labour market, natives gradually take up more supervisory roles, which often result in better pay.

This section is also accompanied by a technical paper which presents the econometric estimation of the effects of immigration on labour market outcomes, labour productivity, and capital intensity in Malaysia. The findings are generally consistent with existing studies on Malaysia. Nevertheless, it needs to be appreciated that while the impact of foreign workers could be less of a concern in the immediate term, it could be more pervasive over the longer term in relation to the structure of our economic transformation. Reliance on foreign workers, for example, is found to be associated with lower levels of technical adoption in most economic sub-sectors and could in part lead to an economic structure that relies more on low-cost labour which in turn, could impede upon our economic transition towards becoming a high-income economy

Part Three—Malaysia's Development Journey: *Past, Present and Future*

In the final part, we highlight the fact that improvements in the state of households in Malaysia over the decades has not occurred in isolation but is intrinsically tied to the economic development and transformation of the nation. Long-term national and household income trends can be tied to the structural evolution of Malaysia's economy, which started as a predominantly agricultural economy in its early days, evolving into a rapidly industrialising nation that began in the 1970s and peaked at the turn of the century, shifting towards a deindustrialisation process from the 2000s onwards. Improvements in the economy in the past also corresponded with a general improvement in the well-being of Malaysians and these can be observed through indicators such as

increased life expectancy, lower mortality rates for children and improved access to utility facilities.

These improvements over the years have made Malaysia a relatively affluent, upper middle-income country. Since 1987, Malaysia has been classified as a low middle-income country for the first five years and upper middle-income in the following twenty-five years. **As Malaysia heads towards the high-income country horizon, the country would need to reflect on its state of development and key challenges it faces to become an advanced economy. We investigate this along three dimensions: an intensively knowledge-based economy, high quality human capital and modern infrastructures.**

To map the country's potential to be a knowledge-based economy, an overview of the nation's state of research and development (R&D) activities, entrepreneurship and economic complexity is provided. A continuous focus on Malaysia's innovation capabilities is needed, as innovation is a key driver of productivity and long-term income growth. However, Malaysia spent a relatively small amount of resources on research, dedicating only 1.1% of GDP to R&D activities. In the case of entrepreneurship, Malaysian entrepreneurs despite seeing easier conditions to set up a business generally do not innovate. From the perspective of economic complexity, the Malaysian economy's technical know-how and the range of products it produces have been steadily increasing since 1960s, albeit at a slower pace of growth post-2000s. This coincides with the deindustrialisation phenomenon observed in the same time period.

To complement the knowledge-based economy, the state of human capital development in this country—of which 20% of government expenditure goes to education—has plenty of room for improvement. Despite Malaysians receiving 12 years of schooling, Malaysian students receive only 9 years' worth of schooling after adjusting for education quality. The central issue of generating high quality human capital in this country is an important one, as the transition to a high-income nation requires human capital levels that continuously improve productivity, sustain growth and are able to create or utilise technological advancements rather than being substituted by it. Beyond knowledge and human capital, the provision of modern infrastructures and facilities are essential for the seamless and efficient functioning of modern economic activities. Apart from physical infrastructures mentioned earlier, internet and

online services infrastructure is vital for a growing internet user base in Malaysia. Future-oriented improvements are needed for internet-based government services to cope with the demands of Malaysians in the future.

However, these issues should not be taken in isolation as we venture into an uncertain future. Various global and domestic trends—ranging from technological disruptions, changes in the global economic and geopolitical landscape, and changes to our biosphere, to demographic changes in the Malaysian society and lower returns from past growth strategies – pose a challenge to Malaysia's economy and the well-being of its people. **Given the fact that it is difficult to accurately predict what the future holds, rather than reacting to events as they unfold, the best strategy for Malaysia instead, is to build and develop on our core fundamentals.** These fundamentals—broadly identified as openness, human capital development, economic agility, inclusive growth, and macroeconomic stability—are essential in ensuring economic security for Malaysians through both good and trying times.

Conclusion

The three parts of this report could be read independently, and we hope that even through that it could shed new assessments on the various separate aspects of the economy. But if read completely, it is our hope that we are providing a more wholesome picture of how the multiplicity of stories of different Malaysian households presently could be tied to the long arc of our national economic development.

We have not provided detailed policy recommendations, but through our assessments – from the need to appreciate how the diverse economic realities and challenges of different households, the recognition of the centrality of the balance of unpaid care-work with regards to gender equality, to the significance of focusing on strengthening our core economic fundamentals as our nation wades into a rapidly changing and uncertain global and domestic environment—it is hoped that we have highlighted areas of priorities that are essential to address in securing the future of the state of all households in Malaysia.

PART 01

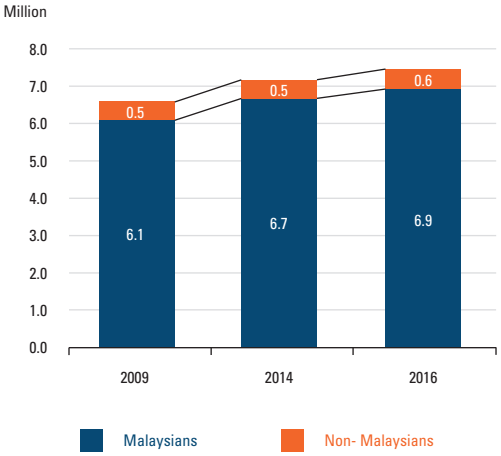
PART 1

THE STATE OF HOUSEHOLDS: DIFFERENT REALITIES

Since the publication of our first *State of Households* in 2014, by outlining some of the pressing issues of the nation, the primary focus of our assessment is that of the well-being of households in Malaysia. In this first part of the third instalment of the publication, we are following through with this focus, anchoring on a central and crucial observation that not all households have the same experience—we all live in different realities. The chapter is in three key parts, the first being an update on the development in household incomes since the last report and exploring how the differences in incomes can be explained by some common factors. The second part is on household expenses, with an emphasis on the different experiences of different households based on their income-levels, as well as a longer-term assessment on the changing patterns in household expenditure in the last decade. The last part takes on an even longer-term view, providing an overview assessment on the changing contour of household income distribution and inequality in Malaysia since the 1970s.

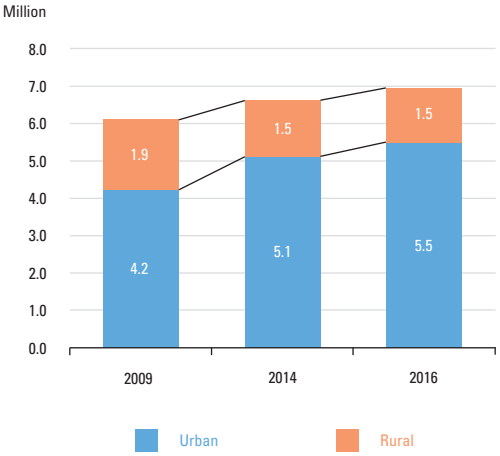
1.1 Introduction—Households in Malaysia

Figure 1.1: Number of households, 2009 – 2016



Source: DOSM

Figure 1.2: Number of Malaysian households, by stratum, 2009 – 2016



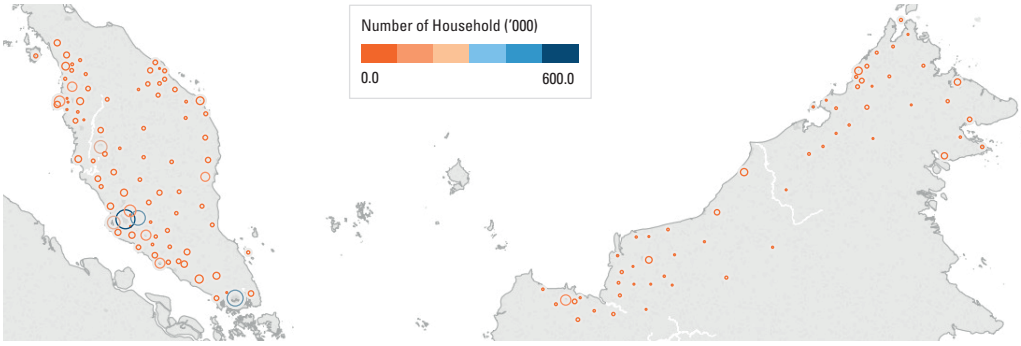
Source: DOSM

We begin with an introduction to the basic characteristics of households in Malaysia. A household is defined as a person or group of related or unrelated persons who usually live together and share the use of food and other living essentials. The total number of Malaysian and non-Malaysian households in Malaysia in 2016 stood at 7.5 million households, with 6.9 million households with Malaysians as heads of household (Figure 1.1). This number increased from 6.6 million households in 2009, at an average annual rate of 2.0% between these four years. Given the nature of these available statistics, unless explicitly stated otherwise, references to households are taken to mean households with Malaysian citizens as the heads of household.

Nearly 78% of households in Malaysia in 2016 were in urban areas, increasing from 69% in 2009 (Figure 1.2). This corresponded to 5.5 million households in 2016, increasing from 4.2 million households in 2009. This was mirrored by the decrease in the number of households in rural areas. In 2009, there were 1.9 million households in rural areas. In 2016, this number was 1.5 million.

In terms of states, Selangor had the largest number of households, with 1.6 million households, while Perlis had only 56,300 households. Figure 1.3 shows the distribution of households by districts. The larger the circle, the more households there are in the district. Petaling, Selangor had the highest number of households at 535,400 households, followed by WP Kuala Lumpur at 461,600 households. Pakan, Sarawak had the smallest number of households at 3,400 households.

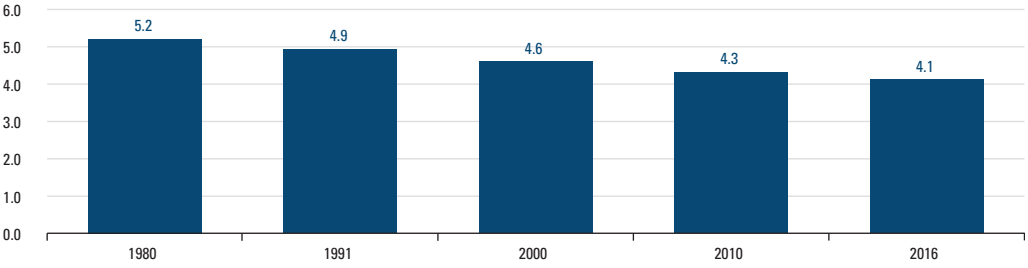
Figure 1.3: Number of households, by district, 2016



Source: Department of Statistics Malaysia

In 2016, the average size of a household was 4.1 persons (Figure 1.4). This follows a long trend of declining household size in Malaysia. For example, in 1980, the average household size was 5.2 persons.

Figure 1.4: Average household size, Malaysia, 1980 – 2016



Source: CEIC (n.d.)

1.2 Household Incomes

1.2.1 The national 'average'

Figure 1.5a: Real & nominal median household income, 2009 – 2016

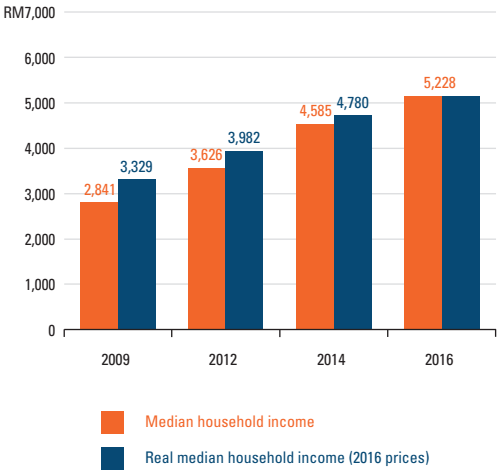
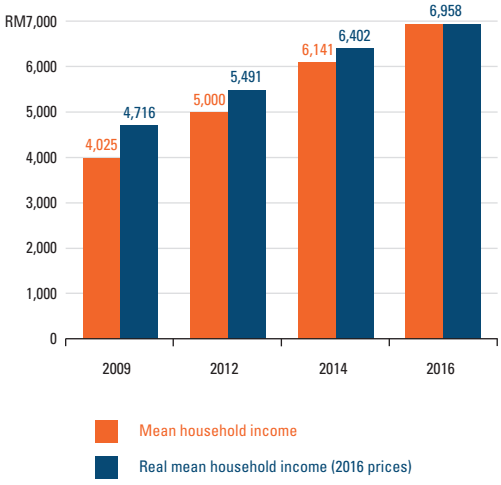


Figure 1.5b: Real & nominal mean household income, 2009 – 2016

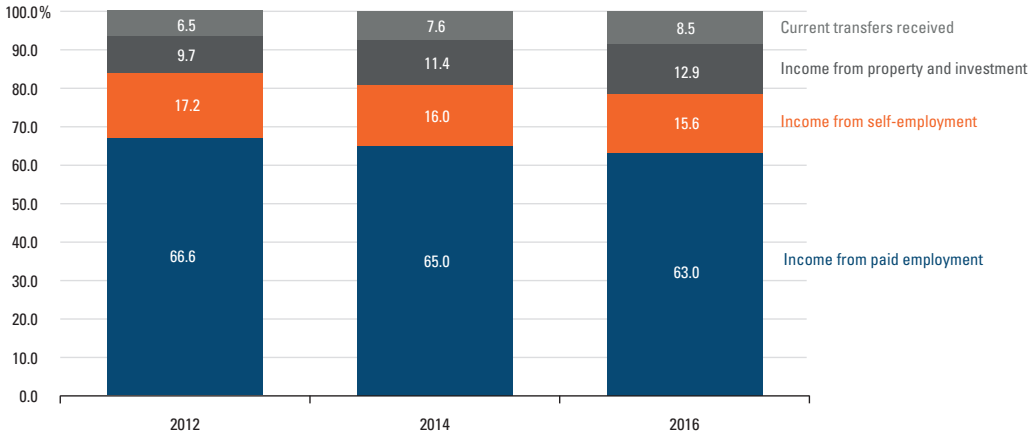


Source: Department of Statistics Malaysia and KRI Calculations

The median household income in 2016 was RM5,228 per month, while the mean household income was RM6,958 per month (Figure 1.5a, 1.5b). Median household income increased at 9.1% per year on average from RM2,841 per month in 2009, while mean income increased by 8.1% per year on average from RM4,025 per month in 2009.

With inflation accounted for, real median household income increased by 6.7% per year on average since 2009. At 2016 prices, the equivalent median household income in 2009 was RM3,329 in 2009. Real mean household income, on the other hand, increased by 5.7% per year on average from RM4,716 in 2009, in 2016 prices.

Figure 1.6a: Head of household sources of income, 2012 – 2016

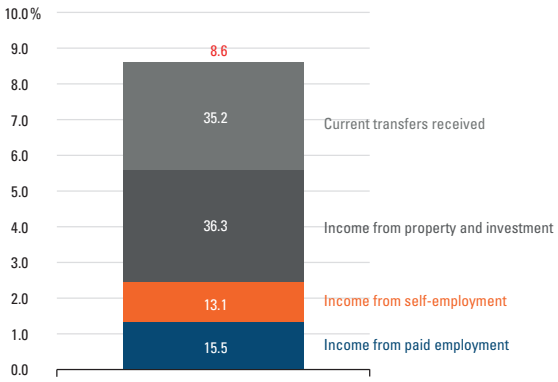


Source: Department of Statistics Malaysia and KRI Calculations

Figure 1.6a shows the shares of head of household's sources of income from 2012 to 2016. To note, data from before 2012 is not available publicly, hence the choice of 2012 for the start of analysis. The sources of income for the entire household income itself is also not available.

Paid-employment, followed by self-employment were the two most important sources of income for household heads, contributing to 63.0% and 15.6% of their income respectively in 2016. Their relative importance, however, has been decreasing. In 2012, both sources of income accounted for 66.6% and 17.2% of total income respectively. Instead, the share of household income from property and investment, and current transfers (income from government aid and transfers from family) have been increasing. In 2016, income from property and investments accounted for 12.9% of household head income, increasing by 3.2 percentage points from 2012. Income from current transfers accounted for 8.5% of household head income in 2016, increasing by 2.0 percentage points from 2012.

Figure 1.6b: Sources of income, contribution to growth, 2012 – 2016

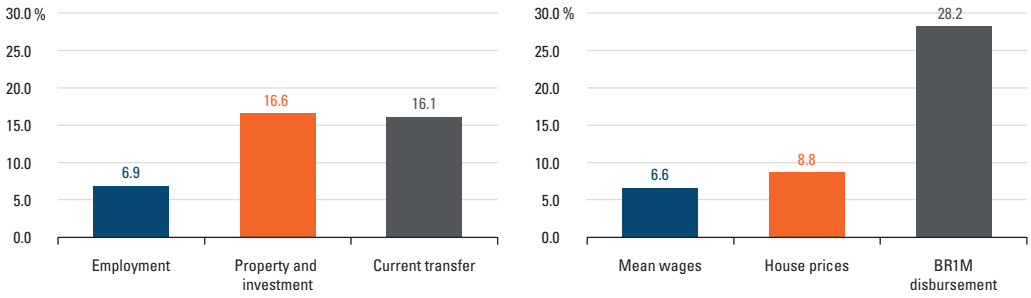


Source: Department of Statistics Malaysia and KRI Calculations

The picture is slightly different in terms of growth in income. Figure 1.6b shows the overall growth of household income, and the contribution to the growth from the constituent sources of income[1]. Between 2012 and 2016, mean income of households grew by 8.6% per year. Of this, income from property and investment contributed 36.3% to the growth, followed by current transfers at 35.2%. Both self-employment and employment only contributed 13.1% and 15.5% to the income growth.

1 As data is not available for the constituent sources of income for the whole household income, we assumed that the proportion for the sources of income follows the proportions of household heads income.

Figure 1.7: Average annual growth of head of household's sources of income, and related indicators, 2012 – 2016



Source: Department of Statistics Malaysia, Ministry of Finance, NAPIC and KRI Calculations

Figure 1.7 shows that the growth of household income from employment, including from self-employment, is on average 6.9% per year since 2012. This is lower than income from property and investment (16.6% per year since 2012) and income from current transfer (16.1% per year since 2012).

The changes in the different sources of household income were broadly in line with other relevant indicators observed during the same period. The lower rate of growth in income from employment is reflected by the growth of 6.6% per year in mean wages from 2012 to 2016. This is lower than the rate of growth in house prices at 8.8% per year during the same period. Similarly, the rate of growth in Bantuan Rakyat 1 Malaysia (BR1M) disbursement[2] was at 28.2% per year in the same period, potentially contributing to the growth of household income derived from current transfers.

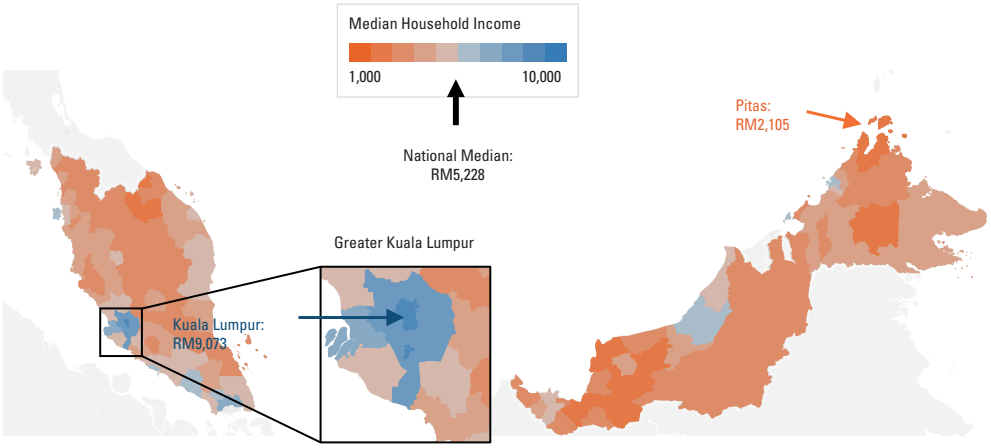
2 BR1M disbursement includes transfers both to households and individuals

1.2.2 Different Households, Different Realities

National averages can obscure the very diverse realities that different Malaysian households live in. For the first time ever, the *Department of Statistics, Malaysia* (DOS) has released granular household income data down to the district level in the latest *Household Income Survey* report. This rich information opens up the possibility of analysing the experiences of different Malaysian households in different parts of the country in a much more nuanced manner.

In order to appreciate the diversity in experiences of different households in Malaysia, one could observe the differences in income-level geographically. Figure 1.8 is a map of the median household incomes of all the 144 districts and federal states in Malaysia for 2016. The deeper blue the district, the higher the median household income of the district. On the opposite end, the deeper orange the district, the lower the median household income.

Figure 1.8: Median household income district, 2016

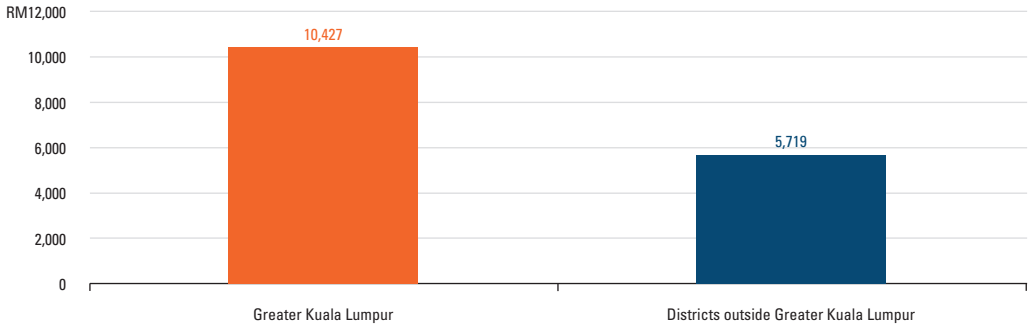


Source: Department of Statistics Malaysia

Households in the vast majority of districts earned less than the national median household income of RM5,228. Mainly highly urbanised and populated districts had higher median household income, such as the districts in the Greater Kuala Lumpur (for example, Petaling at RM7,904), Pulau Pinang (for example, Timur Laut at RM5,964) and Johor Bahru (Johor Bahru at RM6,518).

The differences between districts can be stark: Kuala Lumpur had the highest median household income at RM9,073, 4.3 times higher than the district with the lowest median household income in the country: Pitas, Sabah at RM2,105 median household income.

Figure 1.9: Greater Kuala Lumpur and rest of Malaysia mean household income, 2016

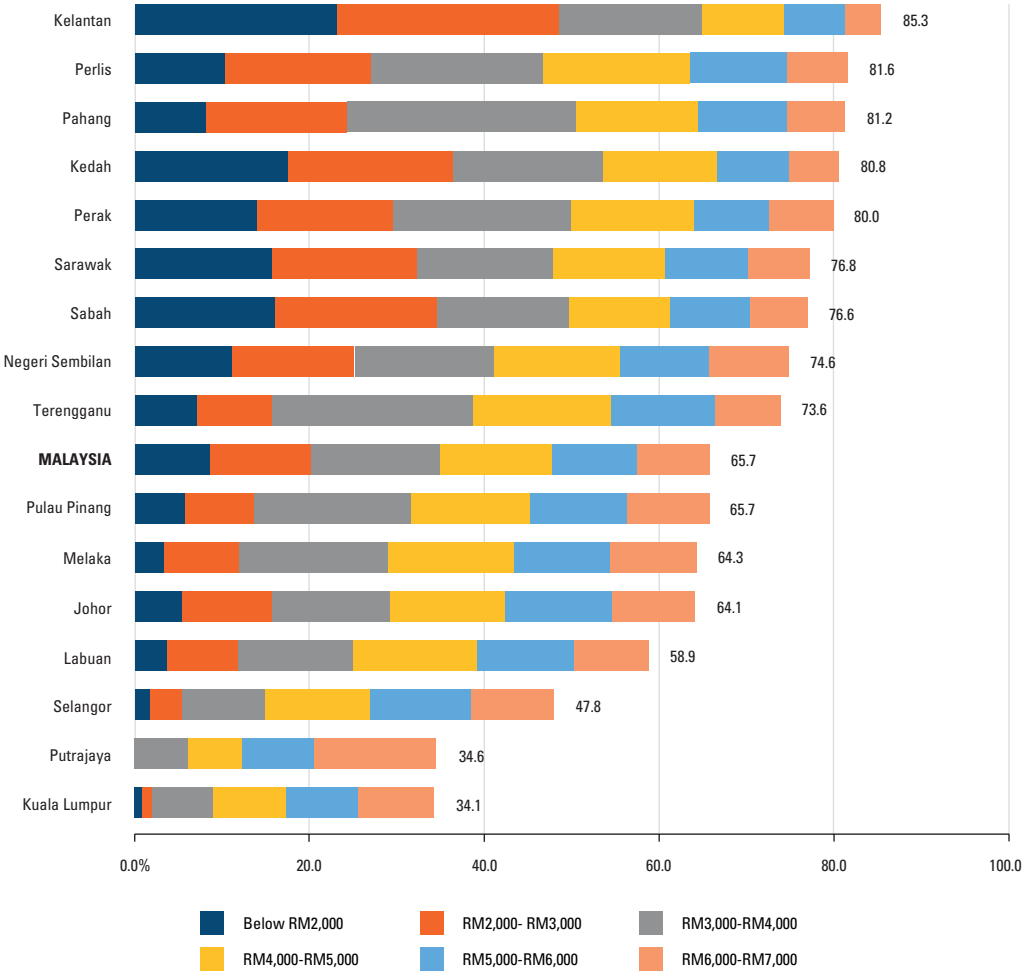


Source: Department of Statistics Malaysia and KRI Calculations

Figure 1.9 shows the mean household income between districts within and outside of Greater Kuala Lumpur [3]. Households within Greater Kuala Lumpur earned RM10,427 in mean household income, nearly two times the mean household income in the rest of the districts in Malaysia. The district with the lowest mean household income in Greater Kuala Lumpur, Klang at RM8,606, was higher than the district with the highest mean household income outside of Greater Kuala Lumpur, Johor Bahru at RM8,198. Total income of all households in Greater Kuala Lumpur was almost 40% of the total income of all households nationally, with only 26.3% of the total number of households in the country. For comparison, Johor Bahru, which had 6.4% of total income of all households nationally, only had 5.4% of the total number of households. Pulau Pinang with 6.0% of the total income of all households nationally, only had 6.2% of the total number of households.

3 The definition of Greater Kuala Lumpur is adopted from EPU standard, and includes districts Kuala Lumpur, Gombak, Petaling, Sepang, Putrajaya, Klang & Hulu Langat

Figure 1.10: Percentage of households by state below RM7,000, 2016



Source: Department of Statistics Malaysia

The national mean household income of RM6,958 also masks the variety of household income at the state level. Figure 1.10 shows the percentage of households in each state that have household incomes less than RM7,000. Kelantan had the highest percentage of households below the national mean household income, where 85.3% of households had incomes below RM7,000. This is followed by Perlis at 81.6% and Pahang at 81.2%. Selangor,

Kuala Lumpur and Putrajaya, where around a quarter of the population reside, were among the states with the lowest percentage of households below national mean household income, with Kuala Lumpur the lowest at 34.1%.

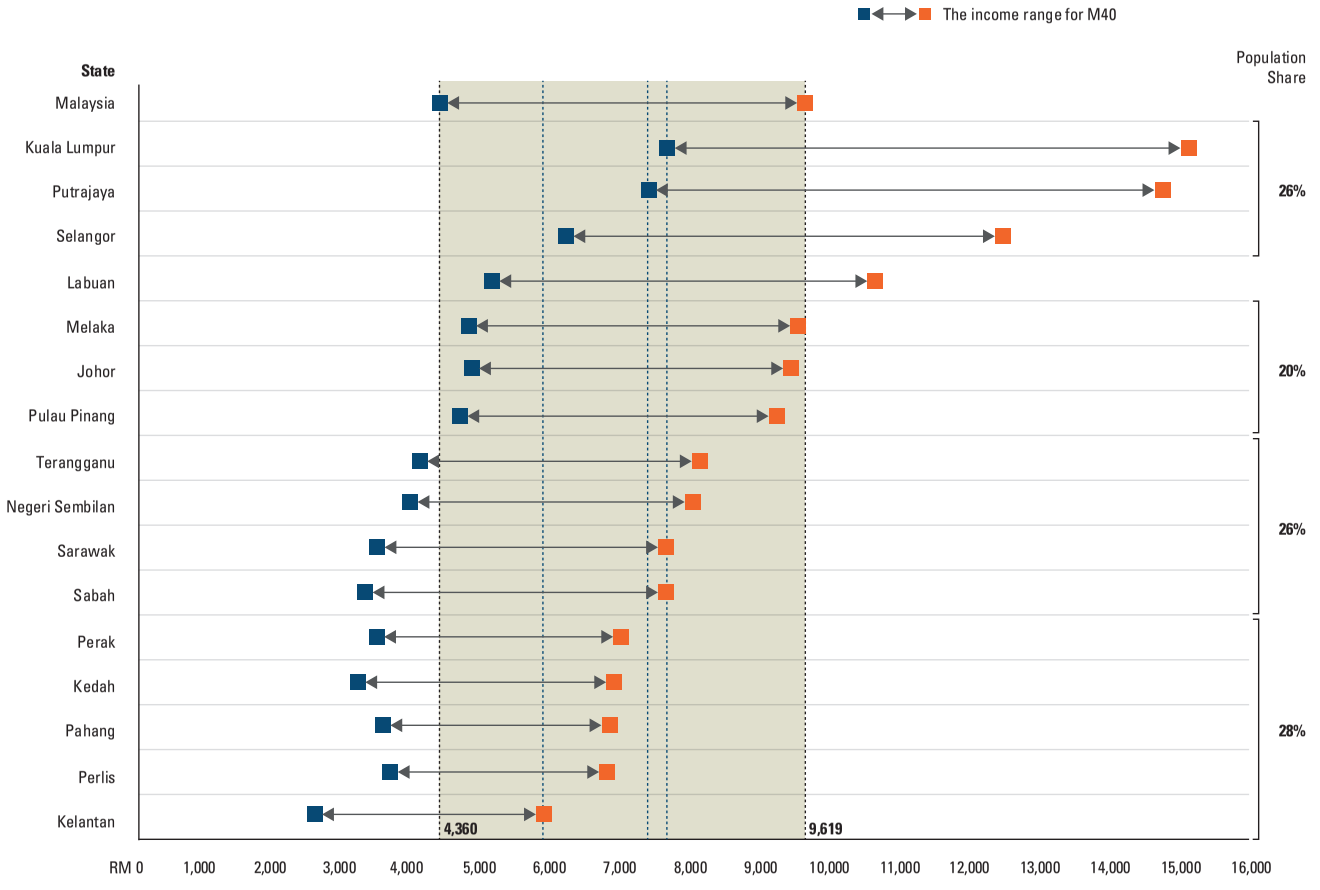
The heterogeneity of household incomes can also be seen through how different it is to be in the different income groups—bottom 40%, middle 40% and top 20%—in each of the states. Figure 1.11 shows the state and national thresholds for the different income groups in terms of household income. The lower and higher threshold lines bounding the shaded region represent, nationally, the highest household income for a household to be categorised in the national bottom 40% and the middle 40% respectively. This means that households that earned below RM4,360 per month in 2016 are in the bottom 40% of all households, while households that earned between RM4,360 and RM9,619 per month are in the middle 40% of all households. Households that earned above RM9,619 are in the top 20% of all households.

However, the equivalent state-level thresholds were very different for each state. In Figure 1.11, the blue squares represent the highest household income of the bottom 40% in the state, and the orange squares show the highest household income of the middle 40% in the state. For states in Greater Kuala Lumpur, such as Kuala Lumpur, households in the bottom 40% in the state may be in the middle 40% nationally. For example, a household in Kuala Lumpur with income just below RM7,640 is in the bottom 40% of Kuala Lumpur, but is considered to be in the middle 40% nationally.

By contrast, the top 20% households in some states may be in the middle 40% nationally. For example, a household in Kelantan that earned just above RM5,870 is considered to be in the top 20% of households of the state. However, they would be part of the middle 40% households nationally, and in fact in the bottom 40% of households if they're in Kuala Lumpur.

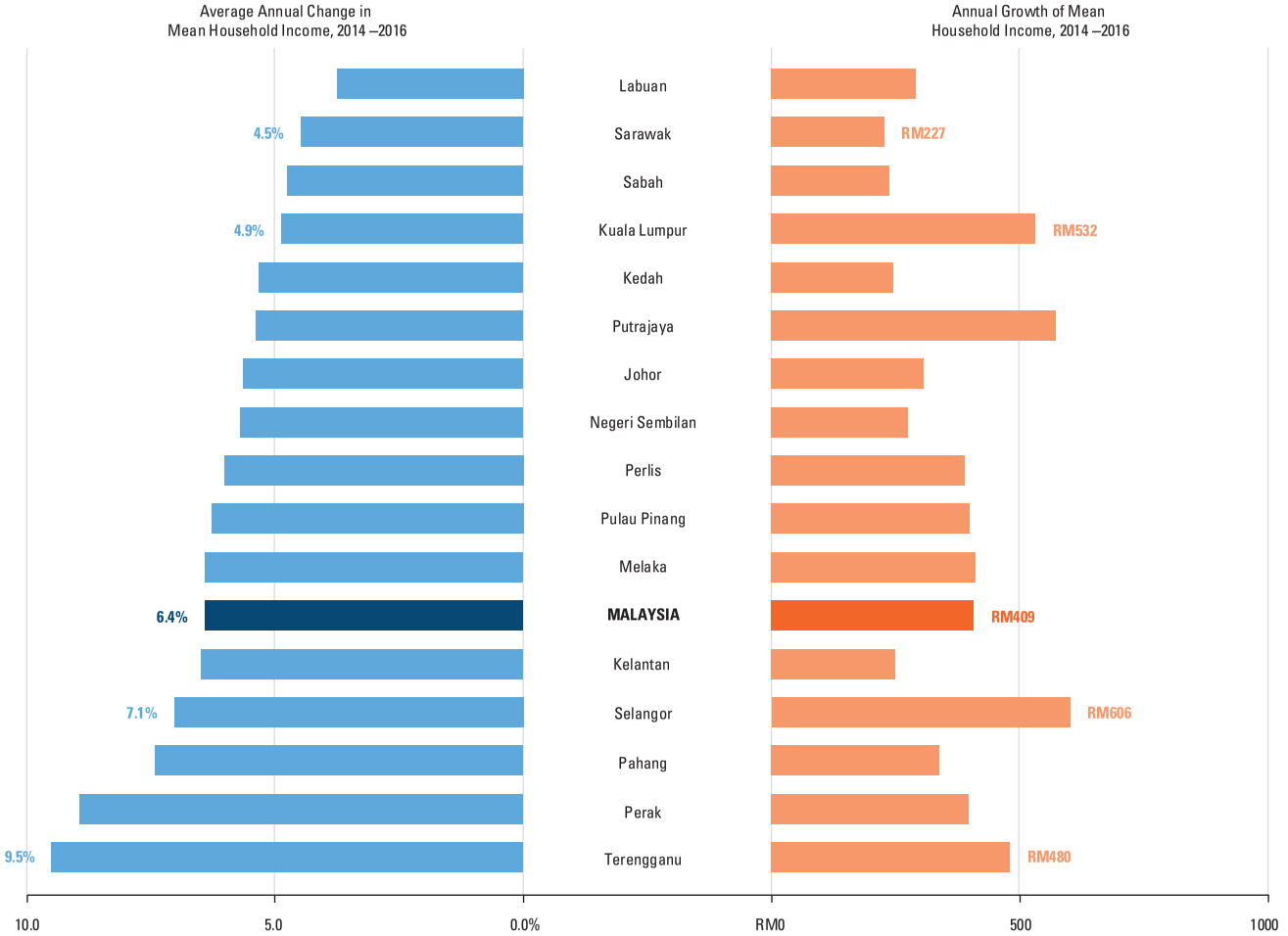
Only Melaka, Johor and Pulau Pinang coincide roughly with the national threshold. This means only around 20% of the population in the country can be roughly segmented using the national threshold into three income groups.

Figure 1.11: Income thresholds for household income class, 2016



Source: Department of Statistics Malaysia
Note: The highlighted area represents the income threshold for the M40 group in 2016: More than Rm4,360 and less than RM9,620

Figure 1.12: Annual growth and change in mean household income, 2014 – 2016



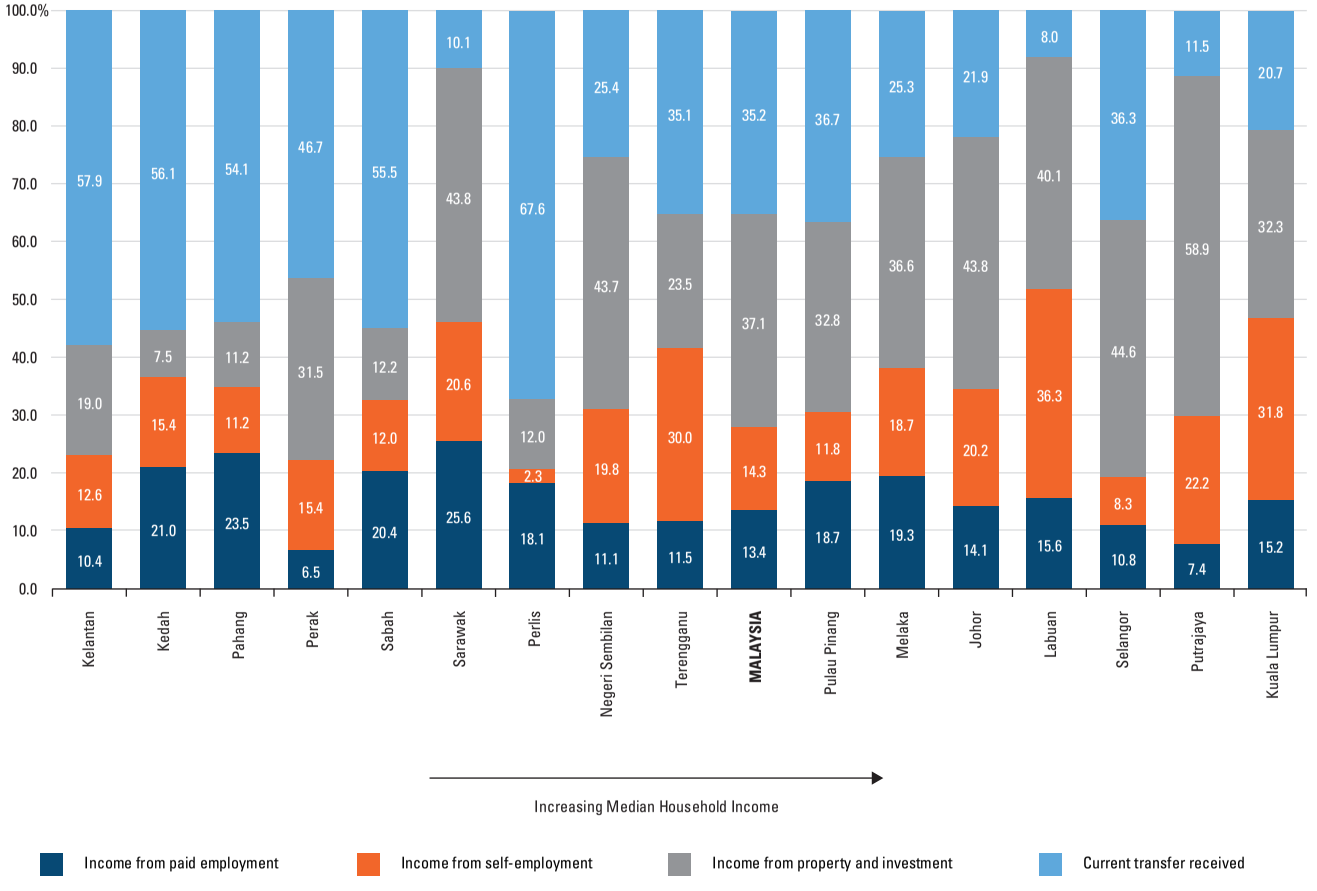
Source: Department of Statistics Malaysia

State differences also extend to the different annual growth rates in household incomes and the sources to that growth. Figure 1.12 shows the growth rates of mean household income by state from 2014 to 2016, broken down to the sources of income that contributed to that growth[4]. State level data on sources of income by head of household is not available publicly before 2014, hence only data since 2014 were presented. Between 2014 to 2016, the national mean household income grew by 6.4% per year. The mean household income in Terengganu grew the fastest at 9.5% per year, higher than states such as Sarawak which grew at 4.5% per year. However, while the household income in Kuala Lumpur grew at the 4th slowest among all the states, in absolute terms, household income has increased on average by RM532 per year, one of the largest increases. Conversely, while Terengganu grew the fastest by nearly two times at 9.5% per annum, in absolute terms, it has only increased on average by RM480 per year. Mean household income in Perak grew by 8.9% per annum, but has increased only on average by RM399 per year.

Figure 1.13 shows the annual contribution to growth by the sources of income by mean household income. For states with lower than national median household income such as Terengganu, Perak, Pahang and Kelantan, current transfers were found to be the largest driver of household income growth. For example, 35.1% of the growth in household income in Terengganu is driven by current transfers received. By contrast, in Selangor, which had a higher than national mean household income, nearly 50% of growth in household income was driven by income from property and investment. However, other than Labuan, all other states found non-employment source of income contributed more to overall growth compared to employment.

4 As previously, as data are not available for the constituent sources of income for the whole household income, we assumed that the proportion for the sources of income follows the proportions of household heads income.

Figure 1.13: Annual contribution to growth of mean household income by sources of income, by state, 2014 – 2016



Source: Department of Statistics Malaysia

1.2.3 What explains the diversity in household incomes?

A firm understanding of the reasons underpinning the diversity in household incomes is essential in appreciating the actual state of households—and more broadly, the overall state of the Malaysian economy. A comprehensive and definitive treatment on this matter, however, is complex and is beyond the scope of this part of the report. With that said, by assessing the association of Malaysian household incomes with various dimensions of household life, such as demography, economic participation, urbanisation and degree of human capital, we seek to unpack some of the empirical regularities on why some households have higher household income than others, and why large variations of household incomes across different regions in the country exist.

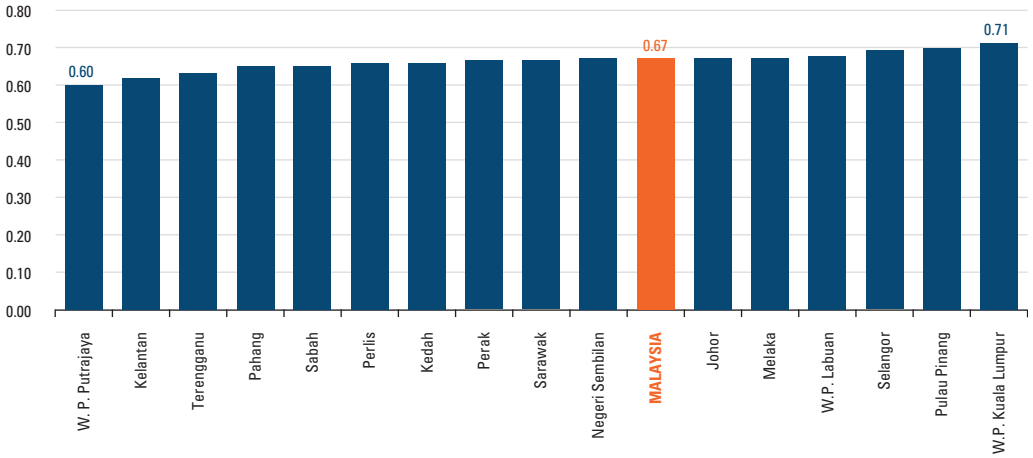
Demography

One common refrain of why places such as Kuala Lumpur could have higher household incomes compared to other states is that perhaps there are simply less retirees or young children compared to adults in the working age[5] in the state. That is, the demographic condition is more economically favourable in Kuala Lumpur.

Figure 1.14 shows the number of adults in the working age per population for each state. On average, Malaysian households in 2016 had 0.67 working-aged adults per population. Putrajaya had 0.6 working-aged adults per population, the lowest amongst all the states while Kuala Lumpur had the highest number of working-aged adults per population at 0.71 working adults per population.

5 Between the age of 15 to 64.

Figure 1.14: Number of working population per population, by state, 2016

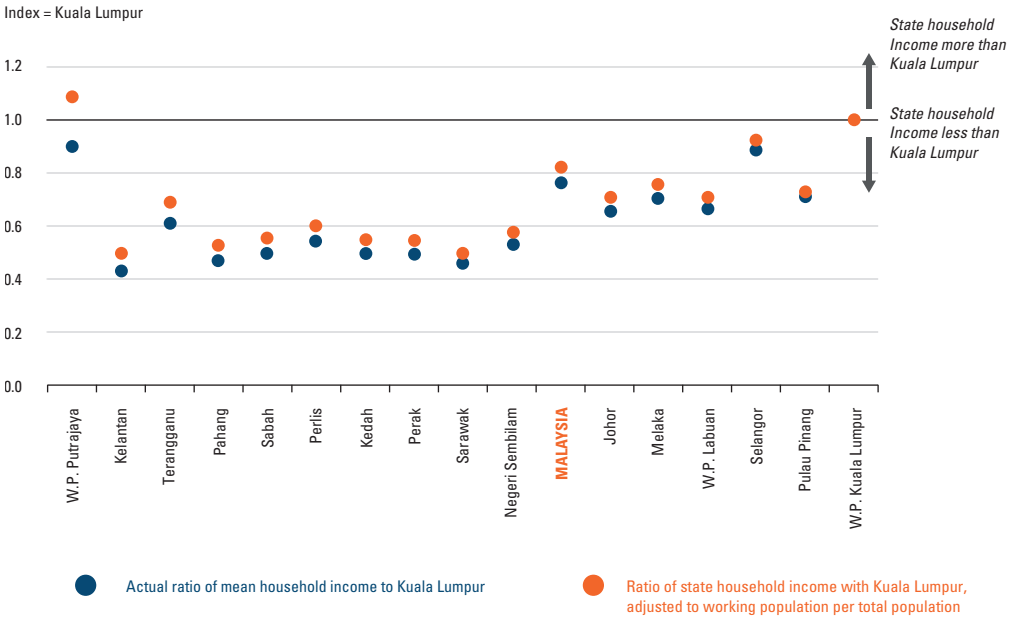


Source: Department of Statistics Malaysia and KRI Calculations

Figure 1.15 shows the ratio between the mean household income of each state to Kuala Lumpur in blue circles, and the ratio between the adjusted state household income, assuming the state has the same number of working-aged adults per population as Kuala Lumpur, to the mean household income of Kuala Lumpur in orange circles. For both ratios, the larger the ratio is above 1, the larger the state household income is compared to Kuala Lumpur. Simlarly, the smaller the ratio is below 1, the smaller the state household income is compared to Kuala Lumpur.

After assuming that each state has the same number of working-aged adults per population as Kuala Lumpur, state household incomes increase for most states. However, other than Terengganu, Melaka and Pulau Pinang, the increase is less than 10%. The household income in Labuan and Sarawak have the smallest increase at nearly 0% and 1.3% respectively, while household income in Pulau Pinang would have the largest increase at 19%.

Figure 1.15: Ratio of mean household income and adjusted household income by working population to Kuala Lumpur, 2016



Source: Department of Statistics Malaysia and KRI Calculations

However, the number of working-aged adults could overestimate the number of adults who are presently working and providing income to the household. This may be due to some women staying at home to care for the family while others are unemployed for other reasons, therefore not bringing income to the household. Therefore, comparing the number of actual income recipient per household of each state would be more accurate. When there are more income earners in the household, household income would probably be higher.

Figure 1.16a shows the number of income recipient per household for each state in 2016. The difference in the number of income recipients between states is small, the smallest being Kedah, Kelantan, Negeri Sembilan, Perak and Sarawak with 1.7 income recipients per households, and Labuan had the largest at 2 income recipients per household. For Kuala Lumpur, the number was 1.9 income recipients per household. Correspondingly, the difference in labour force participation rate across states was also relatively small, between 59.1% of the population in Kelantan to 77.6% of the working adult population in Putrajaya.

Figure 1.16a: Number of income recipients per household, by state, 2016

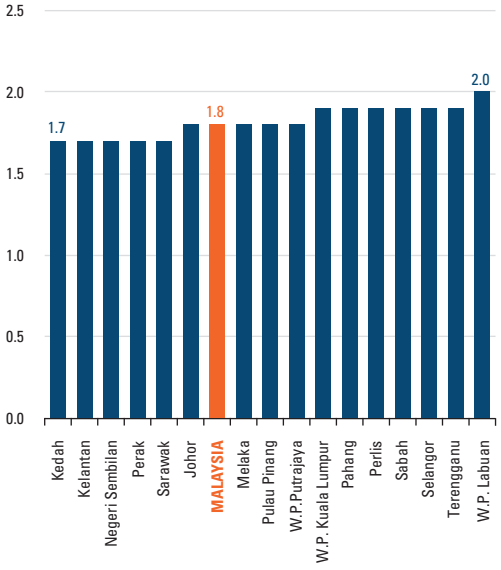
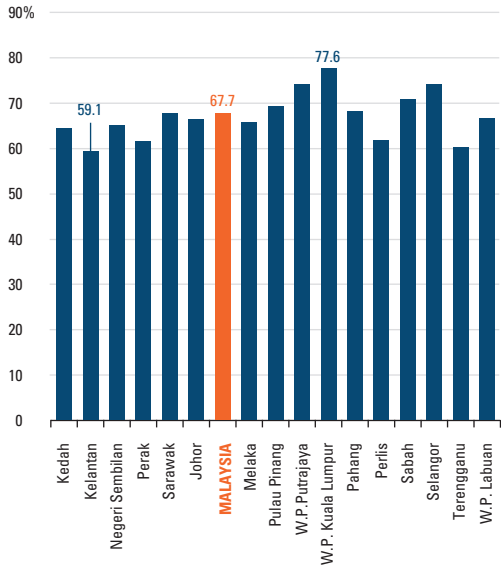


Figure 1.16b: Labour force participation rate, by state, 2016



Source: Department of Statistics Malaysia and KRI Calculations

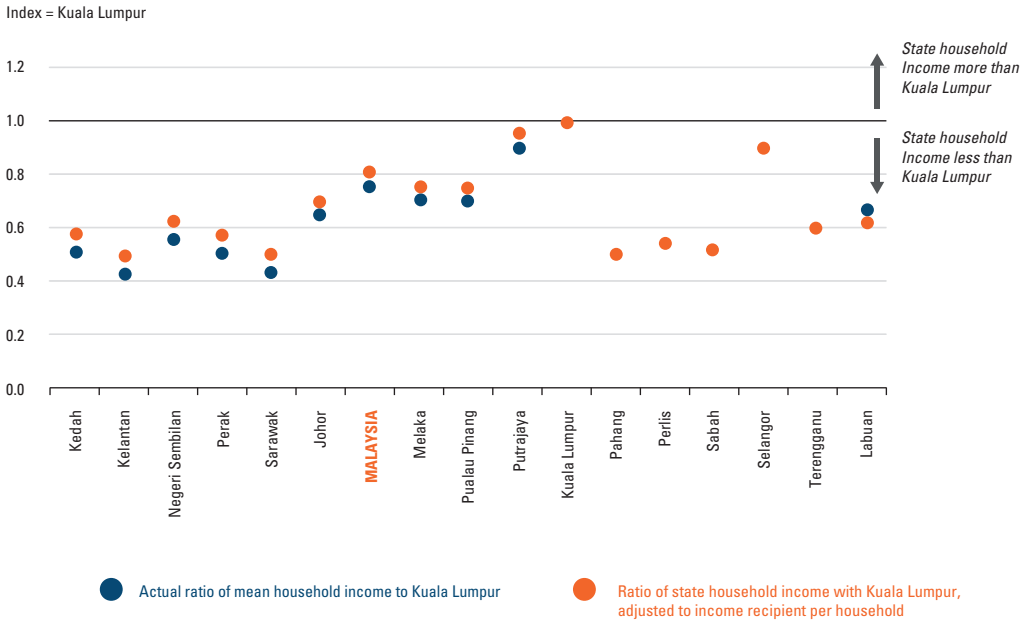
If the other states have the same number of income recipient per household as Kuala Lumpur, while everything else remains the same, would the household income of these states be as high as Kuala Lumpur? To see if this is true, the exercise above is repeated but this time equalising income recipients per household; we adjusted the state household income by assuming that each state has the same number of income recipients per household as Kuala Lumpur.

Figure 1.17 shows the ratio between the actual mean household income of each state to Kuala Lumpur in blue circles. The orange circles represent the ratio between the adjusted state household income, assuming that each state has the same number of income recipient per household as Kuala Lumpur, to the mean household income of Kuala Lumpur. For both ratios, the larger the ratio is above 1, the larger the state household income is compared to Kuala Lumpur. Simlarly, the smaller the ratio is below 1, the smaller the state household income is compared to Kuala Lumpur.

After assuming that each state has the same number of income recipients per household with Kuala Lumpur, for most states, the hypothetical state household incomes increase. The gap between Kuala Lumpur and the rest narrows if we take into account the degree of economic participations that varies across different households for different states. However, the quantum is not large—less than a tenth of the gap. Negeri Sembilan has the largest increase at 6.5%, while Pahang, Perlis, Sabah, Selangor and Terengganu would remain the same, as these states have the same number of income recipient per household as Kuala Lumpur.

This hypothethical exercise is meant to provide a cursory illustration that demography, even after accounting for the degree of economic participation, does not meaningfully explain the large variations in household income between the states.

Figure 1.17: Ratio of mean household income and adjusted household income by income recipient to Kuala Lumpur, 2016



Source: Department of Statistics Malaysia and KRI Calculations

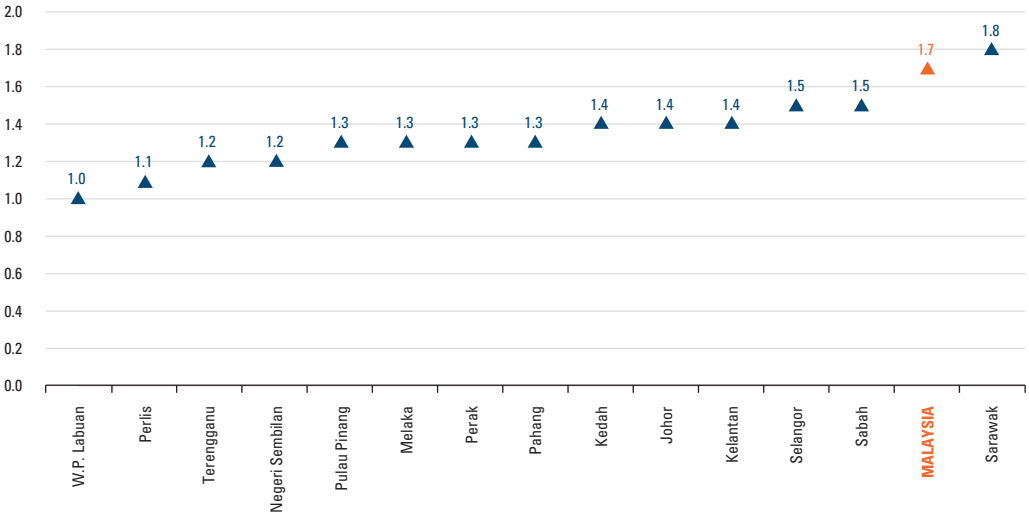
Urbanisation

Another potential factor that could explain the differences in household income is urbanisation. Urban areas are often more economically productive than rural areas, for a variety of reasons. Therefore, an urban household typically has a higher income compared to a rural household.

In 2016, nationwide, urban households earned more than 1.7 times of rural households. This pattern is also true at state level. Figure 1.18 shows the ratio of urban median household income to rural median household income. The results show that across all states, urban median household income was higher than rural income. The largest difference in household income was in Sarawak, where urban households earned 1.8 times more than rural household income. This is followed by Sabah and Selangor, where urban households earned 1.5 times more than households in rural areas. The smallest difference is in Perlis, where urban households earned 1.1 times more than rural households. Urban

households in the other states earned between 1.1 times to 1.5 times of rural households. The degree of urbanisation matters—an urban household in Malaysia was on average 70% richer than their rural counterpart. This observation holds true even when we look at it within each state. It should be noted that the precise mechanism of why this is so is not explored here, and as such, it should not be used to imply that urban Malaysia is unequivocally better than rural Malaysia. What this shows, however, is that the rural-urban dimension is a salient angle to shed further light on why the large variation of household incomes exist in Malaysia.

Figure 1.18: Ratio of urban to rural median household income, by state, 2016

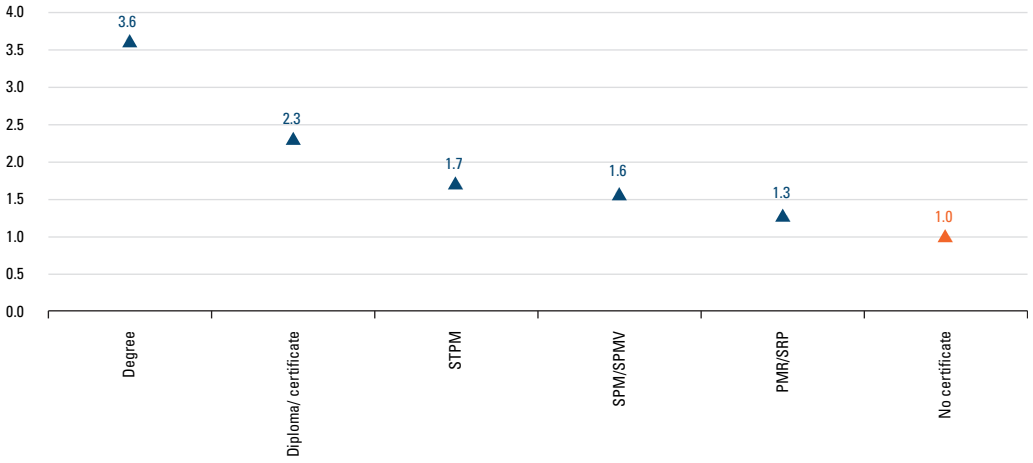


Source: Department of Statistics Malaysia and KRI Calculations

Education and skills

In economics, human capital is a measure of the skills, education, capacity and attributes of individuals which influence their productive capacity and earning potential. It is also one of the most important determinants of overall economic outcomes for both households and the overall economy[6]. As such, it is likely that the large variation in household income could be explained by the differences in human capital for each household—measured, albeit indirectly, through their education and occupational skill-levels[7].

Figure 1.19: Ratio of median household income to no certificate income, 2016



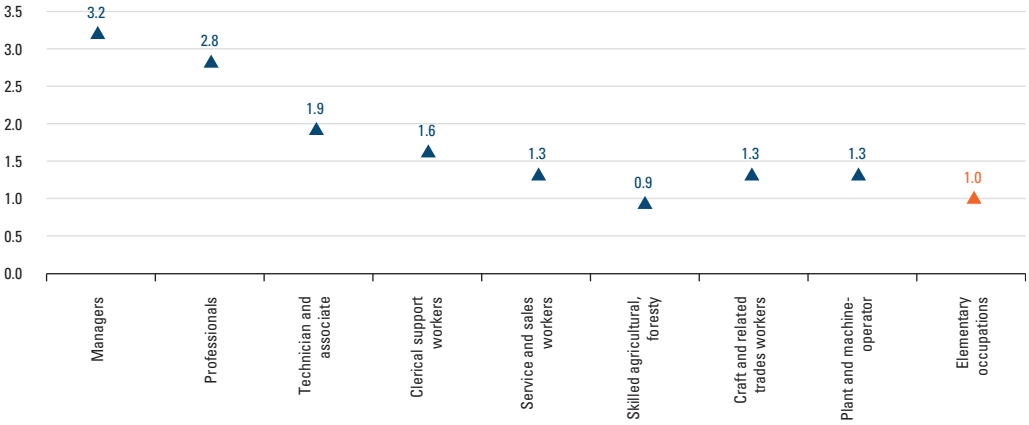
Source: Department of Statistics Malaysia and KRI Calculations

Figure 1.19 shows the ratio of median household income by education level of household heads relative to household heads with no certificate. Household heads who had at least a degree qualification had household incomes of more than 3.6 times to those with no certificate. This was more than 2.1 times the difference between urban and rural households.

6 A comprehensive discussion on this is in Chapter 3 of this report.

7 The categorisation of education level and occupation level is according to DOS's standard of categorisation.

Figure 1.20: Ratio of median household income to elementary occupations income, 2016



Source: Department of Statistics Malaysia and KRI Calculations

Figure 1.20 shows the ratio of median household income of household head occupation relative to household heads working in elementary occupations. Similarly, household heads who were in the high-skilled, manager category earned 3.2 times more than household heads who are in low-skill, elementary occupations. Generally, the higher skilled occupations the heads of household had, the higher the overall household income. The magnitude of the differences is not trivial—households with higher human capital have considerably higher household incomes.

In this section, we discussed the differences in household incomes in Malaysia, and how they are associated with three relevant dimensions—demography, urbanisation and human capital. From these observations—demography does not seem to meaningfully account for the differences in household incomes across states. More could be explained by the degree of urbanisation, and even more so by the degree of human capital. Urban households earn more than rural households, and households with heads with higher education and skill levels have much higher household incomes. The latter will be explored in greater depth in Part 3 of this report in the broader context of the economic development of Malaysia.

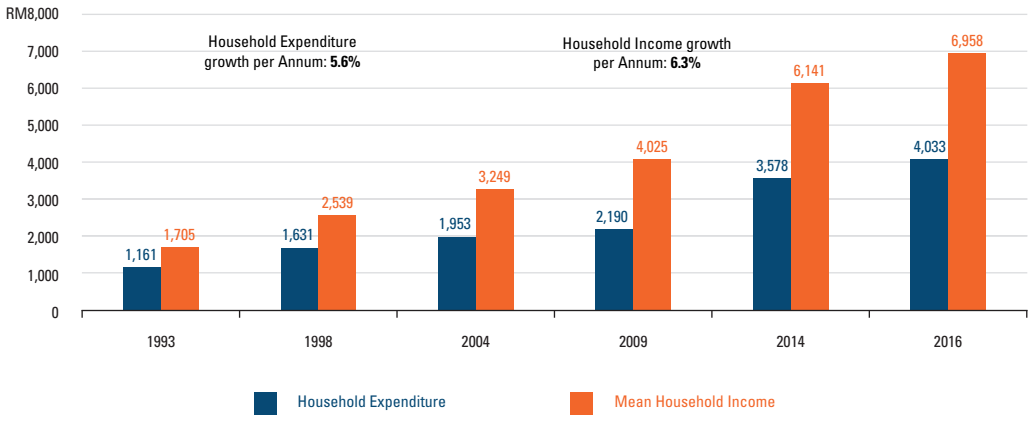
However, having higher household income does not fully reflect the well-being of the household. For example, goods and services may be more expensive in some areas, requiring higher household income to maintain the same quality of life. The next section seeks to look at the expenditure of households to further explore the different experiences of Malaysian households.

1.3 Household Expenses

1.3.1 A national overview

Assessing the well-being of households through the perspective of income is important, but inadequate. Complementing the analysis with understanding the trends in household expenses serves to provide a more complete picture of how Malaysian households have fared.

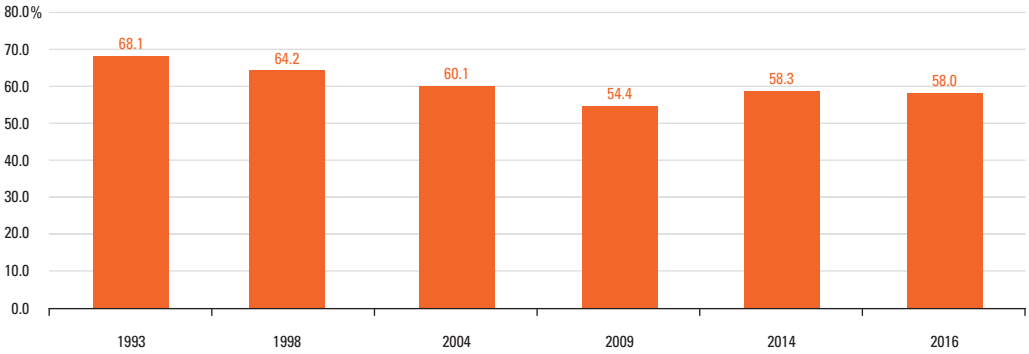
Figure 1.21: Household expenditure and income, 1993 – 2016



Source: Department of Statistics Malaysia and KRI Calculations
Note: The surveys for household income and expenditure were not done simultaneously before 2014.

The average household expenditure in 2016 was RM4,033, increasing from RM1,161 in 1993. Household expenditure has grown in line with mean household income, with income growing slightly faster than expenditure (Figure 1.21). Mean household expenditure has grown by 5.6% per year since 1993, while mean household income has grown by 6.3% per year in the same period.

Figure 1.22: Household expenditure as percentage of household income, 2016



Source: Department of Statistics Malaysia and KRI Calculations

Figure 1.22 shows household expenditure as a percentage of household income. The share of mean household expenditure was 58.0% of mean household income in 2016, decreasing from 68.1% in 1993[8]. The share of household expenditure dipped in 2009 to 54.4% before increasing again in 2014.

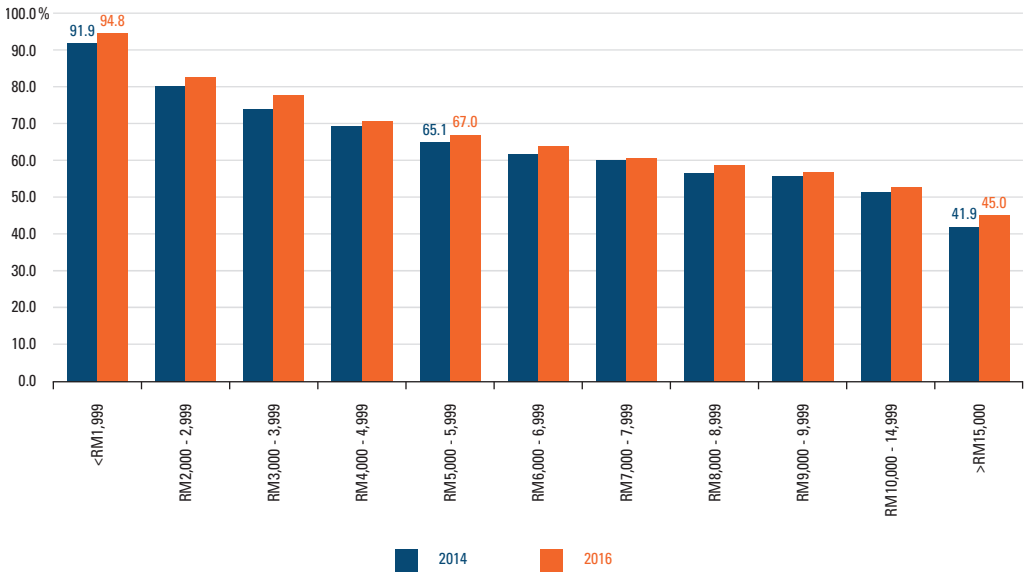
1.3.2 Diverging experiences for lower- and higher-income households

Yet again, the overall national figures mask important differences in experiences across different households. Figure 1.23a shows the proportion of household expenditure per household income for households of different income classes. The share of household expenditure per household income has increased for all income levels from 2014 to 2016. In 2016, households with incomes below RM2,000 spent 94.8% of their incomes in consumption items listed in the household expenditure survey, increasing from 91.9% of their income in 2014. Conversely, households earning above RM15,000 monthly incomes only spent 45% of their incomes in 2016, increasing from 41.9% of their income. The median household income in 2016 was RM5,228, correspondingly, about 67% of it is spent on household expenditure, up from 65.1% in 2014.

8 To note, the surveys for household income and expenditure are not done simultaneously before 2014. Data quoted before 2014 were based on separate household surveys.

This means that the income remaining after expenditure, that is the residual household income, has reduced for all income classes. Figure 1.23b shows the residual household incomes of the different income classes. Worryingly, for households earning below RM2,000, the income remaining after accounting for inflation (i.e. real residual income) is only RM76 in 2016, reducing from RM124 in 2014. This highlights that households earning below RM2,000 are potentially very vulnerable against any economic shocks or emergencies.

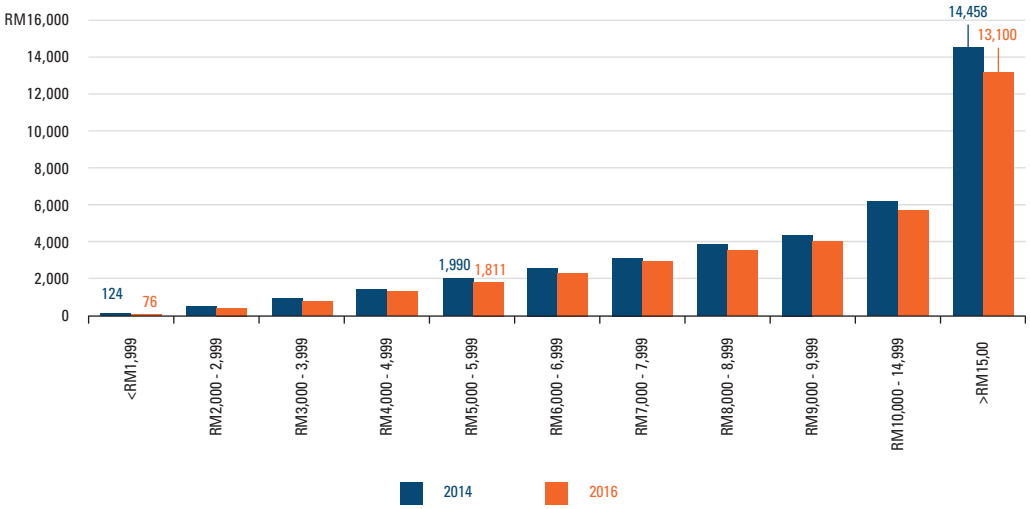
Figure 1.23a: Share of expenditure to household income, 2014 – 2016



Source: Department of Statistics Malaysia and KRI Calculations

This is in contrast to households earning above RM15,000, who had RM13,100 remaining in 2016, decreasing from RM14,458 in 2014. Households earning around the median household income had RM1,811 remaining in 2016, a reduction from RM1,990 in 2014.

Figure 1.23b: Real residual household income, 2014 – 2016 (2016=100)



Source: Department of Statistics Malaysia and KRI Calculations

Important to note, however, residual household income still includes income to be paid as tax and compulsory social security schemes. Higher income households most likely pay larger amounts of residual household income for taxes.

What led to the reduction of residual income? Figure 1.24 shows the changes in quantity of item consumed and expenditure per year from 2014 to 2016 by income class. Two important distinctions have to be made. Changes in quantity consumed is calculated from the growth in real expenditure to remove the effects of inflation, hence measuring the changes in the actual quantity of item consumed by the household. Changes in expenditure is calculated from the growth of actual money spent on expenditure.

Figure 1.24: Change in expenditure on selected items by household income class, 2014 – 2016

Cost of living?

Lower income households' spending's on most items continue to grow except for recreation and cultural services...

... but actual quantity consumed in fact declined for many items, even overall food, given higher prices.

	Percentage change in expenditure, annual(%)						
Income class of households	Food at Home	Housing & housing-related	Transport	Health and Education	Communication	Food away from Home	Recreation & cultural services
Below RM3,000	3.2	5.6	-6.0	11.0	2.4	4.4	-5.9
RM3,000 to RM5,000	2.5	4.1	-2.1	12.3	-0.7	3.4	-2.9
RM5,000 to RM10,000	1.5	3.7	-3.7	9.4	-2.9	4.3	-0.2
RM8,000 to RM10,000	0.1	1.6	-1.7	8.6	-2.0	4.8	5.1
Above RM10,000	2.3	1.6	0.9	5.8	-0.1	4.5	6.0

	Percentage change in quantity consumed, annual(%)						
Income class of households	Food at Home	Housing & housing-related	Transport	Health and Education	Communication	Food away from Home	Recreation & cultural services
Below RM3,000	-1.1	2.5	-3.7	7.0	1.5	-0.6	-8.5
RM3,000 to RM5,000	-1.3	1.3	2.2	8.3	-1.4	-0.9	-5.4
RM5,000 to RM10,000	-2.2	1.0	0.7	5.8	-3.3	0.3	-2.4
RM8,000 to RM10,000	-3.5	-0.9	2.9	5.2	-2.3	0.8	3.0
Above RM10,000	-1.2	-0.6	5.9	2.8	-0.1	0.8	4.1

Source: Department of Statistics Malaysia and KRI Calculations

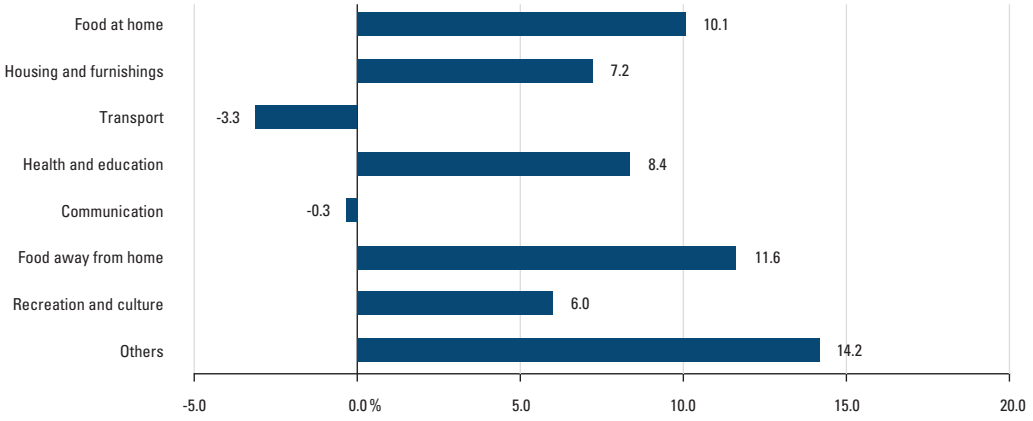
Lifestyle?

Higher income households' expenditure grew overall for most items, including recreation and cultural services...

... and on actual quantity, food consumed at home declined but is substituted for food away from home.

From this perspective, we can observe a very clear divergence in experiences between lower- and higher-income households. For households with incomes below RM5,000, cost of living could be a key factor affecting their expenditure patterns. This is most telling with regards to expenditure on food. While overall money spent increased for food at home[9], the quantity of food consumed at home reduced. This reduction in the amount of food at home consumed is not substituted by food purchased away from home[10], as the quantity consumed also reduced. This coincided with the rise in prices for both food at home and food away from home (Figure 1.25). Aside from food, lower income households also reduced consumption in several expenditure categories, especially those that are more discretionary in nature. For example, both the expenditure and quantity of recreation and culture services consumed reduced. For households with income below RM3,000, even the actual quantity consumed for transportation declined despite the overall decline in prices for this expenditure category.

Figure 1.25: Cumulative change in CPI, 2014 – 2016



Source: Department of Statistics Malaysia and KRI Calculations

9 Food at home includes food purchased in groceries or cultivated to be prepared or cooked for consumption at home.
10 Food away from home includes food purchased for consumption in restaurants and cafes.

On the other hand, the expenditure patterns of higher income households are very different, highlighting perhaps more of a trend in lifestyle. While households earning above RM5,000 have reduced the consumption of food at home, they substituted it with eating more food away from home. Also, unlike lower-income households, the quantity of recreation and culture services consumed also increased for these households. Furthermore, as transportation prices have reduced given the decline in petrol prices during this period (Figure 1.25), the quantity of transportation consumed increased even though actual money spent reduced.

Overall, this observation is very revealing. Is the changing pattern of Malaysian consumption in the last few years a reflection of the rising cost of living, or an outcome of shifts in lifestyle? The answer—it seems—is both, depending on whether you fall under the poorer or richer halves of Malaysian households.

1.3.3 Long-term expenditure patterns

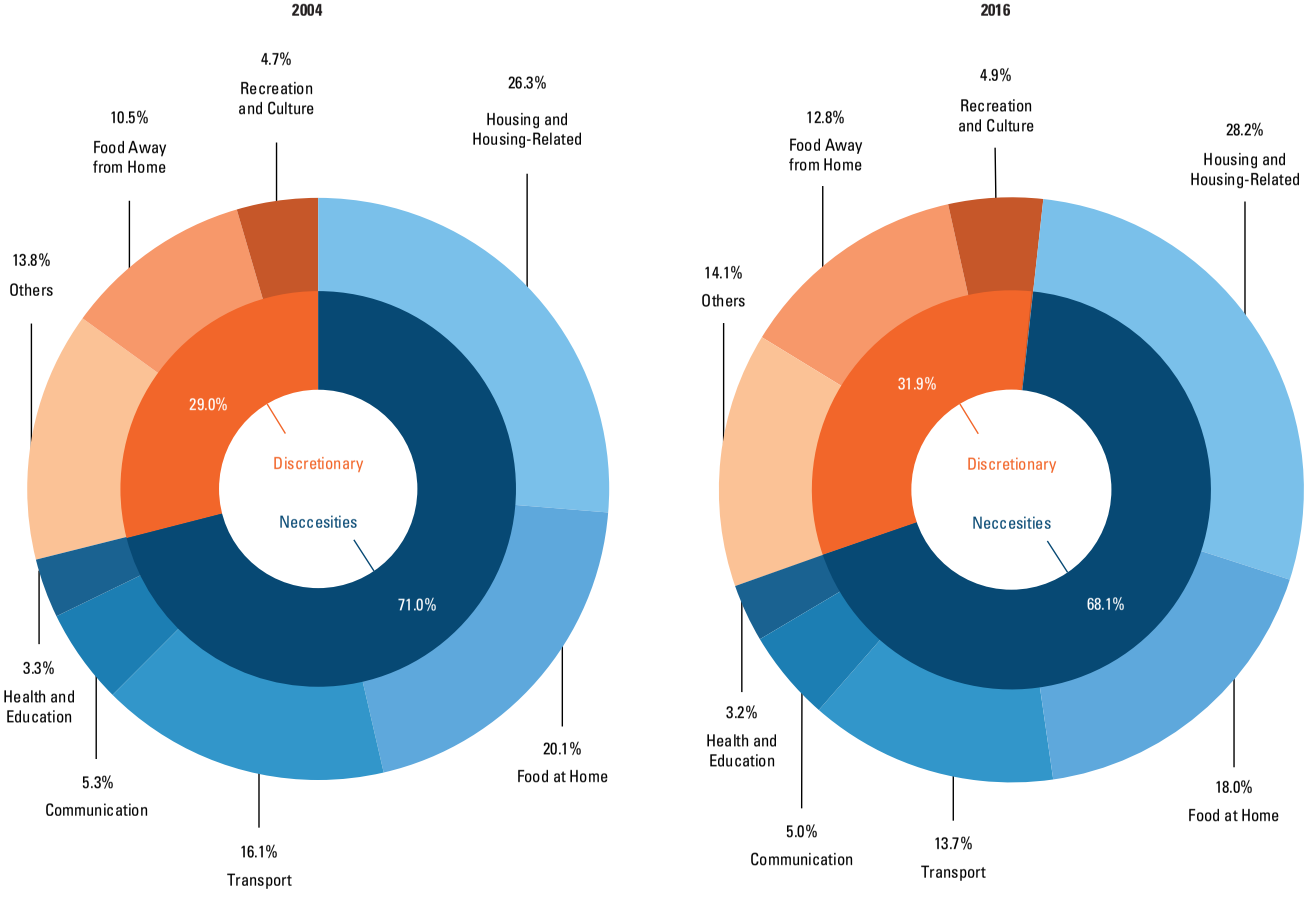
Going beyond the short-term changes between 2014 and 2016, we look further into the past on changes in what households choose to spend since 2004. A long-term understanding on changes in the share of household expenditure can shed light on the evolving socio-economic conditions of Malaysian households. In order to ensure an accurate comparison, the assessment here is from 2004, the earliest year in which publicly available statistics use the current definition in the expenditure items.

Figure 1.26[11] shows the share that the different categories of expenditure households spend on, compared to total expenditure for 2004 and 2016. In 2016, the share of expenditure in housing and housing-related items occupied the largest share in household expenditure at 28.2%. This increased from 26.3% in 2004, which also was the largest share in expenditure for that year. However, besides housing and housing-related items, the share of other expenditure categories that are considered less discretionary in nature have decreased. Food at home was 18% of total household expenditure in 2016, reducing from 20.1% in 2004, both the second largest expenditure item for the respective years. Transport was 13.7% of total expenditure in 2016, a 2.4 percentage point decrease from 16.1% of household expenditure in 2004, the largest change in expenditure share.

In contrast, the share of expenditure on items that are more discretionary in nature has increased during the same period. Food away from home was 12.8% of total expenditure in 2016, an increase from 10.5% in 2004. Recreation and culture services occupied 4.9% of expenditure in 2016, increasing from 4.7% in 2004.

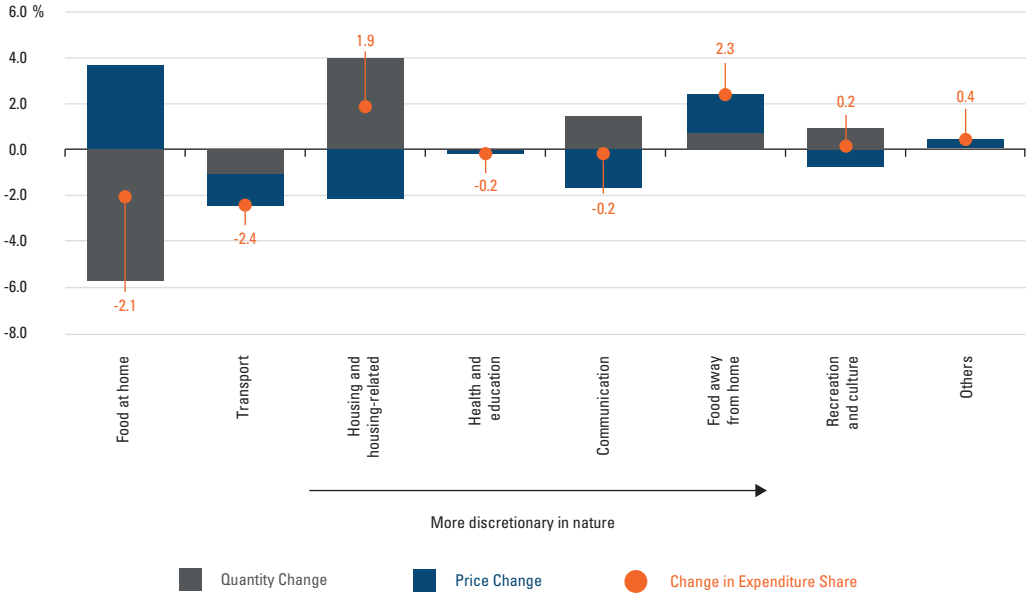
11 The expenditure items are based on categories in the Household Expenditure Survey. These are housing and housing-related (which includes housing and furnishing expenditure), food at home (which includes food and non-alcoholic beverages), transport, communication and health & education. For analytical purposes, we consider these expenditure categories to less discretionary in nature. The other expenditure categories are recreation and culture services, food away from home and others (which includes alcoholic beverages & tobacco, clothing & footwear, accommodation services and miscellaneous goods and services).

Figure 1.26: Share of expenditure, 2004 and 2016



Source: Department of Statistics Malaysia and KRI Calculations

Figure 1.27: Change in nominal expenditure share, 2004 – 2016



Source: Department of Statistics Malaysia and KRI Calculations

The change in the share of expenditure here can be decomposed into two components—the change due to the change in actual quantity consumed, and the change due to the changes in prices. This is shown in Figure 1.27, which shows the overall change in expenditure shares of the various expenditure categories, and the constituent quantity and price effects[12].

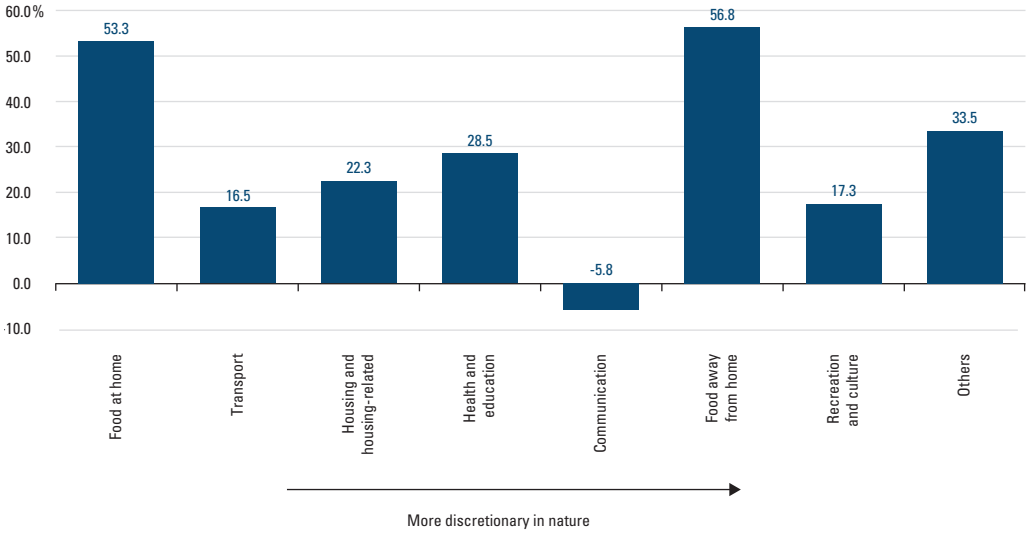
There are a number of observations worth highlighting. The expenditure share of food at home has fallen by 2.1% from 2004 to 2016. This has been driven fully by the quantity effect. The price effect has in fact been a large positive, which is unsurprising given that the price of food at home has increased by 53.3% since 2004 (Figure 1.28). The fall in expenditure share of food at home is accompanied by the increase of 2.3% in share of food away from home expenditure in total expenditure, driven by both positive price and quantity effects.

12 Quantity purchased is measured by changes in the share of expenditure items in total expenditure in real terms. The residual from the difference between this share and the share of nominal expenditure items to nominal total expenditure is thus taken be effects from the changes in prices on the share of expenditure.

The opposite trend is observed for the share of expenditure on transportation. The share of expenditure in the transport category to total expenditure has fallen by 2.4% between 2004 and 2016, driven by both negative price and quantity effects.

Communication share of expenditure in total expenditure has also fallen by 0.2%. Interestingly, this quantity effect is actually positive, but the overall share declined as the negative price effect more than offsets the positive price effects. This is in line with the lower prices in the communication category, which declined by nearly 6.0% during this period as measured by the CPI.

Figure 1.28: Cumulative change in CPI, 2005 – 2016



Source: Department of Statistics Malaysia and KRI Calculations

Overall, in the recent decade, the change in the expenditure pattern of Malaysian households has saw a shift towards a greater share of expenditures that are more discretionary in nature. By decomposing the change in share into quantity and price effects, it can be observed that changes in the prices for different expenditure categories have important consequences on the overall expenditure patterns. This is particularly clear for the case of expenditure on food, which has seen large price increases, as well as expenditure on communication, in which prices have declined.

Table 1.1: Cumulative and annual change in CPI, 2005 to 2016

	Cumulative change in CPI (%)	Annual average change in CPI (%)
Food at Home	53.3	4.0
Transport	16.5	1.4
Housing and Housing-Related	22.3	1.8
Health and Education	28.5	2.3
Communication	-5.8	-0.5
Food Away from Home	56.8	4.2
Recreation and Culture	17.3	1.5
Others	33.5	2.7

Source: CEIC (n.d.)

Table 1.1 shows the per annum changes in CPI. The relatively large cumulative changes from 2005 to 2016 could be the consequence of small increases per year. For example, the 53.3% cumulative increase in food at home CPI from 2005 to 2016 only requires a 4.0% increase per annum, while the increase of 56.8% increase in food away from home requires only a 4.2% increase per annum.

Box 1.1: Snapshot of basic amenities

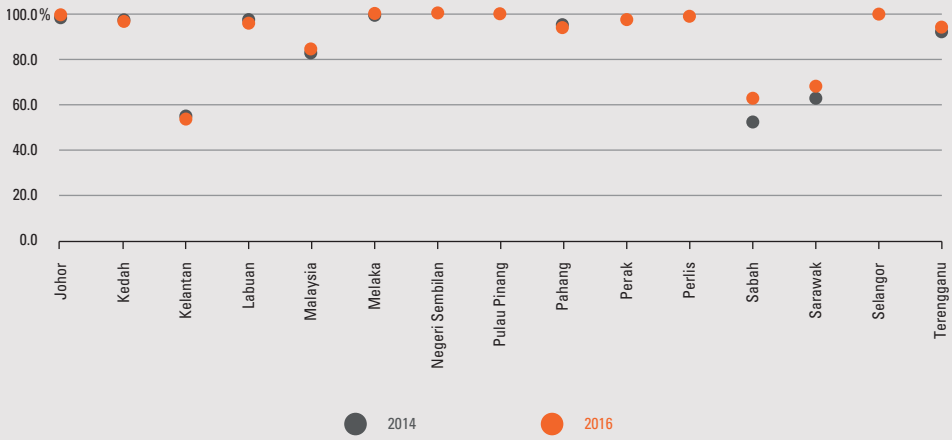
The first two editions of *The State of Households* provided snapshots of household access to basic amenities, based on the previous releases of the HIS by DOS. In keeping with this, we looked at the statistics provided by the 2016 HIS release for further insights into outcomes related to living

standards, as a complement to analyses of household income and expenses to understand the wellbeing of households.

In this respect, findings for 2016 indicate continued improvements for states that were lagging behind in some areas of basic amenities. Figure 1.29, Figure 1.30 and Figure 1.31 show that Sabah improved access for rural households to pipe water and schools, while Sarawak too improved these provisions in addition to access to health centres.

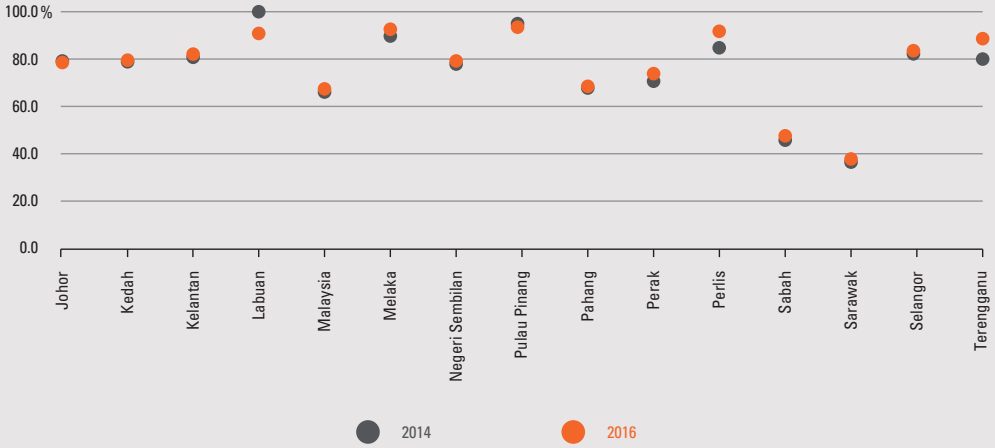
However, it is worth noting that rural households in several states saw small declines in these metrics from 2014 to 2016. In Kelantan, Pahang and Labuan, slightly fewer rural households had access to pipe water. With respect to proximity to services, fewer rural households in Johor, Pulau Pinang and Labuan were in close proximity to government secondary schools, while fewer in Johor, Pahang, Sabah, Selangor and Labuan were in close proximity to public health centres.

Figure 1.29: Percentage of rural households with access to pipe water, by state, 2014 and 2016



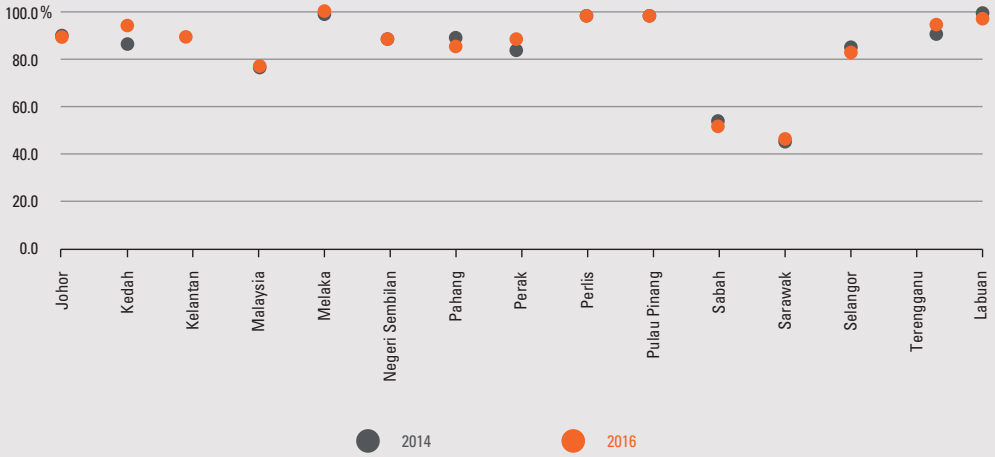
Source: Department of Statistics Malaysia

Figure 1.30: Percentage of rural households located <5km from a secondary school, by state, 2014 and 2016



Source: Department of Statistics Malaysia

Figure 1.31: Percentage of rural households located <5km from a public health centre, by state, 2014 and 2016



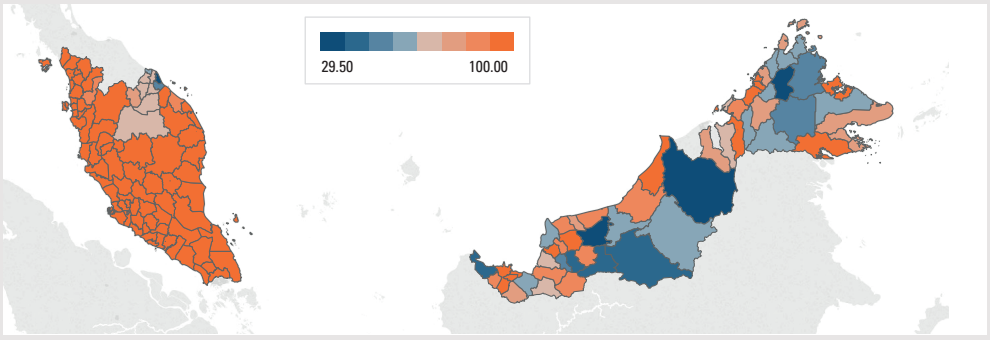
Source: Department of Statistics Malaysia

The 2016 HIS for the very first time also released statistics on basic amenities down to the district level, which reveal a clearer illustration of the disparities between and within states, especially between East Malaysia and Peninsular Malaysia.

With respect to household access to electricity, the 2016 figure at the state level suggests that nearly all households have access to electricity. The figures for rural households in Sabah and Sarawak stood at 98.7% and 99.3%, respectively, indicating that these two states were just under full coverage. However, district data indicate a considerable gap for a few districts, including Beluran and Tongod district, where 8.6% and 6.8% of households, respectively, did not have access to electricity. This constitutes approximately 1,000 households in Beluran and 300 in Tongod.

In terms of access to pipe water, several districts still have shares as low as under 30% of households with access, with these households largely concentrated in districts in Kelantan, Sarawak, and Sabah (Figure 1.32).

Figure 1.32: Percentage of households with access to pipe water, by district, 2016

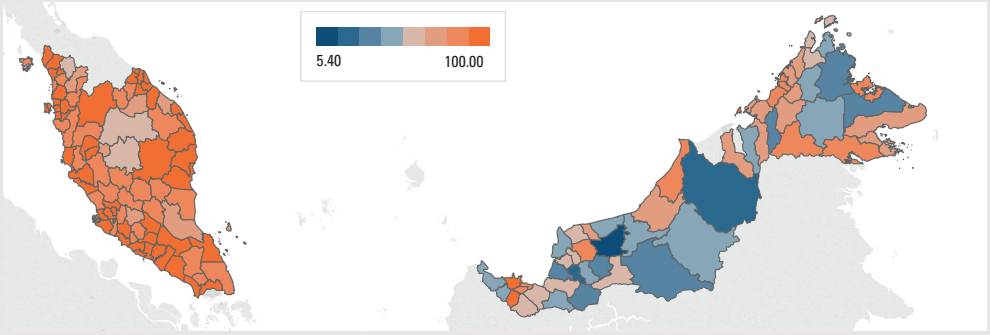


Source: Department of Statistics Malaysia

Likewise, some of the same districts in Sabah and Sarawak lagged especially far behind also in terms of proximity to government secondary schools and public health centres (Figure 33 and Figure 34). Some districts in particular had shares of less than 6% of households located within 5km from a government secondary school, and some had shares of less than 20% being

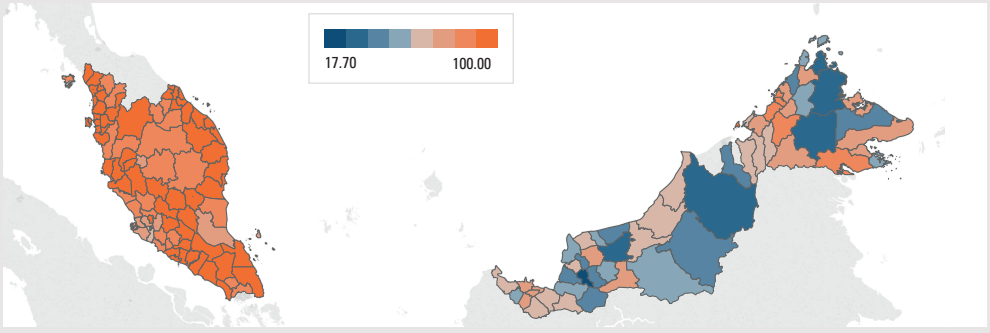
located within 5km of a public health centre. An excess of 50% of households in some of these districts were located further than 9km to a public health centre. Nevertheless, some districts in Peninsular Malaysia also lagged behind, with a remaining small share of households several districts lacking in proximity to both public health centres and government secondary schools.

Figure 1.33: Percentage of households located <5km from a secondary school, by district, 2016



Source: Department of Statistics Malaysia

Figure 1.34: Percentage of households located <5km from a public health centre, by district, 2016



Source: Department of Statistics Malaysia

Overall, these findings provide an alternative illustration of the different realities for households across Malaysia.

For an interactive exploration of these statistics, visit KRI Visualisations for the accompanying "The State of Households 2018: An Interactive Visualisation".

1.4 Changing Trends in Inequality

In the past *State of Households* reports, inequality has always been an important focus. In those reports, we explored the issue of economic inequality of households in Malaysia from various perspectives to provide a richer understanding of the actual situation in Malaysia. In this report, we further extend our assessment by providing a long-term perspective of the changing trends in inequality, touching briefly on how the standard measure of inequality in Malaysia could be improved to better reflect economic reality.

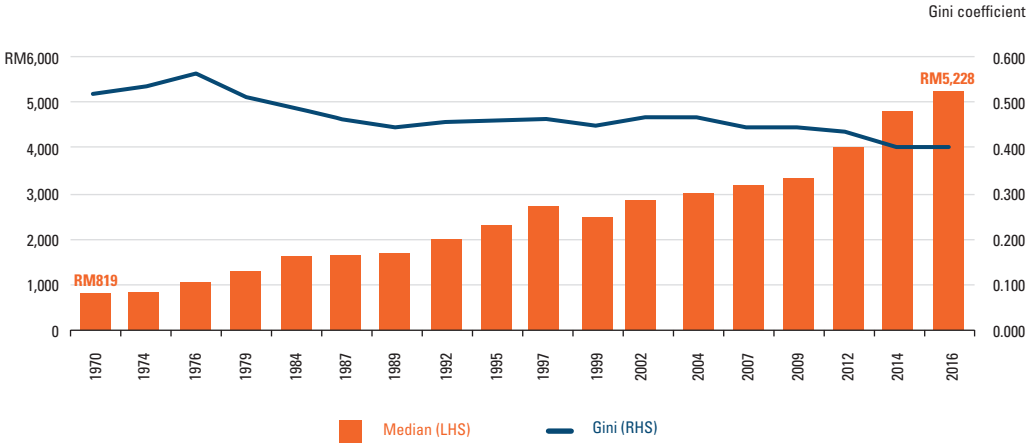
1.4.1 Income inequality declined over the years

The collection of official data on household incomes in Malaysia began almost five decades ago, in 1970[13]. Household income in Malaysia has been steadily increasing from 1970 until 2016. In 1970, household median income was RM819 in 2016 prices (Figure 1.35). Today, this figure has increased 6.4 times to RM5,228. It is also noted that growth has been broadly inclusive, as household income inequality fell from a high Gini[14] coefficient of 0.513 in 1970 to 0.399 in 2016. The greatest continuous drop in inequality occurred from 1976, when the Gini coefficient was 0.557, to 1989, when it was 0.442. From 1989 to 2004, inequality has remained somewhat stagnant. Post 2007, inequality started falling again, and between the last two Household Income Surveys, inequality fell from 0.401 in 2014 to 0.399 in 2016 (0.5% lower) as Figure 1.35 shows.

13 It is important to note that the Household Income Survey officially commenced in 1984. Prior to that, the official data on household incomes was obtained from the Post Enumeration Survey in 1970 and 1974, and the Agriculture Census 1977 for 1976. The figures on historical household income prior to the 1984 may not be entirely comparable to those after, hence care is taken in interpreting these figures prior.

14 The Gini coefficient measures the degree of inequality by ranking each household from poorest to richest and calculating the distance of the cumulative households from the 45-degree line which indicates perfect equality (income share = household share). A Gini coefficient of 0 indicates a perfectly equal society while a Gini coefficient of 1 suggests that one household holds all the income.

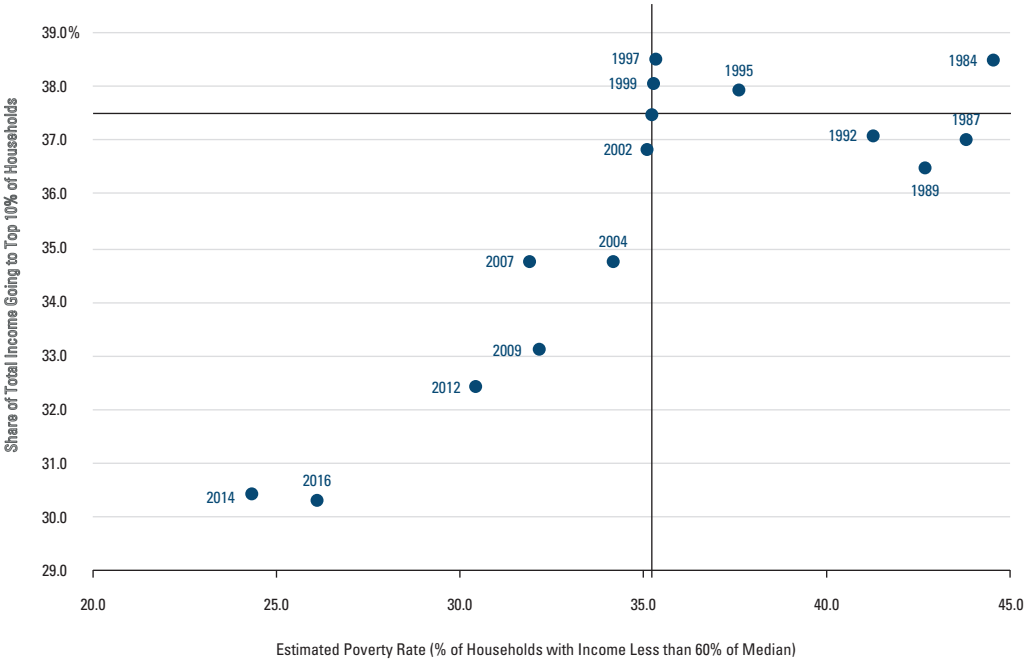
Figure 1.35: Real household median income and level of inequality, 1970 – 2016



Source: EPU and World Development Indicators

The improvement in income inequality can also be observed when we focus more directly on the conditions at the top and bottom end of the income distribution. Figure 1.36 shows how the percentage of households living with less than 60% of median household income, a measure of relative poverty (on the x-axis), and the share of total income earned by the top 10% of households (on the y-axis) have evolved from the mid-1980s to now. From the mid-1980s to the early 2000s, we witnessed improvement in relative poverty, but top income shares remained relatively flat. After the early 2000s however, we moved to the bottom left quadrant, with both relative poverty declining and incomes that go to the top 10% of households reducing, pointing towards improvement in inequality that comes from both ends of the income distribution.

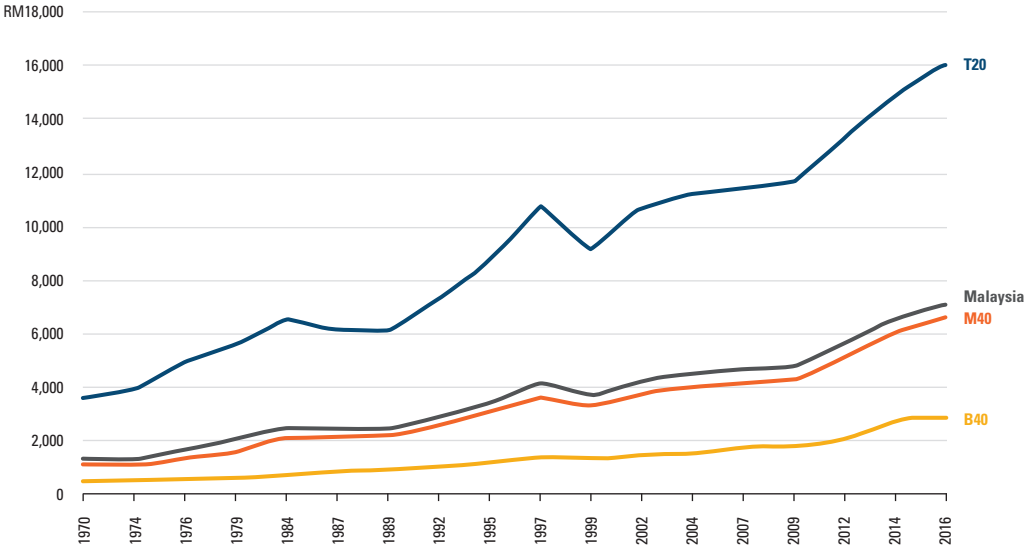
Figure 1.36: Households in relative poverty and income share of top 10% of households, 1984 – 2016



Source: EPU, PovcalNet and KRI calculations

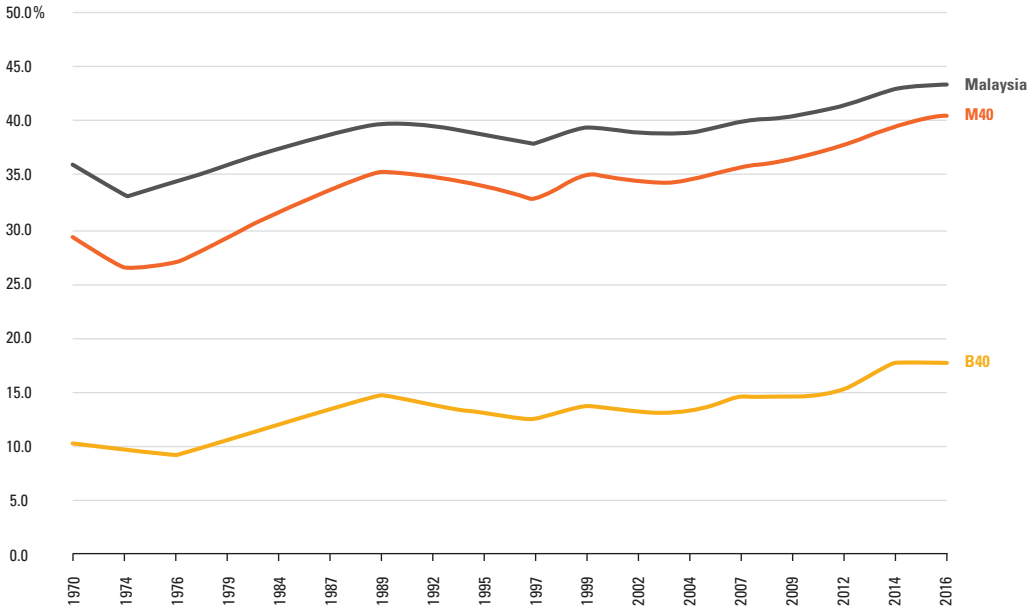
Another angle at which improvements in income equality was seen is by looking at the trends of household incomes in the different income groups—the bottom 40%, middle 20% and the top 10%. Figure 1.37 shows that all income groups experienced an upward trend in mean income, after adjusting for inflation since 1970. Additionally, the mean household income of the bottom 40% and middle 40% of households have increased as a share of the mean household income of the top 20% of households. In 1970, the mean household income for the bottom 40% of households was only 10.3% of the mean household income of the top 20% of households. This improved substantially in 2016, with the bottom 40% income increasing to 17.7% of top 20% mean income. The mean household income for the middle 40% was 29.4% of the top 20%, while in 2016, it became 40.4% (Figure 1.38).

Figure 1.37: Real mean household income by income group, 1970 – 2016



Source: Department of Statistics Malaysia and World Development Indicators

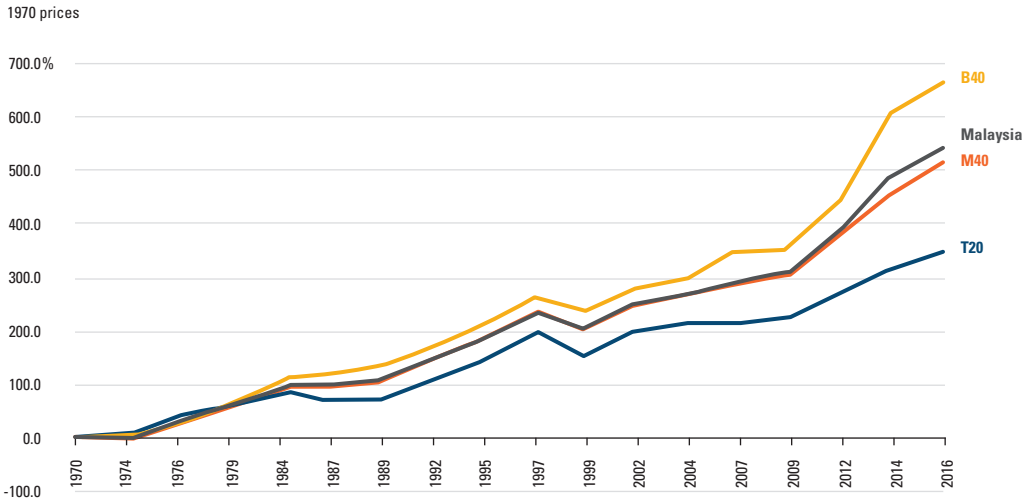
Figure 1.38: B40 and M40 mean household income as share of T20 mean income, 1970 – 2016



Source: Department of Statistics Malaysia and World Development Indicators

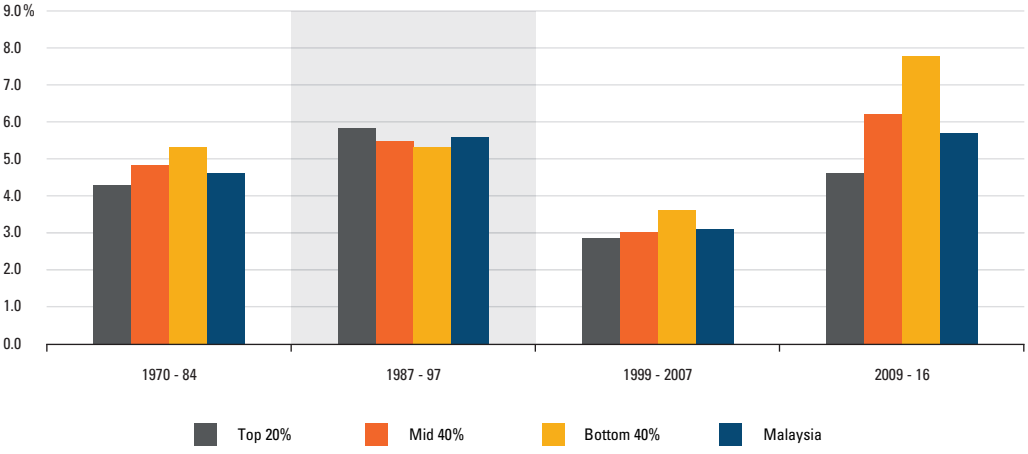
The bottom 40% of households experienced the greatest cumulative growth in income from 1970. Mean household income for the bottom 40% was 7.6 times higher in 2016 compared to 1970. The middle 40% of households also saw significant improvement; mean household income was 6.1 times higher. The top 20% experienced the least cumulative growth in income, but still a respectable increase of 4.4 times from 1970 (Figure 1.39). The only period in which the top 20% households experienced higher annual income growth than the other two groups was between 1987 and 1997 (Figure 1.40).

Figure 1.39: Cumulative change in household income by income group, 1970 – 2016



Source: Department of Statistics Malaysia, World Development Indicators and KRI calculations

Figure 1.40: Growth in real income (annualized)

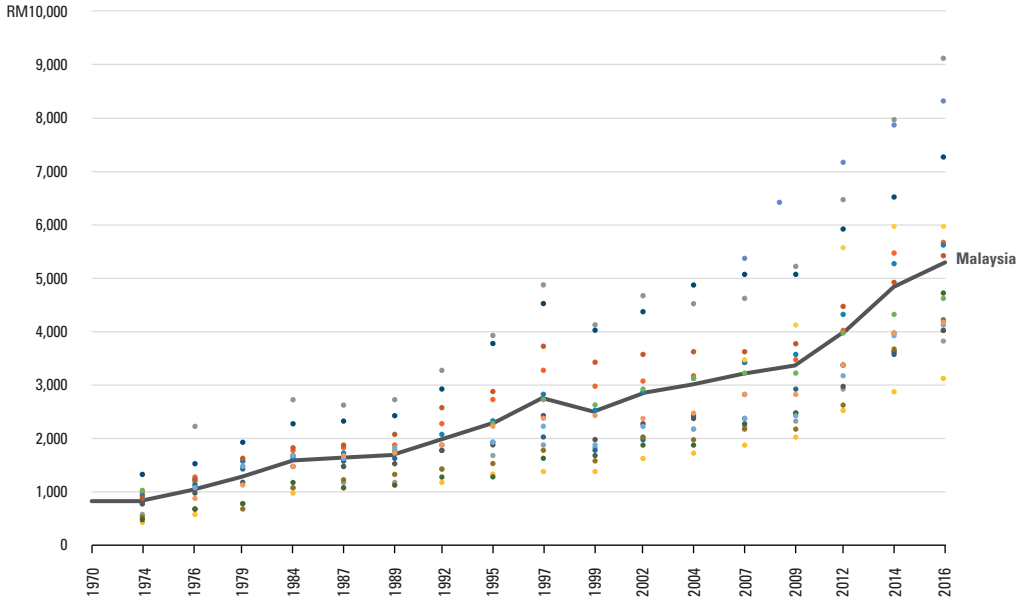


Source: Department of Statistics Malaysia, World Development Indicators and KRI calculations

1.4.2 No convergence in income between states

Thus far, we have been looking at the vertical dimension of income inequality—that is trends relating to households in different parts of the income distribution. The changing trends in household income can be analysed through a spatial dimension. In this section, we look at the changing trends in household income across different states in Malaysia. Reflecting the national trend, household income of each state rose steadily over the years too. However, some states have consistently higher incomes than others (Figure 1.41). Kelantan had the lowest income at RM392 in 1970, while Selangor had the highest at RM1,317 (3.4 times higher). In 2016, Kelantan again had the lowest median, a figure of RM3,079, while Kuala Lumpur had the highest at RM9,073 (2.9 times higher).

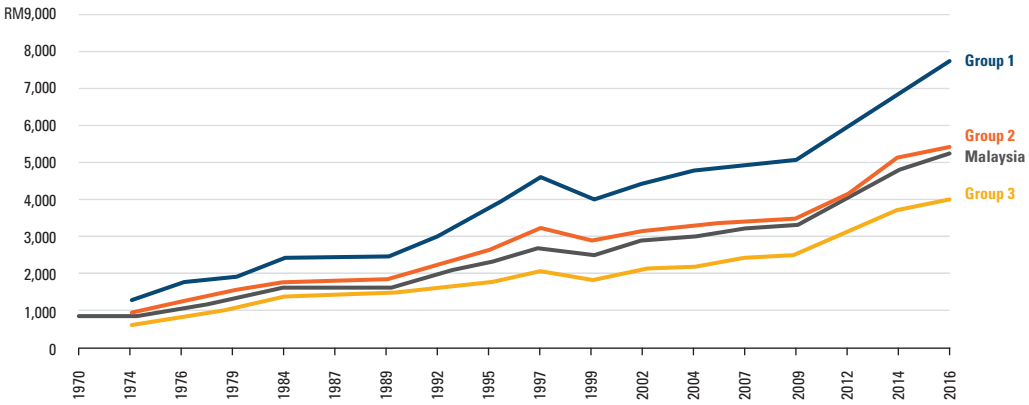
Figure 1.41: Real median household income by state, 1970 – 2016



Source: EPU, World Development Indicators

For ease of analysis and exposition, the different states are categorised into three groups. Selangor, Kuala Lumpur and Putrajaya, having the highest income, are referred to as Group 1. Pulau Pinang, Johor, Melaka and Negeri Sembilan are referred to as Group 2. These states have household median incomes which closely track the national median. Group 3 consists of the remaining states located along the eastern coast of Peninsular Malaysia and East Malaysia which have income levels below the rest of the country (Figure 1.42).

Figure 1.42: Real household median income by state clusters, 1970 – 2016

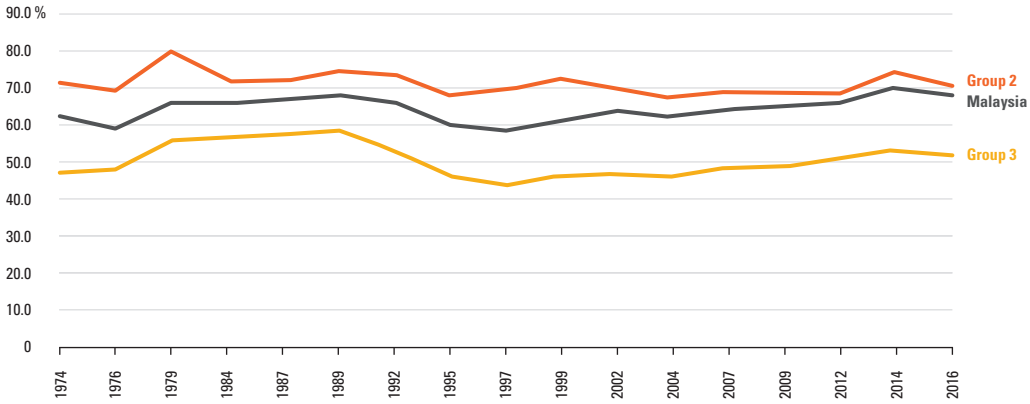


Source: Department of Statistics Malaysia, World Development Indicators and KRI calculations

Overall, the distance between the median household income of each group has not significantly converged over the years. Despite increasing incomes, the ratio of the median income of any group of states to the Group 1[15] cluster has remained rather stagnant over time (Figure 1.43). Throughout the last four decades, Group 2 and 3 median household incomes have been roughly 70% and 50% of that of Group 1, respectively.

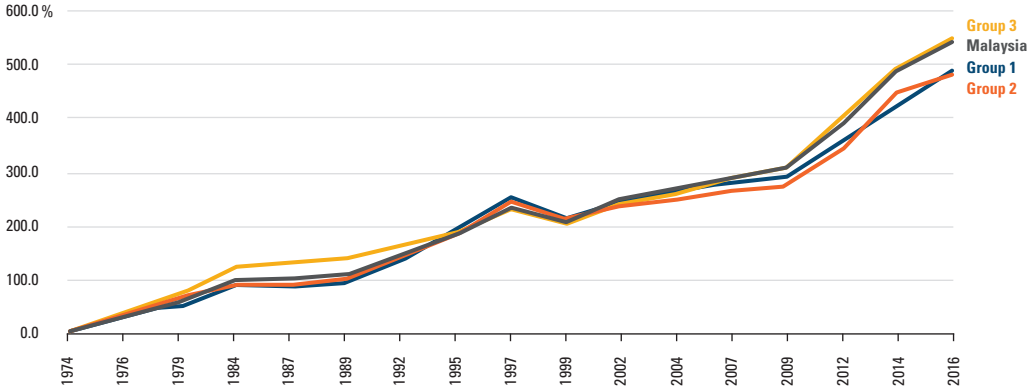
15 Note that for 1970, 1974 and 1979, Kuala Lumpur and Putrajaya were not included in the Selangor, Kuala Lumpur and Putrajaya cluster due to unavailability of data and the non-existence of Putrajaya. From 1976, and 1984 to 2004, this cluster includes Selangor and Kuala Lumpur. From 2007 to 2016, the median income of Selangor and Kuala Lumpur were included in the calculation of the average median income in the cluster.

Figure 1.43: Household median income as proportion of Selangor, Kuala Lumpur and Putrajaya median, 1974 – 2016



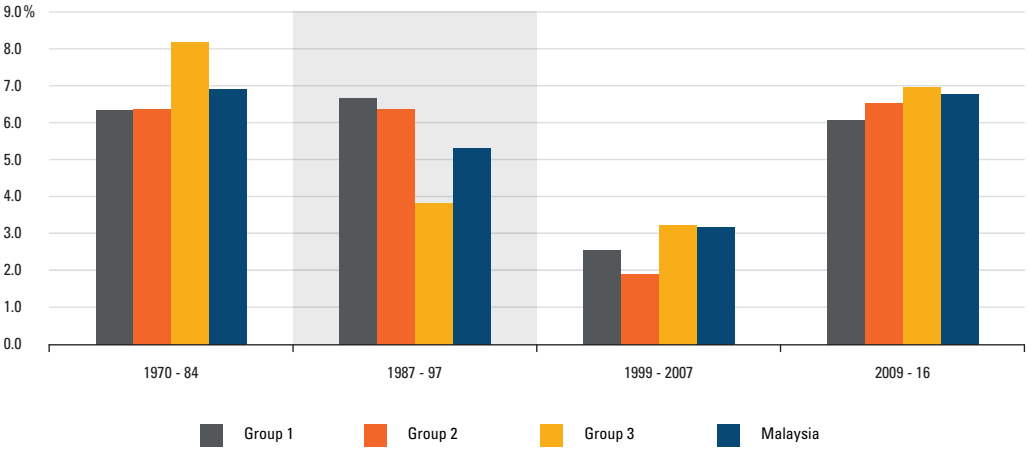
Source: Department of Statistics Malaysia, World Development Indicators and KRI calculations

Figure 1.44: Cumulative change in household median income by state group, 1974 – 2016



Source: Department of Statistics Malaysia, World Development Indicators and KRI calculations

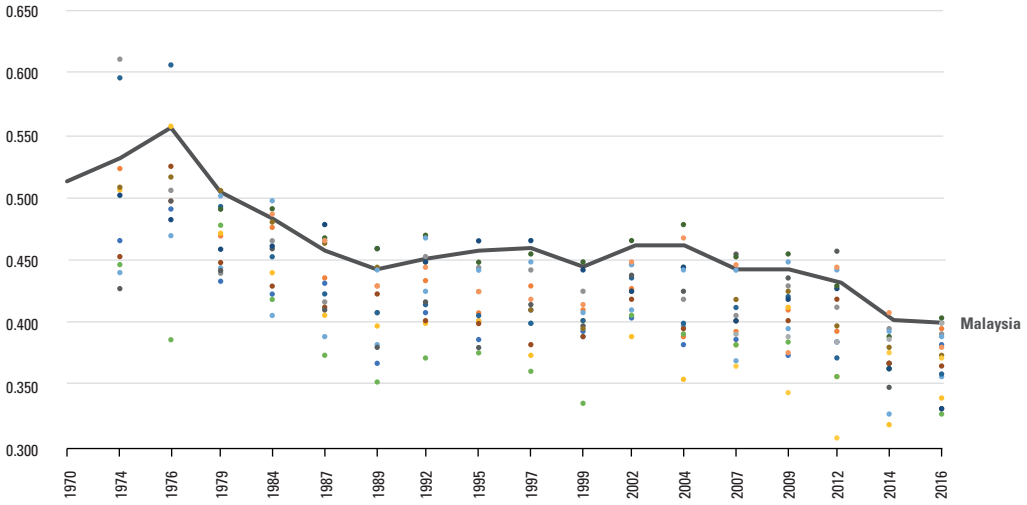
Figure 1.45: Annual growth in household income by state group in four periods



Source: Department of Statistics Malaysia, World Development Indicators and KRI calculations

In terms of income inequality within states, some states are more unequal than others even when overall inequality has declined (Figure 1.46). In 1974, the most unequal state was Pulau Pinang which has a Gini coefficient of 0.597, while the least unequal was Perlis, at 0.425. In 2016, Sabah was the most unequal with a Gini of 0.402, while Pahang was the least unequal at 0.324.

Figure 1.46: Gini of states, 1970 – 2016



Source: Department of Statistics Malaysia

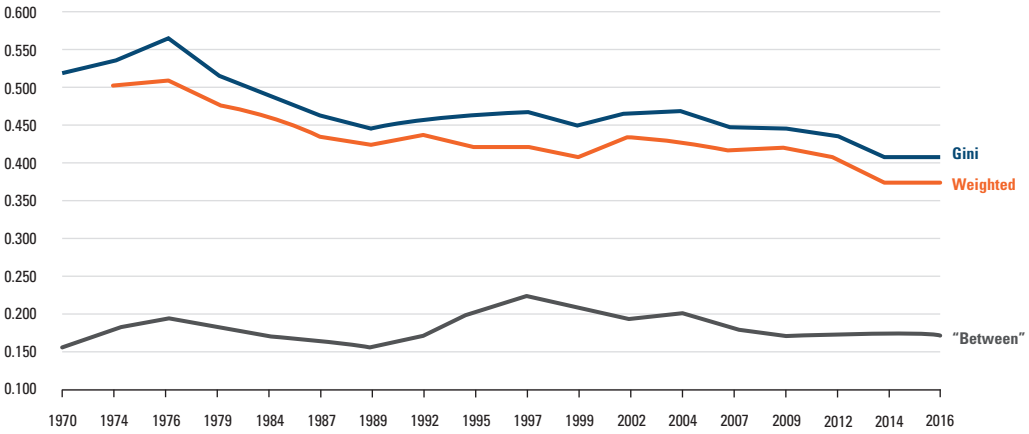
National-level inequality also tends to be higher than state-level inequalities, suggesting that income differences between states contribute to a higher national Gini coefficient overall. Figure 1.47 shows inequality through three different measures: 1) the usual national-level Gini coefficient, 2) weighted inequality which assigns different weights to each state based on the number of households[16], and 3) *between-state inequality* which assumes that each household within a state earns the state mean income. Weighted inequality gives an idea of how inequality has changed within each state (*"within-state inequality"*), while *between-state inequality* shows how differences in income between states have evolved.

Within-state inequality decreased in line with overall national inequality. In 1974, the weighted inequality by states was 0.497, while in 2016, the figure decreased to 0.369. In contrast, there has been no clear improvement in *between-state inequality* over the entire period. This is consistent with the observation that has not been any clear convergence in household incomes between the different states. Nevertheless, it can be observed that the period with the greatest change was from 1989 to 1997, where *between-state inequality*

16 Population share is used for years in which on number or share of households is unavailable.

increased from 0.154 to 0.218 (41.6% higher). This coincides with the rapid industrialisation period of the Malaysian economy. Overall national inequality, however, remained somewhat unchanged, implying that despite increasing *between-state inequality* during this rapid industrialisation period, the improvement in within-state inequality has offset the overall rise in income inequality for Malaysia.

Figure 1.47: National versus "between" state inequality, 1970 – 2016



Source: Department of Statistics Malaysia, CEIC, Population of Malaysia (Saw Swee Hock, 2007) and KRI calculations

Is income inequality in Malaysia underestimated?[17]

It is fair to ask if the official measure of income inequality could somehow underestimate the true extent of income inequality in Malaysia. Statistically, the measurement of income inequality derived from household surveys typically suffers from under-sampling and under-reporting of households in the upper-end of the income distribution. This "missing income" could lead to the underestimation of income inequality.

For the case of Malaysia, the degree of underestimation is further compounded by the fact that income from non-citizens are not included in the official measurement of income inequality, most of who occupy the lower-end of the income distribution. From an economic perspective, if the changing trend in income inequality is taken to be a consequence of underlying socio-economic

17 For a more detailed technical discussion, refer to accompanying Technical Note—1 "More or Less Equal? Accounting for missing top and bottom incomes in measurement of income inequality in Malaysia".

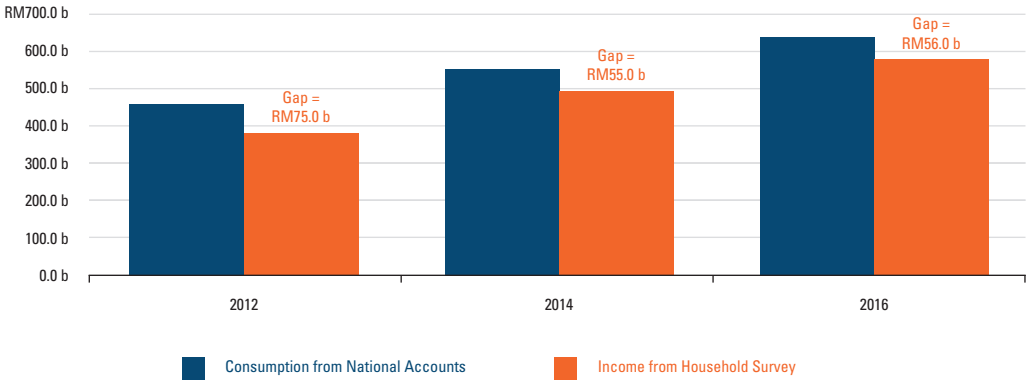
processes, then including all households and not just Malaysian citizens would give a more accurate and complete representation. The following section attempts to account for missing incomes for both the upper- and lower-end of the income distribution for the period between 2012 and 2016.

The total income from household surveys is often smaller than household consumption in the national accounts. Survey income is 79.5% of final household consumption in 2012, 84.9% in 2014 and 86% in 2016, and it is highly likely that under-sampled and under-reported top incomes are the reason. High income earners are incredibly rare, so even if the surveyor were to encounter one high income earner, the mean income of this household may not necessarily reflect the whole spectrum of the top income class. It is also more difficult to establish contact with higher income households, and even if this is accomplished, these households may understate incomes. Household final consumption expenditure from the national accounts is often more reflective of total household income as it closely tracks consumption. Missing top incomes are calculated from taking household final consumption expenditure[18] and subtracting total household income from the Household Income Survey and missing bottom income (details below).

Figure 1.48 shows the gap between final household consumption expenditure adjusted for missing bottom income and income from the household survey. This gap is non-trivial, although there has been an improvement in that missing income as a portion of survey income has been falling (83.7% in 2012, 90% in 2014 and 91.3% in 2016).

18 This item excludes expenditure by non-profit institutions serving households from final private consumption expenditure.

Figure 1.48: Total household consumption from national accounts versus total household income from household survey, 2012 – 2016

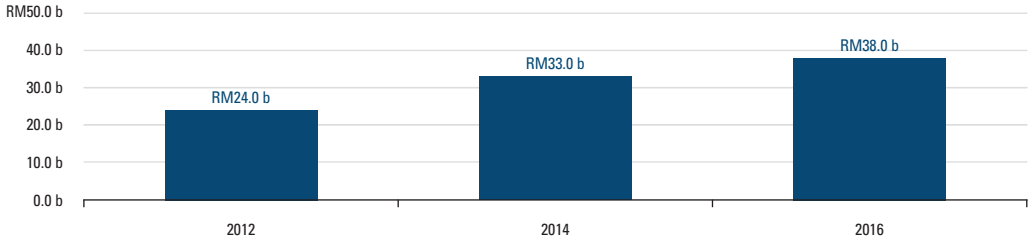


Source: Department of Statistics Malaysia and KRI calculations

Missing bottom income is due to often-neglected foreign workers representing a sizable part of Malaysia. The share of foreign workers to the total number of employed in Malaysia has increased in the past four years. Over half of all workers with no formal education and over 45% of workers educated up to the primary level are of foreign origin. The missing bottom income is calculated by estimating the total income accrued to foreign workers. The total income for foreign workers with an education level up to primary is added to the lowest decile of the Malaysian income distribution. The income of those with secondary education is added to the second lowest decile. Foreign workers with tertiary level qualifications are not considered. The number of households in each decile was converted into number of income recipients due to the addition of foreign workers, although household inequality is still the focus.

Figure 1.49 shows estimated income from low- and semi-skilled foreign workers from 2012 to 2016. Again, this is non-trivial and foreign income is observed to have increased to RM38.0b in 2016.

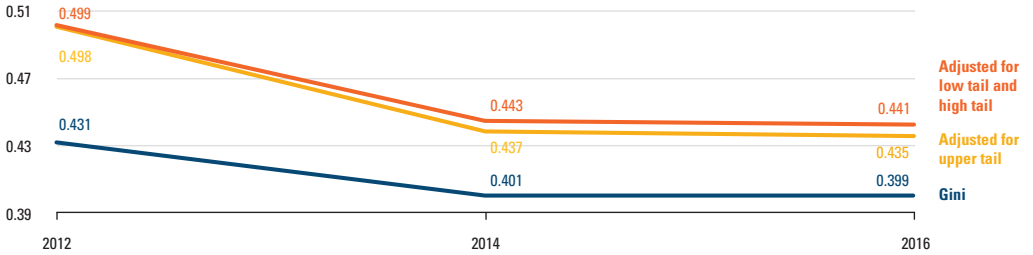
Figure 1.49: Estimated total income from low- and semi-skilled foreign workers, 2012 – 2016



Source: Department of Statistics Malaysia and KRI calculations

Adjusting for missing top incomes increases the Gini coefficient from 0.431 to 0.498 (15.5% higher) in 2012, 0.401 to 0.437 in 2014 (9% higher) and 0.399 to 0.435 in 2016 (9% higher). Having adjusted for missing foreign income at the lower end of the distribution, the Gini coefficient has further increased by 0.3% to 0.499 in 2012, 1.4% to 0.443 in 2014 and 1.4% to 0.441 in 2016. Despite this increase in level of inequality, the trend of declining income inequality nonetheless remains. However, inequality is still one of the most important concerns of our time and getting the right measure for it is the first step.

Figure 1.50: Income inequality, adjusted for missing upper and lower incomes, 2012 – 2016



Source: Department of Statistics Malaysia and KRI calculations

Box 1.2: The difference between relative and absolute measures

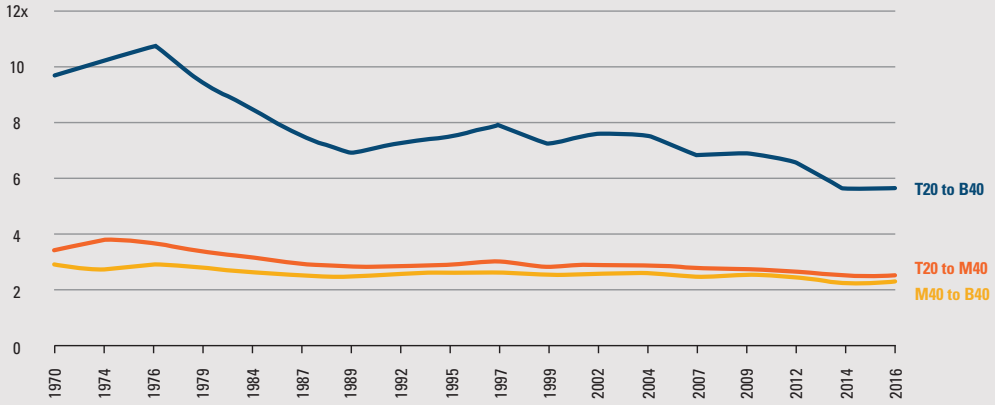
Although official estimates show that inequality has been decreasing, the public are not sympathetic to this notion. Public discussion often revolves around how inequality is still a pervasive problem which has not improved in the past few decades. The general perception is that the rich are getting richer, while the poor are getting poorer. This is not consistent with the 2016 Gini coefficient of 0.399, which is closer to OECD levels.

A different way of looking at the data can provide another reason as to why perception differs from official estimates. Relative measures of inequality look at how inequality changes relative to a reference point, while absolute measures only look at the magnitude of change.

Relative income could be converging, but the absolute income gap continues to increase.
A household which starts from a lower base, for example, RM1,000, could have tripled their income in one year to RM3,000. Meanwhile, a household which starts from a high base, like RM10,000, could have doubled their income to RM20,000. In the previous year, the high-income household earned 10 times the low-income household, while in the present year the high-income household earns only 6.7 times the low-income household, since the income of the high-income households grew less than the income of the low-income household. Additionally, the Gini coefficient would even be lower. However, the gap between these two households in the previous year was RM9,000, while in the present year it is RM17,000.

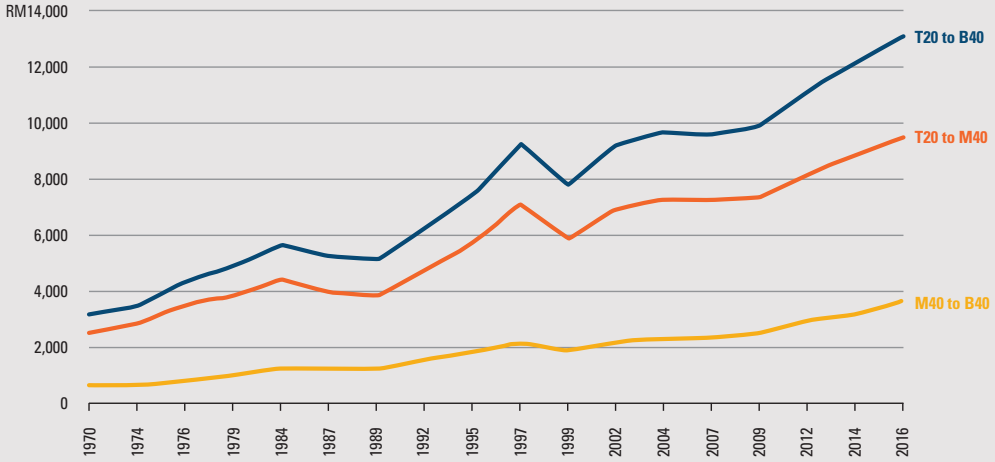
From Figure 1.51, household income of the top 20% as a multiple of bottom 40% household income has significantly decreased from 1970 to 2016. Similarly, it has decreased as a multiple of middle 40% income. Middle 40% income as a multiple of bottom 40% income has also decreased. However, the absolute gap between all three income groups have increased, the gap between the top 20% and bottom 40% is particularly striking, and this could the reason for resentment and the negative perception of inequality.

Figure 1.51: Household income as a multiple of income group, 1970 – 2016



Source: Department of Statistics Malaysia

Figure 1.52: Difference in real mean household income, 1970 – 2016

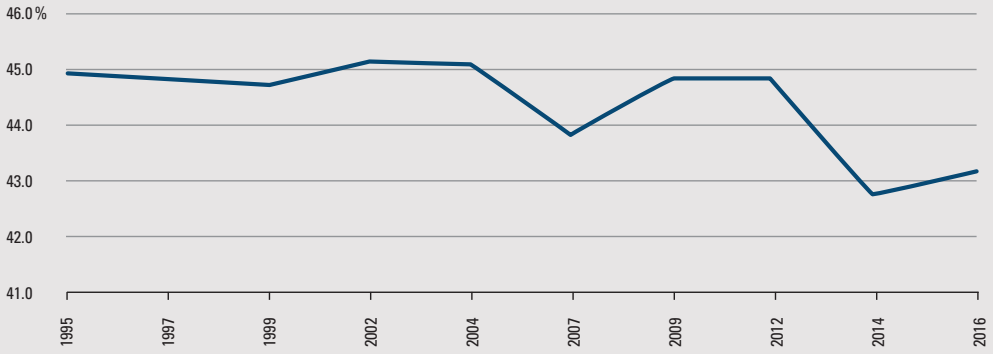


Source: Department of Statistics Malaysia, World Development Indicators and KRI calculations

Poverty rate could be declining, but more people could be impoverished. Say, for instance, in a year Malaysia has a poverty rate of 40%, while in the following year its poverty rate is 30%. The percentage of households living in poverty has clearly fallen. Suppose however that the population in the first year was 10.0 million while the population in the following year was 20.0 million. This would mean that there were 4.0 million poor households in the first year and 6.0 million in the following. The number of poor households has increased by 2.0 million.

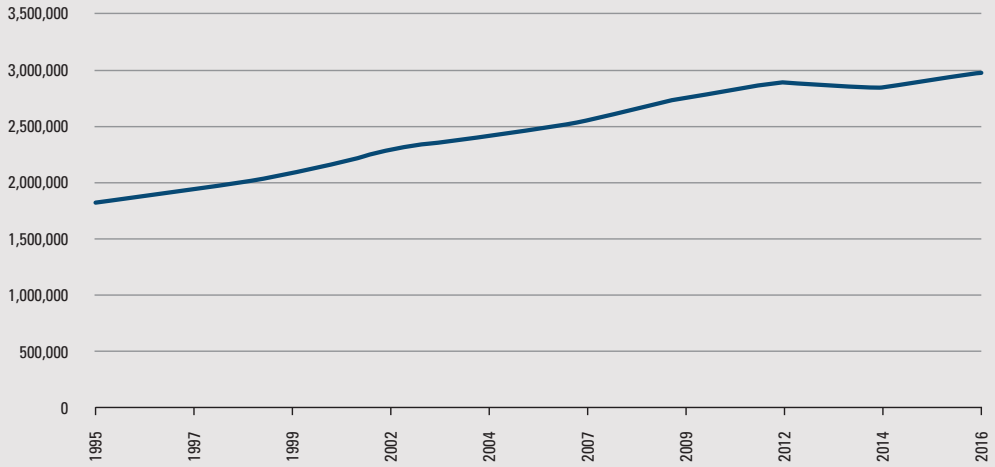
Looking at the figures below, the poverty rate has been falling from 1995 to 2016, but the number of poor households increased due to population growth.

Figure 1.53: Percentage of households living under 60% median, 1995 – 2016



Source: EPU, World Development Indicators and KRI calculations

Figure 1.54: Number of households living under 60% median, 1995 – 2016



Source: Department of Statistics Malaysia, EPU and KRI calculations

We would need to ask ourselves which measure matters more. To policymakers and economists, looking at relative measures is important to compare how much a parameter has changed relative to a reference point. Researchers can observe whether certain redistributive policies are effective based on whether inequality has declined over time. Sometimes, relative measures are important to ordinary households too when comparing how much their conditions have changed relative to a reference year. However, absolute measures are a lot more obvious and easier to compute. Households would scarcely find out how much their income as a percentage of top 20% household income has changed over time. They are likely more interested in the difference between their income and the income of another household. The existence of falling inequality is not enough to reassure the public since inequality, nonetheless, still exists. The growing number of poor households is clearly quite visible to the public, thus fuelling the negative sentiment surrounding inequality. It may also be worth noting that globalisation has opened markets to many international goods and services. Rather than comparing with historical conditions, which would imply that households have a better standard of living compared to previous generations, households are now able to compare with others (even from different countries) in the present. We always tend to compare with those who are better off, rather than those who are worse off.

1.5 Conclusion

In this part, through the central focus of households as the unit of reference, we have explored multiple perspectives relating to the economic well-being of Malaysians. While the perspectives explored are varied, they are tied through a common theme—that different households have very different experiences. To fully appreciate the state of households in Malaysia, there is a need to look beyond conventional, high-level economic indicators that could mask the experiences of Malaysians living in different economic realities. Hopefully, this chapter managed to clearly illustrate this through the discussion on, amongst other, the large variations of household income across different households, the different economic challenges faced by Malaysians from lower income households that otherwise would not have been able to be discerned by looking at national averages. The fact that even when the statistics on income inequality is improving, the absolute gap between income groups and the number of households living in relative poverty are continuing to rise. These are far from exhaustive, but they serve to highlight the broader message that it is essential to complement national-level economic assessments with analyses that are sensitive to the differences at a more refined level.

This in turns underlies an important point—the significance of having access to more granular level statistics and to have the right socio-economic indicators that could adequately reflect the richness of the warp and weft of economic realities. DOS and many other official agencies have begun to make important and earnest efforts in recent years towards this end. Going forward, the continued effort in this regard is essential for both the research community and policymakers in Malaysia to improve our understanding of the pressing issues of the economy and the necessary actions required to address them.

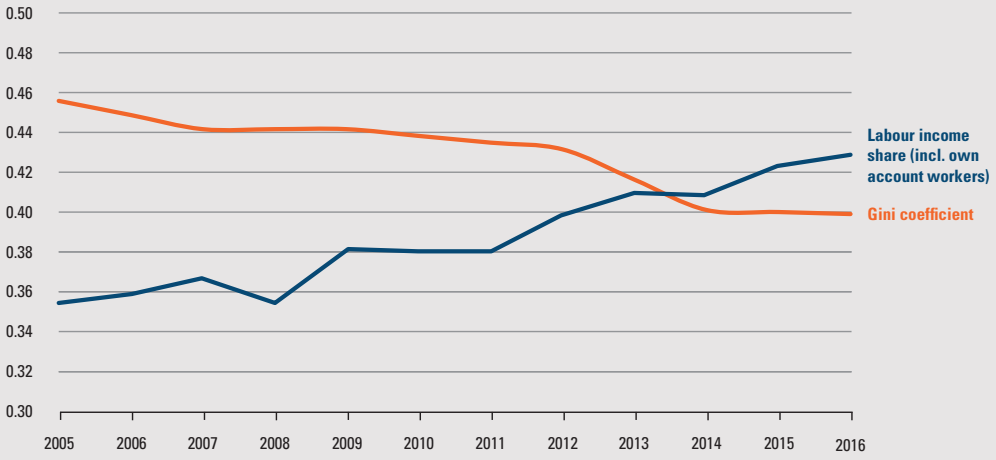
Box 1.3: Household income inequality and the labour income share

It is important to appreciate that income inequality does not occur in isolation of other developments in the economy. It is instead the outcome of some underlying macroeconomic processes. For us to truly understand the changing trends in income inequality, we would need to have a better grasp of these underlying processes.

One such processes is the changing share of national income that is paid to labour. Labour income share declines when real wages grow more slowly than labour productivity. This, in turn, implies that a growing fraction of the gain of productivity in the economy is going to capital. Since capital tends to be concentrated amongst richer households, falling labour income share is likely to increase income inequality.

Declining labour income shares is indeed one of the defining developments in the global economy over the past few decades. True for most advanced economies and many major emerging economies, this development is associated with the worsening of income inequality in these economies. This is found to have been driven in a large part by the combination of impacts from technology and the consequences of increased global integration.

Figure 1.55: Labour income share and Gini Coefficient, 2005 – 2016



Source: KRI (forthcoming)

Malaysia, an outlier

In contrast to the global trend, Malaysia's labour income share has instead been increasing since the official statistics were made available in 2005, together with declining household income inequality, as shown in Figure 1.55. Between 2005 and 2016, including income share going to self-employment, labour income share has increased by 7.5 percentage points.

Based on our research, this increase in labour income share in Malaysia can be explained by three factors:

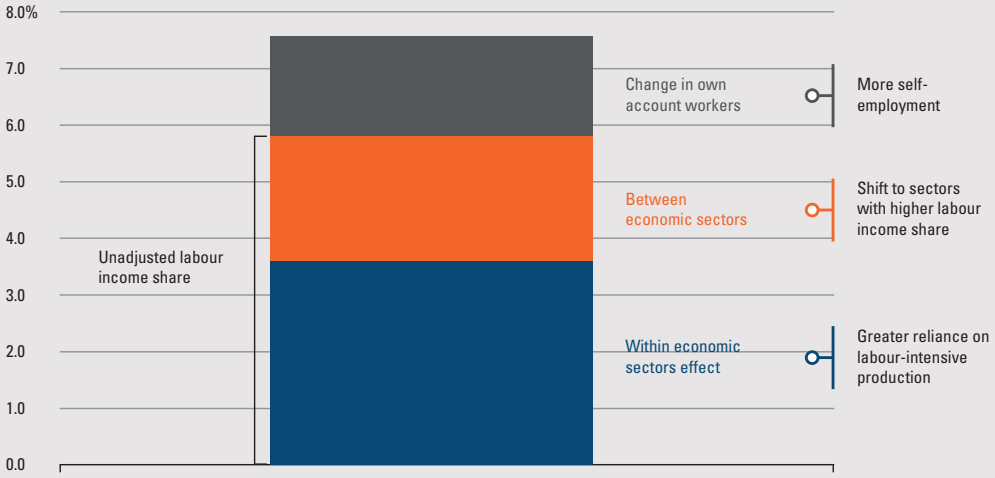
- **More self-employment.** More than a fifth of the increase in labour income share since 2005 can be accounted for by the increasing share of the Malaysian workforce who are in self-employment. The increase has been apparent in urban areas and amongst women joining the labour force. Part 2 explores these trends at greater length.

- **Structural shifts to economic sectors with higher labour income share.** The share of the services sector in the Malaysian economy has been growing, particularly in the more traditional services sub-sector such as wholesale and retail trade. At the same time, the share of the manufacturing sector in the overall economy has been gradually declining, especially in high-tech manufacturing. Since the services sector has higher labour income share relative to the manufacturing sector, this has led to an overall increase in the economy-wide labour income share. From 2005 to 2016, close to 30% of the increase in labour income share can be attributed to this shift.

- **Greater reliance on labour-intensive production.** Almost half of the overall increase in labour income share since 2005 can be attributed to the individual increases in labour income share within all major economic sectors. This is turn can be explained by the greater reliance on labour-intensive production in most economic sub-sectors. It is found that the sub-sectors with the higher increase in labour income share are associated with decreased investment in technology and higher increase in the proportion of low-skilled foreign workers hired.

Overall, the increase in the labour income share in Malaysia has been broad-based, with all economic sectors experiencing increases to varying degrees, together with a higher share of self-employment in the workforce. This development is not inconsistent with the deindustrialisation of the Malaysian economy in which the share of manufacturing sector has been gradually declining after peaking in the early 2000s, replaced by the services sector.

Figure 1.56: Decomposition of the increase in labour income share, 2005 to 2016



Source: KRI (forthcoming)

Good for the future?

From the increase in labour income share and the improving income inequality, it appears that over the last decade, the growth of the economy has become more inclusive in nature—benefiting many Malaysians.

Structurally, however, this has been accompanied by a transition away from a more capital-intensive to a more labour-intensive model—a structure that is skewed towards lower skilled workers rather than investment in technology, and more traditional services sub-sectors rather than high-tech manufacturing. If our potential for sustained economic growth in the future lies in our ability to harness innovation and improve productivity growth, this structural change that is accompanying our deindustrialisation could work to our disadvantage.

Our findings highlight that the transition towards an economy that is simultaneously inclusive and productivity-driven could be wrought with trade-offs that would need to be carefully managed.

For a more complete treatment of this box, read our forthcoming research paper—*What Explains the Increase of Labour Income Share in Malaysia?*

References

Ahluwalia, Montek S. 1976. *A Social Accounting Matrix for Malaysia*. Washington, D.C.: Development Research Center, World Bank.

Anand, Sudhir. 1983. *Inequality and Poverty in Malaysia*. Oxford: Oxford University Press.

Anand, Sudhir, and Paul Segal. 2015. "The Global Distribution of Income." In *Handbook of Income Distribution*, 937-979. Amsterdam: Elsevier.

Ang, Jian Wei, and Athreya Murugasu, Chai Yi Wei. 2018. *Low-Skilled Foreign Workers' Distortions to the Economy*. Annual Report, Kuala Lumpur: Bank Negara Malaysia.

Armour, Philip, Richard V. Burkhauser, and Jeff Larrimore. 2013. "Using the Pareto Distribution to Improve Estimates of Topcoded Earnings." Ithaca: Cornell University.

Atkinson, A. B. 2015. *Top Incomes in Malaysia 1947 to the Present (With a Note on the Straits Settlements 1916 to 1921)*. Paris: World Wealth and Income Database.

Atkinson, A. B., and Thomas Piketty. 2007. *Top incomes over the twentieth century: a contrast between continental European and English-speaking countries*. Oxford: Oxford University Press.

—. 2010. *Top incomes: a global perspective*. Oxford: Oxford University Press.

Bandiera, Oriana, and Ashwini Natraj. 2013. "Does Gender Inequality Hinder Development and Economic Growth? Evidence and Policy Implications." *World Bank Research Observer* 28 (1): 2-21.

Bureau of Economic Analysis. 2012. *Bureau of Economic Analysis*. U.S. Department of Commerce. 24 April. Accessed January 01, 2018. https://www.bea.gov/faq/index.cfm?faq_id=1009.

Carr-Hill, Roy. 2013. "Missing Millions and Measuring Development." *World Development* 46: 30-44.

Cowell, Frank. 1998. *Measurement of Inequality*. London: Distributional Analysis Research Programme.

Deaton, Angus 2005. "Measuring Poverty in a Growing World (Or Measuring Growth in a Poor World)." *The Review of Economics and Statistics* 87 (1): 1-19.

Deaton, Angus. 2001. "Counting the World's Poor: Problems and Possible Solutions." *The World Bank Research Observer* 16 (2): 125-147.

Dutta, Soumitra, Bruno Lanvin, and Sacha Wunsch-Vincent. 2017. *The Global Innovation Index 2017: Innovation Feeding the World*. Ithaca, Fontainebleau, and Geneva: Cornell University, INSEAD,
and
World Intellectual Property Organization.

Focus Malaysia. 2017. "The super rich getting richer." *Focus Malaysia,* 3 November.

George Town World Heritage Inc. *Directory of Traditional Trades and Occupations in George Town World 2012 (by streets)*. George Town: George Town World Heritage Inc.

Goesling, Brian. 2001. "Changing Income Inequalities within and between Nations: New Evidence." *American Sociological Review* 66 (5): 745-761.

Groves, R. M., and M. Couper. 1998. *Nonresponse in Household Interview Surveys*. Hoboken: Wiley.

Guvenun, Fatih, and Greg Kaplan. 2017. *Top Income Inequality in the 21st Century: Some Cautionary Notes*. Cambridge: National Bureau of Economic Research.

International Labour Organization. 2016. *Review of labour migration policy in Malaysia*. Tripartite Action to Enhance the Contribution of Labour Migration to Growth and Development in ASEAN, Thailand: ILO Regional Office for Asia and the Pacific.

Jantzen, Robert T., and Klaus Volpert. 2012. "On the Mathematics of Income Inequality: Splitting the Gini Index in Two." *The American Mathematical Monthly*. 119: 824-837. The Mathematical Association of America

Kazandjian, Romina, Lisa Kolovich, Kalpana Kochhar, and Monique Newiak. 2016. "Gender Equality and Economic Diversification." *IMF Working Paper*. Washington D.C.: IMF.

Korinek, Anton, Johan A. Mistiaen, and Martin Ravallion. 2005. "Survey Nonresponse and the Distribution of Income." *World Bank Policy Research Working Paper 3543*. Washington D.C.: World Bank.

Lakner, Christoph, and Branko Milanovic. 2015. "Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession." *World Bank Economic Review*. Washington D.C.: World Bank.

Lee, Hwok-Aun, and Muhammed Abdul Khalid. 2016. "Is inequality in Malaysia really going down? A puzzle explored." Kuala Lumpur: Development Research Group Kuala Lumpur Seminar Series.

Ministry of Finance Malaysia. Various years. *Economic Report*. Putrajaya: Ministry of Finance Malaysia.

OECD. 2001. *Glossary of Statistical Terms*. 25 September. Accessed January 01, 2018. https://stats.oecd.org/glossary/detail.asp?ID=1305.

—. n.d. *What are Equivalence Scales?* Accessed February 6, 2018. http://www.oecd.org/eco/growth/OECD-Note-EquivalenceScales.pdf.

Sabelhaus, John, David Johnson, Stephen Ash, David Swanson, Thesia Garner, John Greenlees, and Steve Henderson. 2012. "Is the Consumer Expenditure Survey Representative by Income?" Washington, D.C.: Federal Reserve Board.

Vasquez, Ian, and Tanja Porcnik. 2016. *Human Freedom Index 2016: Global Measurement of Personal, Civil, and Economic Freedom*. Washington D.C., Vancouver BC, and Berlin: Cato Institute, Fraser Institute, and Friedrich Naumann Foundation for Freedom.

World Bank. 2015. *Malaysia Economic Monitor: Immigrant Labor*. Washington, D.C.: World Bank.

World Economic Forum. 2017b. *The Global Competitiveness Report 2017-2018*. Geneva: World Economic Forum.

World Economic Forum. 2017a. *The Global Gender Gap Report 2017*. Geneva: World Economic Forum.

PART 02

PART 2

THE MALAYSIAN WORKFORCE: A CHANGING LANDSCAPE

Employment is one of, if not the, most important aspects of a modern economy. For households, employment is not just the primary source of income but also the principal means to participate productively in the economy and society. For the country as a whole, a healthy level of employment and creation of decent work opportunities are central to fostering equitable, inclusive and sustainable economic growth. Building on the issues discussed in the previous *State of Households*, this chapter explores in greater depth two important topics that had and will continue to have important implications in shaping the Malaysian employment landscape. The first is on women in the workforce—on the progress made and challenges that remain. Second is on the issue of foreign workers and their impact on the economy.

2.1 Women in the Workforce—A Work in Progress

Half of Malaysian working-age population are women, but they constitute only two-fifths of the labour force. In the 2017 Global Gender Gap report[19] published by the World Economic Forum (WEF), Malaysia ranks 87 out of 144 countries in terms of *Economic Participation and Opportunity*, down seven places from a year ago. Among ASEAN countries, we rank higher only to Indonesia (108th place), whereas most of our regional peers rank significantly above us—Laos at 22nd, Singapore 27th, Vietnam 33rd, and Brunei 61st.

Whilst global awareness of the gender gap in the labour force has burgeoned in recent years, there remains much to be studied with regards to the state of women in the economy in Malaysia. This section aims to fill this gap. By exploring existing data, we examine women's labour force participation rate and some important gender gaps within the labour force, with emphasis on issues that stand out from the analysis. This section concludes with a discussion on why overcoming these challenges for women is crucial for Malaysia.

2.1.1 Gender differences in labour force participation

Gender gap in the labour force begins with women's higher barrier to entry relative to men. In Malaysia, working-age women are less likely than men to participate in the labour force, with different groups of women experiencing different levels of participation. This section looks at women's labour force participation rate[20] (LFPR) and its trends, as well as how they compare with men.

19 The Global Gender Gap Report is an annual report published by the World Economic Forum (WEF), which contains an index that measures the relative gap between men and women across four key categories (sub-index)—Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment. The *Economic Participation and Opportunity* sub-index quoted here is a combined indicator of labour force participation gap, remuneration gap, and advancement gap. Malaysia ranks 87 out of 144 countries for this sub-index. As for the overall Gender Gap Index, Malaysia ranks 104—the lowest rank in ASEAN. For more information about the index, please refer to WEF (2017).

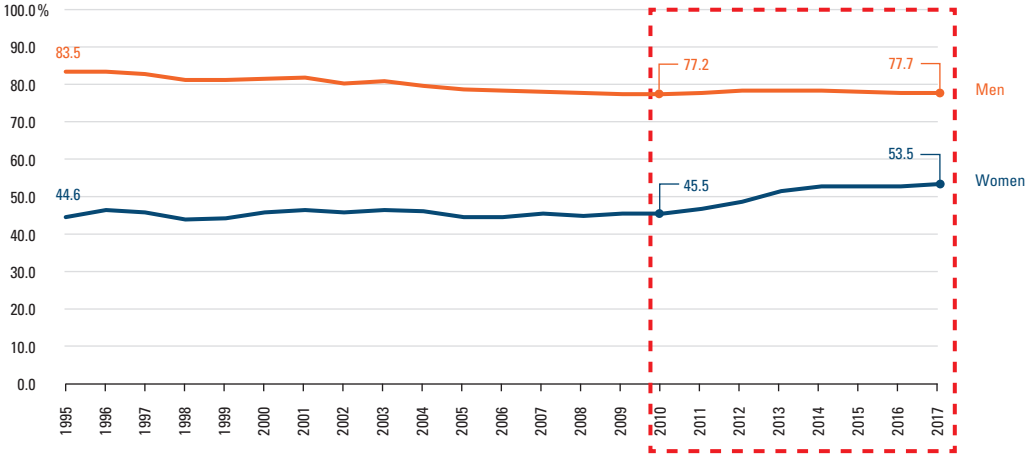
20 Defined as the proportion of working-age population (ages 15 to 64) who are currently employed or are actively seeking employment.

Labour force participation rate and its trend

Over the years, men and women make up roughly equal proportion of the working-age population, but LFPR of both sexes differ significantly. In 2017, Malaysian working-age population comprises 9.5 million women and 9.8 million men[21]. Of this, only 53.5% of women participated in the labour force, whilst 77.7% of men did (Figure 2.1). In fact, women's LFPR has historically been lower than men's, making the gender gap in LFPR a long-standing issue in Malaysia.

Nonetheless, it should be appreciated that progress has taken place over time. Within the past two decades, gender gap in LFPR has narrowed by almost 38% from 38.9 percentage points in 1995 to 24.2 percentage points in 2017. Underlying this progress is a long-term downward trend in participation rates for men, and a corresponding upward trend for women.

Figure 2.1: Labour force participation rate, by sex, 1995 – 2017

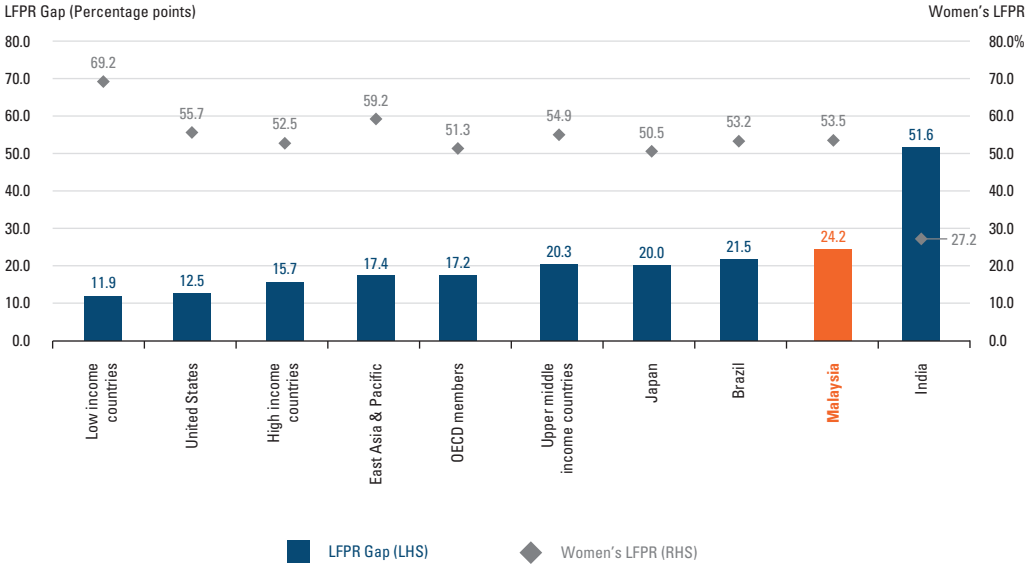


Source: CEIC

21 Source: Department of Statistics Malaysia

Particularly, the improvement and the narrowing of the gender gap in the past seven years has been impressive. From 2010 to 2017, whilst men's LFPR has remained somewhat stable, women's LFPR increased by 8.0 percentage points from 45.5% to 53.5%, nine times more than the 0.9 percentage point increase recorded in the 1995 – 2010 period. As a result, within the seven-year period alone, gender gap in LFPR narrowed by 23.7%. However, this gap remains relatively large by international comparison. Figure 2.2 shows that in 2017, Malaysia's gender participation gap is one of the largest among the selected countries, second only to India. This is despite the fact that Malaysian women's LFPR is actually comparable with, if not higher than, most of the advanced economies.

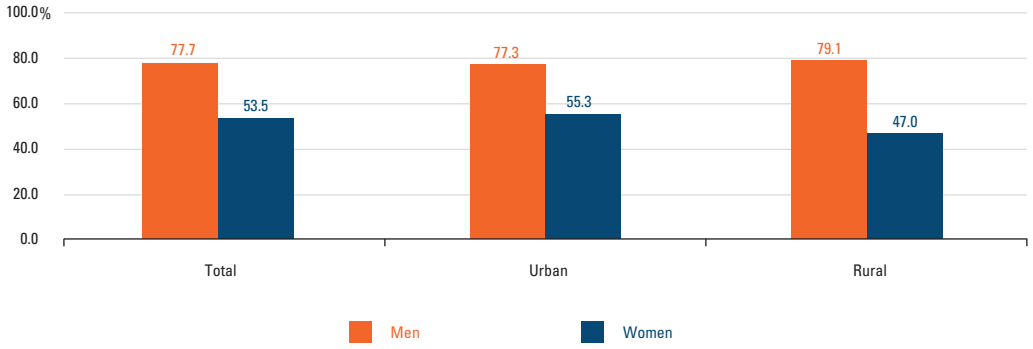
Figure 2.2: Labour force participation rate and gender gap, by selected country and country group, 2017



Source: World Development Indicators and Department of Statistics Malaysia

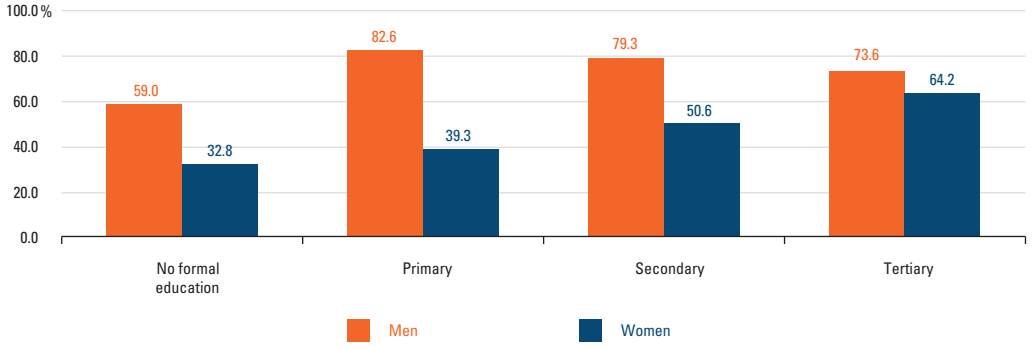
A deeper investigation into the statistics reveals that different groups of women exhibit different levels of labour force participation. To begin with, on average, women in rural areas have a lower LFPR than those in urban areas, but the reverse is true for men. This follows that gender gap is larger in rural areas, and more prominent than the national average (Figure 2.3).

Figure 2.3: LFPR, by sex and urban/rural, 2017



Source: Department of Statistics Malaysia and KRI calculations

Figure 2.4: LFPR, by sex and education level, 2017

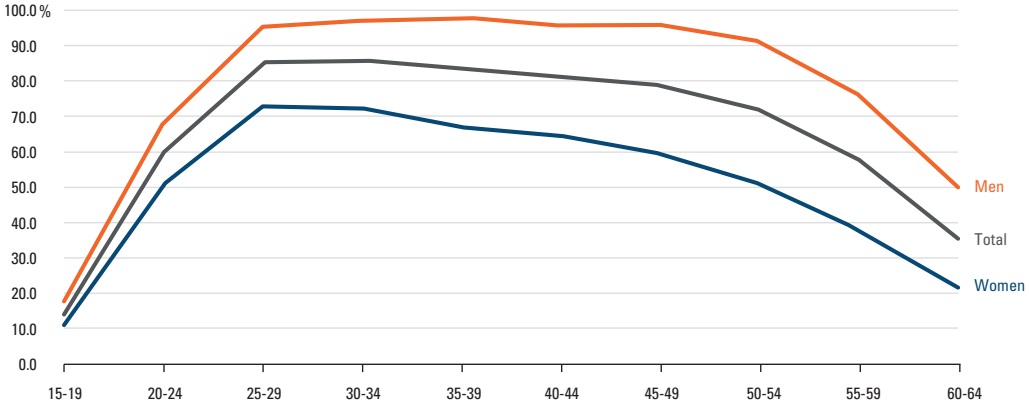


Source: Department of Statistics Malaysia

Women of different education levels, too, exhibit different levels of participation. The higher the education level, the higher is women's LFPR (Figure 2.4). Notably, tertiary-educated women record the highest LFPR, but we see later in the section that they also face the highest unemployment rate among all. Nonetheless, tertiary-educated women still fare best relative to their male counterparts in participation rate, exhibiting the smallest gender gap at 9.4 percentage points.

Another important dimension is the age dimension. Figure 2.5 shows that, at every age group, women's LFPR trails behind men's, with the gap being the largest at 39.4 percentage points for the 50 – 54 age group, where men's LFPR stands at 91.7%, and women's, 52.3%. In fact, LFPR for prime-age men—ages 25 to 54, also known as one's peak earning years, when decisions to stay out of the labour force can be especially costly for one's career[22]—are close to 100%. By contrast, women's LFPR peaks at ages 25-29 at 75.2%, only to decline gradually for all subsequent age groups.

Figure 2.5: LFPR, by sex and age group, 2017



Source: Department of Statistics Malaysia

Before discussing further, it is important to understand that the shape and level of LFPR curves above represent the combined results of two underlying effects—cohort (year of birth) and life-cycle (age) effects. On one hand, each age group could be seen as representing people of different birth cohorts, hence their respective LFPR is influenced by the general social and cultural norms of their time, such as education level and gender stereotypes that could potentially affect participation decision. On the other hand, each age group represents also different stages of life, hence the decision to participate in the labour force could be tied to other decisions relevant to various points in life, for example, decision to study, get married, or retire.

22 Brookings Institution (2017)

The separate influences of both effects are inherently difficult to identify[23], but one way to do so is by comparing "synthetic" labour force participation curves for different birth cohorts. These birth cohorts are created by linking age groups over time for a given cohort. For example, those who were born from 1977 to 1981 will all be between ages 15 and 19 in 1996, and between ages 20 and 24 in 2001, and so on. With this, we can track the experiences of the group as they age, without actually having data on specific individuals[24].

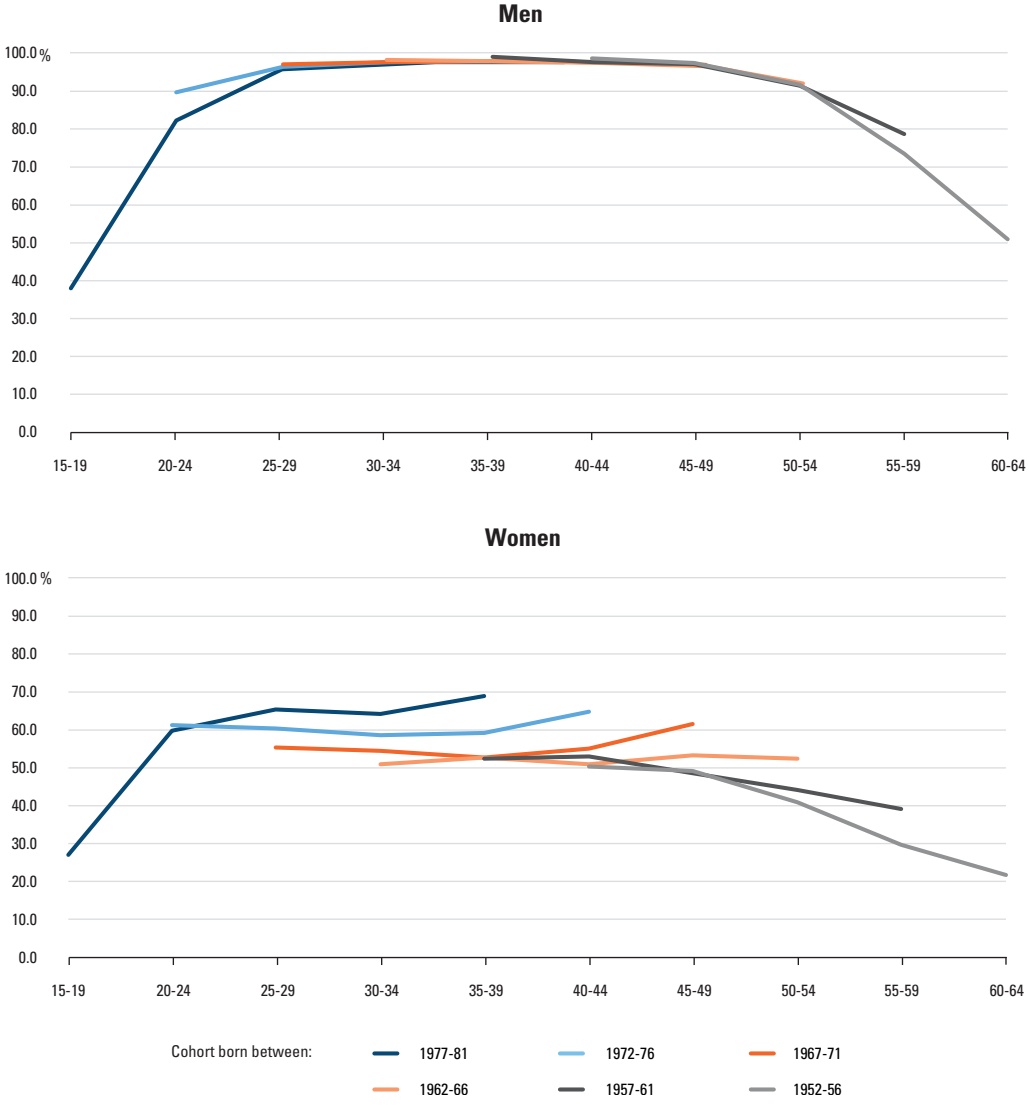
Figure 2.6 presents the synthetic curves for both men and women. By construct, life-cycle effect determines the shape of each curve—how participation decisions change throughout different stages of individuals' lives; whereas cohort effect shifts the participation curve of a cohort up or down[25], so that, say, a generation with proportionately more women working would have participation rates higher than the earlier cohorts, and vice versa. With this understanding, several important observations can be made.

23 Goldin and Mitchell (2017)

24 Ibid

25 Ibid

Figure 2.6: Synthetic labour force participation curves[26], by age group and cohort born from 1952 to 1981



Source: Department of Statistics Malaysia

26 Data from DOS are only available for the period 1995 to 2017, hence for earlier cohorts, their experiences at younger stages of life are unavailable; whereas the more recent cohorts have not reached their older years, so the information has yet to be uncovered. Unfortunately, the time period covered by the data is not long enough for us to create a complete synthetic curve that includes experiences of a given cohort throughout their working ages.

First, for the more recent cohorts, women's life-cycle curves show broadly similar shape. Labour force participation rate generally declines, albeit slightly, as women enter their 30s and increase thereafter at a higher rate around their 40s. The decline coincides with the typical ages when one starts their families, whereas the rise corresponds with the ages when their children reach a certain age, and women return to the workforce again. Interestingly, across cohorts, the decline and uptick in participation rates seem to have moved forward to younger ages, the reasons for which demand more in-depth understanding of, among others, the shift in marriage and childbearing ages of women across generations to explain possible changes in women's life-cycle patterns.

Second, women from the younger generations are increasingly participating in the economy compared to the older generations at almost every age, signalling strong cohort effects at work. This can be seen from the improvements in labour force participation rates with each cohort, especially for cohorts born since the late 1960s. To a large degree, the downward sloping curve observed in Figure 2.5 could be explained by this cohort effect—the older the generation, the lower the participation rate.

Third, for men, not much has changed across cohort, especially for prime-age men, given that the curves have maintained at almost identical levels throughout. Perhaps unsurprisingly, we observe that men's life-cycle curves seem to have persistently followed a rather simple narrative. Participation rate is low between ages 15 and 24—the typical schooling years—after which it gradually rises to almost full participation throughout prime ages. After ages 50 to 54, men start falling out of the labour force as retirement hits.

Evidently, progress has been made over time in lifting women's participation in the economy at every stage of life. More notably, by distinguishing the life-cycle and cohort effects, the analysis shows that Malaysian women may not actually drop out permanently of the workforce after childbearing years. The downward sloping curve of women's LFPR is largely due to participation rates differential in different cohorts, where older generation shows lower LFPR, and younger, higher. This finding is consequential given that it is dissimilar with past research findings[27] as well as general perception that suggest women generally phase out of the workforce after childbearing ages. Further research to help us understand

27 See KRI (2016) and World Bank (2012)

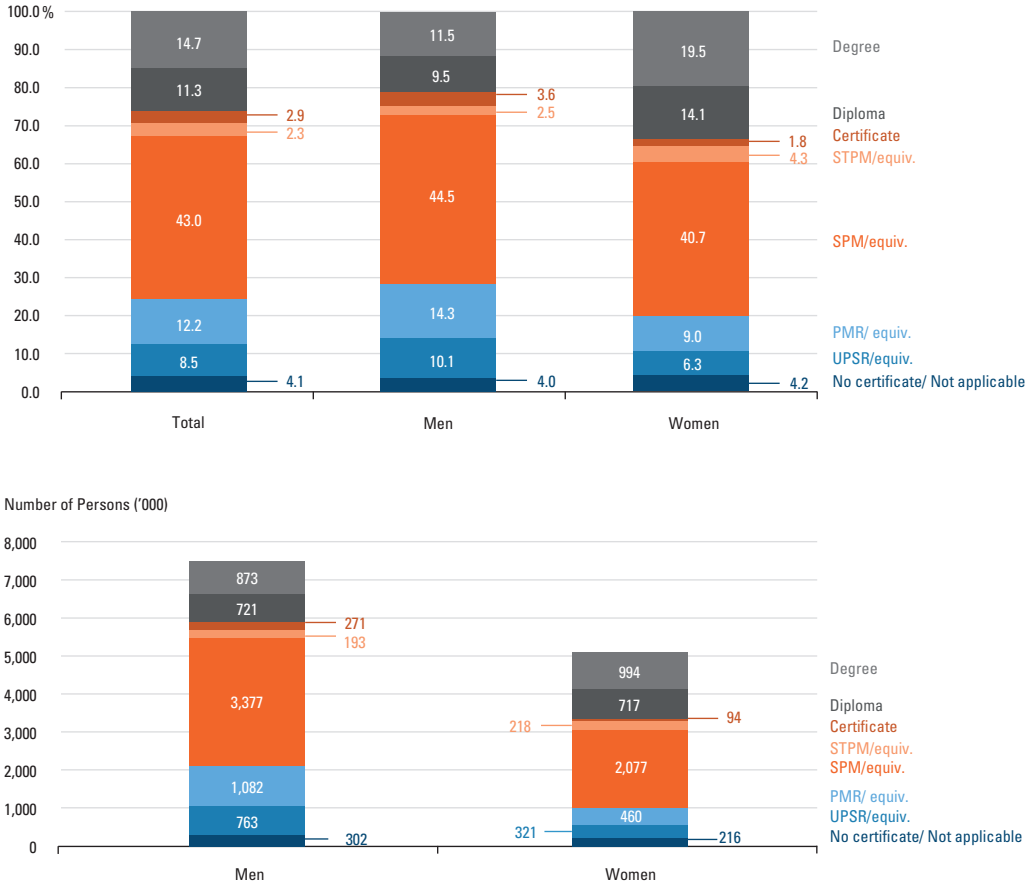
this in-depth is very important as it changes the way that we should be approaching the issue of women's participation in the workforce.

Women in the labour force

For those who join the labour force, who are they? Malaysian women labour force is, on average, higher educated than men. Almost 40% of the women obtained an STPM certificate and above, compared to only about 27% of men (Figure 2.7). However, in absolute terms, they represent around the same number of persons, that is 2 million persons each.

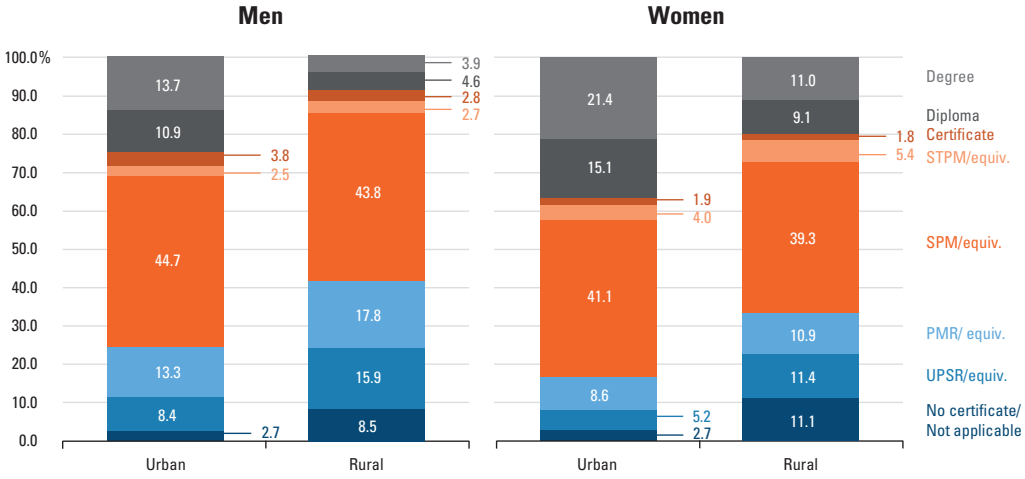
In addition, labour force in urban areas are generally higher educated than those in rural areas, for both men and women. In both the rural and urban areas, women have a higher proportion of labour force with STPM qualification and above (Figure 2.8), although in absolute terms, again, they represent somewhat similar numbers as their male counterparts.

Figure 2.7: Malaysian labour force education profile, by sex, 2017



Source: Department of Statistics Malaysia

Figure 2.8: Malaysian labour force education profile, by sex and urban/rural, 2017



Source: Department of Statistics Malaysia and KRI estimations

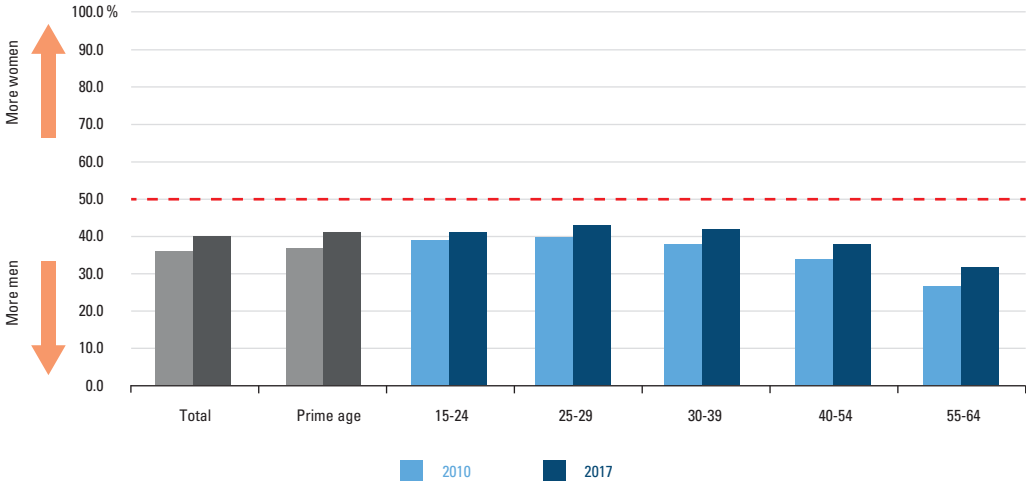
Age wise, 77.0% of the women labour force are of prime ages, slightly higher than men's 74.6% (Figure 2.9). However, in absolute terms, prime-age women labour force is only 3.9 million—that is almost 2 million persons less than 5.7 million men.

Figure 2.9: Malaysian labour force age profile, by sex, 2017

Source: Department of Statistics Malaysia

Some striking patterns emerge when we look at the composition of men and women in the labour force at each age group, as illustrated in Figure 2.10. Across all age groups, there are significantly more men than women. Women constitute only 40.2% and 41.0% of the overall and prime-age labour force respectively.

Figure 2.10: Women as a percentage of total labour force, by age group, 2010 and 2017



Source: Department of Statistics Malaysia

Women's presence peaks at ages 25 – 29 at 43.7%, after which it starts declining at all subsequent age groups, reaching a minimum of 32.0% at ages 55 – 64. This "disappearing women" phenomenon mirrors the shape of LFPR curve observed in Figure 2.6. Because there are increasingly fewer women in the labour force across age groups, whilst men continue to maintain full participation, hence women's presence gradually erodes as we move up the age ladder. This will affect gender equality in occupational opportunities, which will be discussed in detail in the next section. Nonetheless, just as women's labour force participation has improved for all age groups over the years, women's presence in each age group has also seen obvious increase from 2010 to 2017.

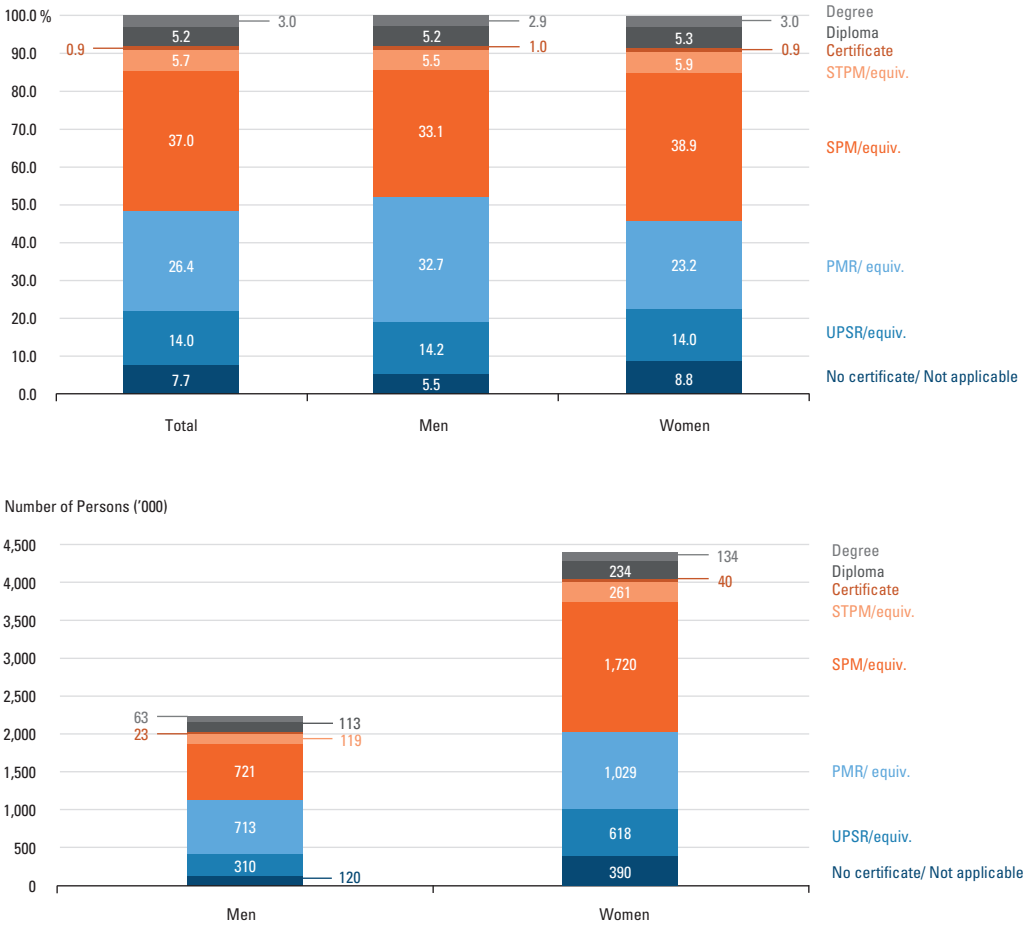
Women outside the labour force

As for those who stay outside the labour force, who are they? As implied above, there are substantially more women outside the labour force than men—two times to be exact, with 4.4 million women and 2.2 million men. These are people who are currently not employed and not actively seeking employment.

Similar to those in the labour force, women outside the labour force are higher educated than men, given that 15.1% of them have at least an STPM qualification, compared to 14.6% of men (Figure 2.11). The difference is more remarkable in absolute terms—they represent 669,200 women, more than twice the number of men at 317,100.

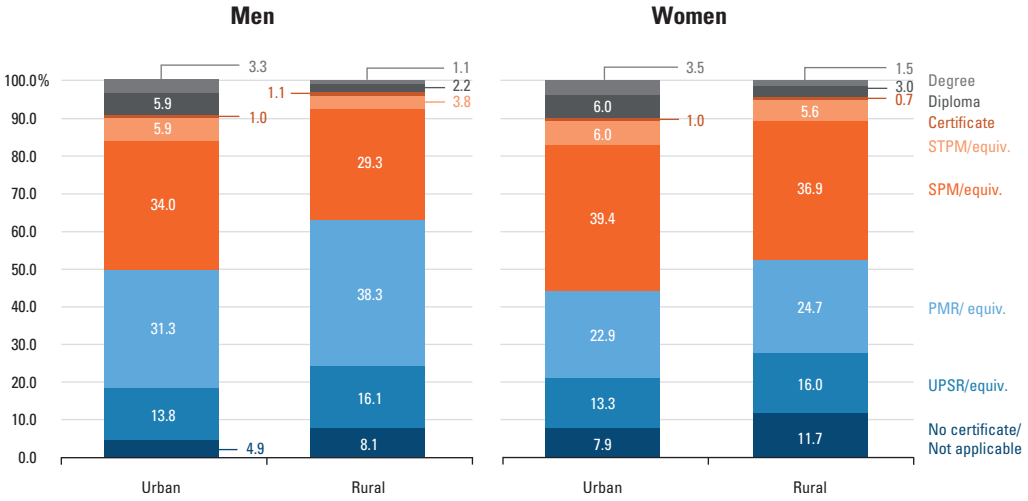
Urban and rural areas display different education profiles for those outside the labour force. Both men and women in urban areas are higher educated than those in rural areas. But in both areas, there are larger proportions of women with at least an STPM qualification compared to men (Figure 2.12).

Figure 2.11: Education profile of population outside the labour force, by sex, 2017



Source: Department of Statistics Malaysia and KRI calculations

Figure 2.12: Education profile of population outside the labour force, by sex and urban/rural, 2017

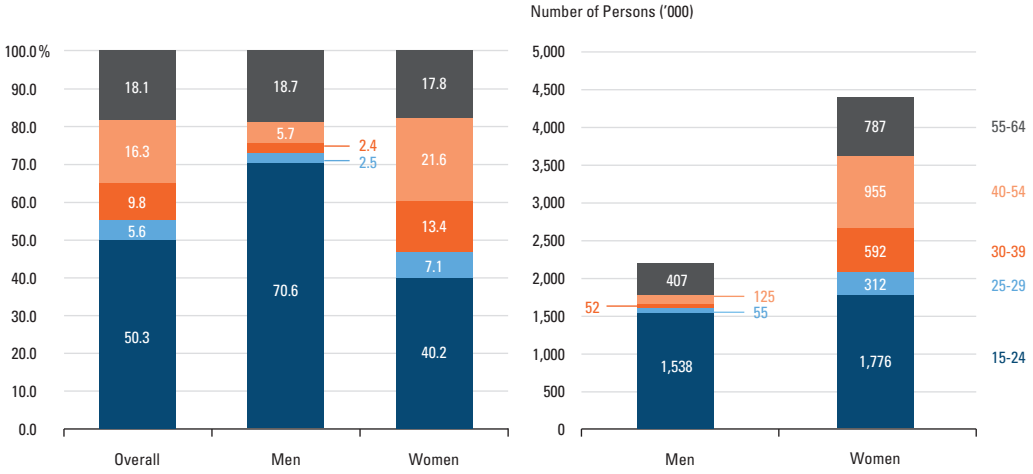


Source: Department of Statistics Malaysia and KRI estimation

By age group, two key observations can be drawn from Figure 2.13. Firstly, men outside the labour force are substantially younger than women. Seven out of 10 men are 15 to 24 years of age, making them the largest group among the men. Comparably, only four out of 10 women are of this age group.

Secondly, almost two million women outside the labour force are of prime ages—that is almost ten times that of men's (0.2 million). In other words, women made up almost 90% of the prime-age population outside the labour force.

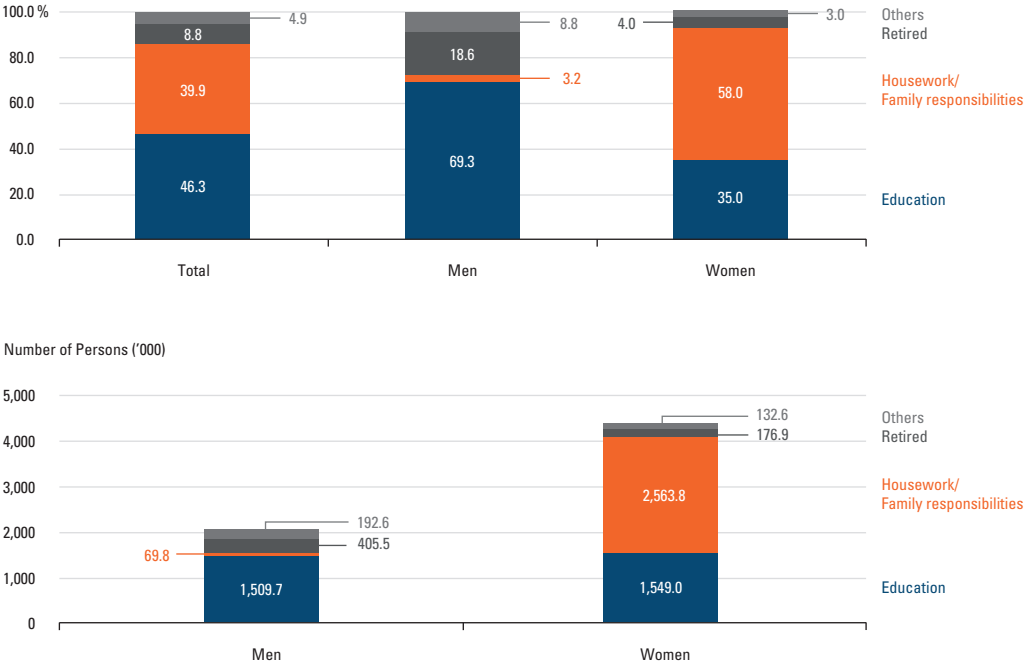
Figure 2.13: Age profile of population outside the labour force, by sex, 2017



Source: Department of Statistics Malaysia and KRI calculations

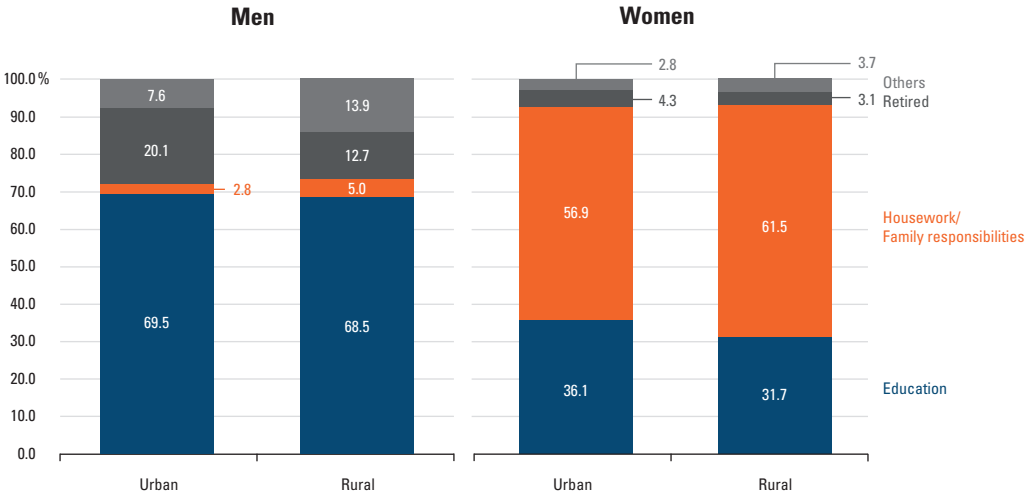
So why do people stay out of the labour force? 69.3% of men stay outside the labour force for education (Figure 2.14), which corresponds with the proportion of men who are between 15 and 24 years of age (see Figure 2.13)—the typical schooling years. As for women, 58.0%, or 2.6 million women do not join the labour force due to family responsibilities. By contrast, only 3.2%, or 69,800 men do the same. In proportional terms, housework also affects more women—and men—in rural than in urban areas (Figure 2.15).

Figure 2.14: Population outside the labour force, by sex and reasons for not seeking work, 2017



Source: Department of Statistics Malaysia and KRI estimation
Notes:
(1) "Education" includes those in education and those planning to pursue further education.
(2) "Others" include those disabled and those uninterested.

Figure 2.15: Population outside the labour force, by sex, reasons for not seeking work, and urban/rural, 2017



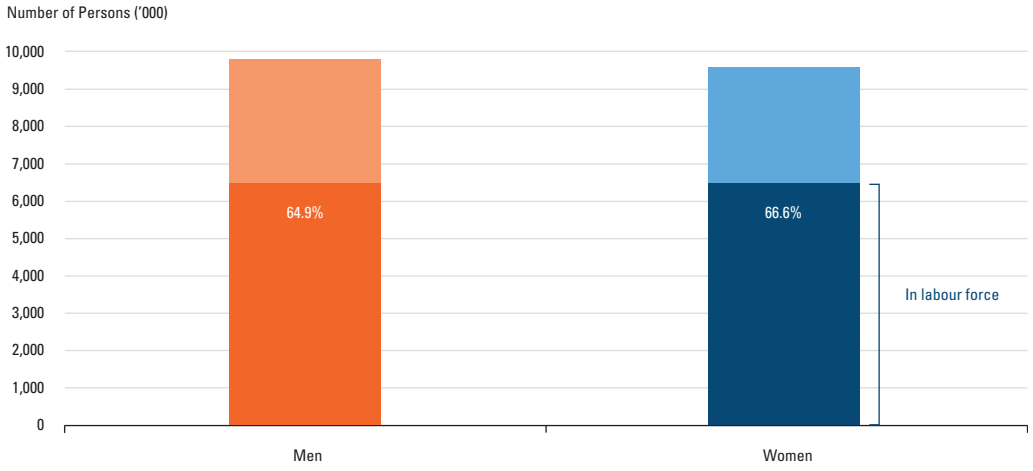
Source: Department of Statistics Malaysia and KRI estimation

The profile of population inside and outside the labour force provides some insights into the issues pertaining to women's labour force participation. For one, Malaysian working-age women are more highly educated than men. But a large proportion of them are outside the labour force, with many still in prime ages.

The major reason for this is the disproportionate care responsibilities shouldered by women in the family. Despite their educational achievement, many women are hindered from participating in the labour force due to family responsibilities. Hence, to alleviate women's challenge to balance family and work, it stands to reason that a fairer distribution of housework between men and women is crucial. In fact, if the total number of persons affected by housework was equally distributed between both sexes in 2017, gender parity in LFPR would already be achievable (Figure 2.16). However, although recent years have seen a great reduction in women affected with care responsibilities, there was only a minimal increase in men who stayed outside the labour force for the same reason (Figure 2.17). If this is an indicator of the redistribution of housework between men and women that had happened over the years, clearly there remains much space for improvement.

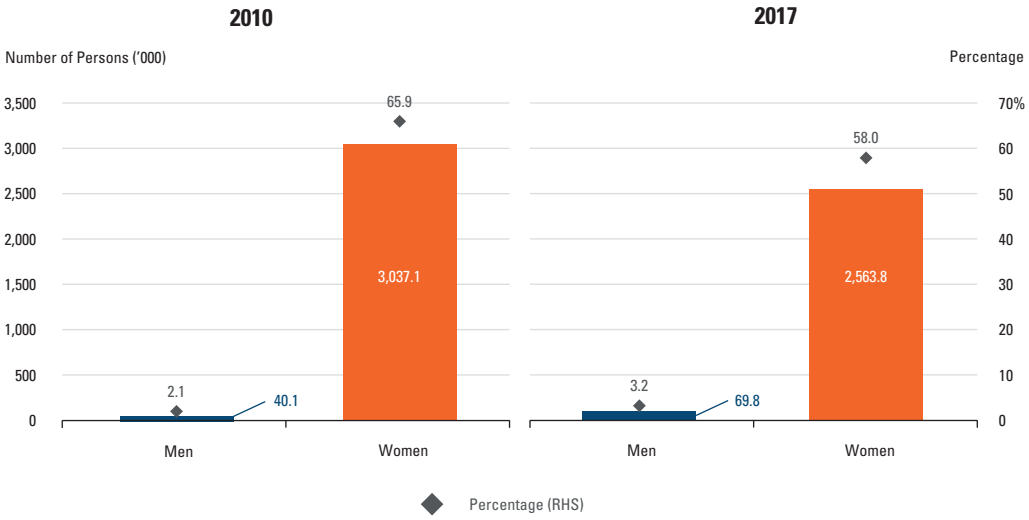
In sum, the unequal distribution of care responsibilities between men and women is fundamental in any discussion about women's economic empowerment, both in Malaysia and globally. Such gender role conformity represents an outcome of a confluence of social, religious and economic factors, the understanding of which is key in the country's endeavour to empower women in the economic sphere.

Figure 2.16: Hypothetical LFPR, by sex, 2017



Source: Department of Statistics Malaysia and KRI calculations

Figure 2.17: Number and percentage of men and women who stay outside the labour force due to housework/family responsibilities, 2010 and 2017



Source: Department of Statistics Malaysia and KRI estimation

Box 2.1: Understanding the importance of both productive and reproductive labour

Productive work, or market work, has always been the focus of mainstream economics, often for good reason. Productive work refers to the production of goods and services that have monetary value and are traded in the market sphere. As a result, labourers participating in productive work are compensated in monetary terms. These activities are easily quantified and hence recorded in countries' national accounts. Productive roles are mainly assumed by men, although women are increasingly taking up these roles in most modern economies.

Reproductive work, on the other hand, comprises both paid and unpaid activities that are associated with care-giving and domestic work. Such activities are largely shouldered by women. It is also increasingly known as "social reproduction" to indicate the broader scope of activities beyond just biological reproduction[28], to include daily activities such as cooking, washing, care for friends and family members and so on. Among these, the

28 UNDP (2001)

unremunerated activities such as unpaid care work has particularly been a blind spot in most economic paradigms, not least because they happen within the private sphere and, arguably, do not contribute to the capitalist processes of production.

The perception of reproductive work as insignificant, however, is increasingly challenged within the discourse on labour market and economic development in recent decades, for at least two reasons. Firstly, social reproduction is of great economic importance as it forms an essential basis of productive work. Care and domestic services, even if unpaid and officially unrecognised in national accounts, are indispensable in ensuring the optimal functioning of labour force participants and an important investment in the nation's human capital. Secondly, the day-to-day performance of reproductive work activities are crucial in preserving the well-being of individuals, families, and communities, without which the maintenance of healthy family and social ties would not be possible.

In fact, the intersection between productive and reproductive work has become especially important in the discussion of gender equality in the labour market. On one hand, gender role conformity which confines women within the domestic sphere often restrict women from participating meaningfully and advancing in the economy. On the other hand, encouraging women to participate in the economy without offering a sustainable alternative care management mechanism risks pressuring women unduly as they assume roles both within and without the home. This highlights the fact that the strive for gender equalities in the labour market must be accompanied by equal emphasis on rethinking the care model in the economy. Given the importance of reproductive work, the way in which society and policymakers address the tension between care responsibilities—especially the unpaid ones—and women's economic participation is consequential for the sustainability of our economic development.

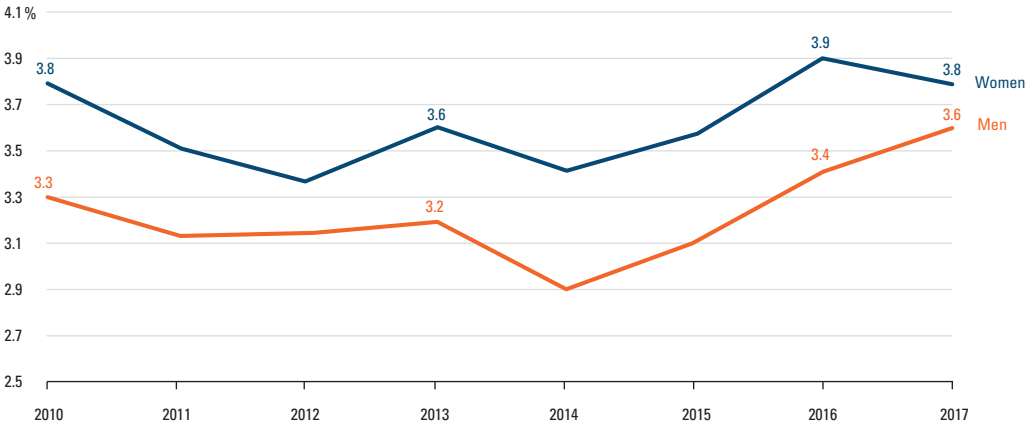
2.1.2 Gender gaps in unemployment, occupational opportunities, and wage

Gender gaps occur beyond labour force participation. This section shows that, women are not only less likely to participate in the labour force, but when they do, they are also (slightly) less likely than their male counterparts to find a job. For those who are employed, women tend to cluster in occupations that are different from men which has implications on the kind of economic opportunities they have access to, and the income they receive. The findings also suggest that gender inequality within the labour force may not always be an outcome of outright gender discrimination in the workforce, but simply a result of how men and women allocate themselves into different occupations.

Unemployment rate disparities between men and women

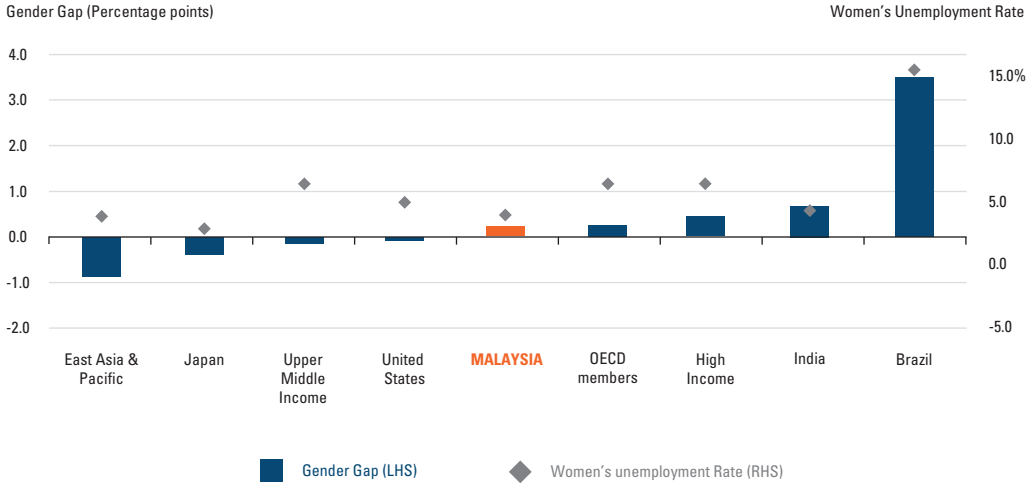
Women's unemployment rate in Malaysia has always surpassed men's. In 2017, women's unemployment rate stood at 3.8%, whereas men's rate at 3.6%. This represents a gap of 0.2 percentage point, a considerable improvement from the year before. By international comparison, this gender gap, as well as women's unemployment rate, is in fact relatively low (Figure 2.19).

Figure 2.18: Unemployment rate, by sex, 2010 – 2017



Source: Department of Statistics Malaysia and KRI calculations

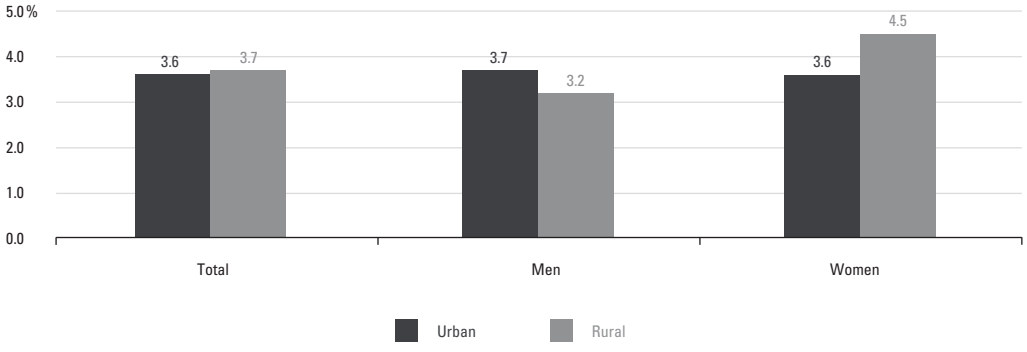
Figure 2.19: Women's unemployment rate and gender gap, by selected country and country group, 2017



Source: World Development Indicators, Department of Statistics Malaysia, and KRI calculations
Note: Gender gap in unemployment rate is measured as the percentage point difference between women and men's unemployment rate, i.e. *women's rate—men's rate*. Hence, a negative gender gap implies that women's unemployment rate is lower than men's.

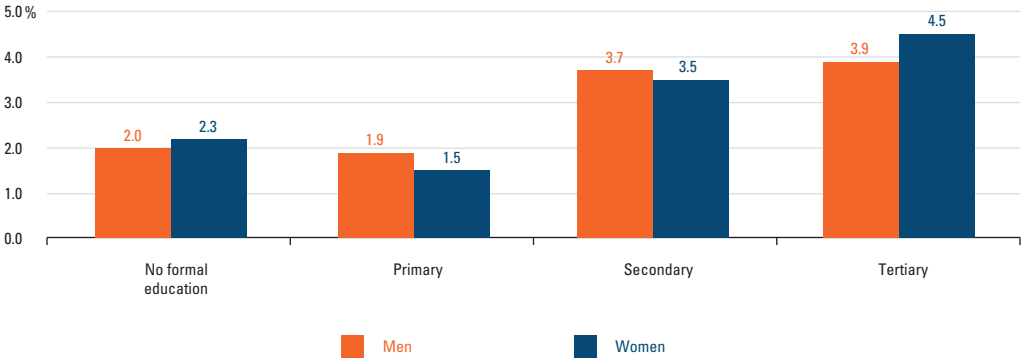
Looking at the statistics by demographic group, women in rural areas face higher unemployment rate compared to their urban counterparts, but the reverse is true for men. Notably, in urban areas, women's unemployment rate fares better than men's (Figure 2.20).

Figure 2.20: Unemployment rate, by sex and urban/rural, 2017



Source: Department of Statistics Malaysia

Figure 2.21: Unemployment rate, by sex and education level, 2017



Source: Department of Statistics Malaysia and KRI calculations

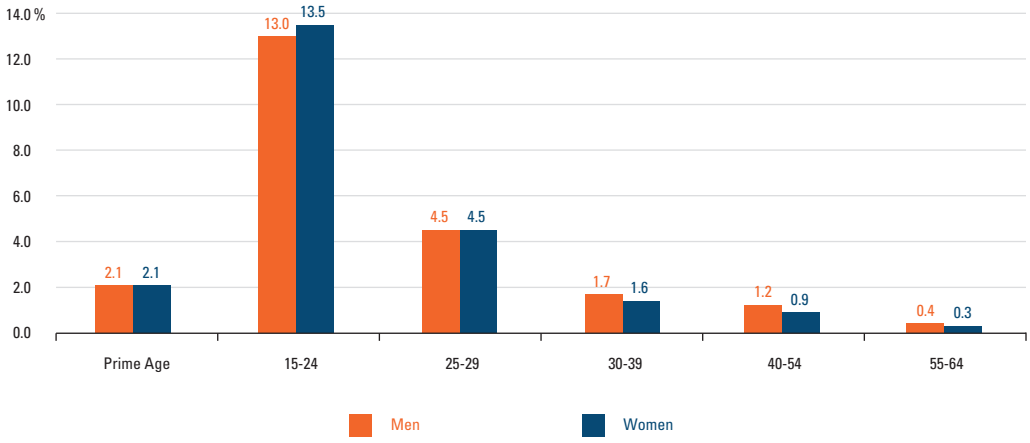
For both men and women, unemployment rate is generally higher at higher education levels, with women's unemployment rate higher than men's for those with no formal education and tertiary education. It is noteworthy that unemployment gender gap is the largest among tertiary-educated labour force, standing at 0.6 percentage points in 2017 (Figure 2.21). In other words, tertiary-educated women find it hardest to get employed relative to men, despite that almost 60%[29] of total graduates from Malaysian tertiary-education institutions are women, and they often outperform men.

By age group, prime-age men and women show the same unemployment rate at 2.1%, lower than the overall rate recorded (Figure 2.22). Among them, the 25 – 29 age group experiences the highest unemployment rate at 4.5% for both men and women.

Apart from that, the 15 – 24 age group record an even higher unemployment rate and gender gap. At 13.0% and 13.5% for men and women, respectively, they mark the highest unemployment rate among all age groups—possibly due to their lack of education and work experience—and also the largest gender gap at 0.5 percentage point. In general, unemployment rate is higher for men than women only from age 30 onwards—for the younger age groups, men's rate is either lower than or the same as women's.

29 MOHE (2018)

Figure 2.22: Unemployment rate, by age group, 2017

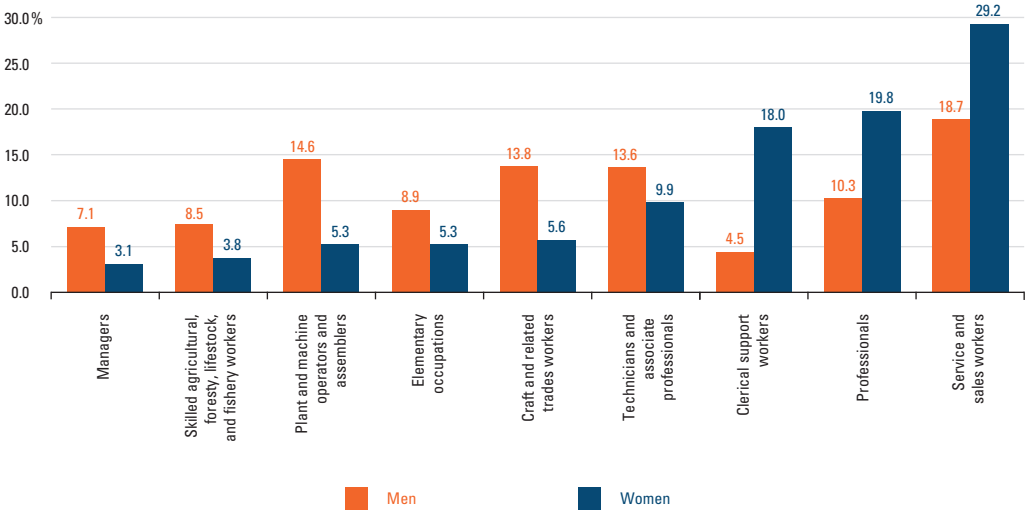


Source: Department of Statistics Malaysia and KRI calculations

Where are the employed women?

When women do get employed, they tend to be engaged in occupations different from men. Almost half the employed women are service and sales workers (29.2%) and professionals (19.8%), followed by clerical support workers (18.0%). Managers, on the other hand, make up only 3.1% of total employed women, the smallest proportion among all. By contrast, men are more equally distributed across all occupations, with clerical support workers making up the smallest share of employed men, at only 4.5% (Figure 2.23).

Figure 2.23: Distribution of employed persons across occupations, by sex, 2017



Source: Department of Statistics Malaysia

Whilst DOS only publishes data on nine occupation categories, the International Labour Organization (ILO) provides employment data for a more disaggregated list of occupations, but does not distinguish between Malaysian and non-Malaysian citizens, and the latest available data is that of 2016. Although not directly comparable with the remaining analysis, we still use the data to present a more granular view of the occupational destinations of both men and women.

Figure 2.24 shows the percentage of women employed by each occupation group, or simply, women's representation in these jobs. Three key observations are clear from the figure. First, men outnumbered women in most occupations, and only two out of 29 occupation categories had a rather balanced share of both sexes in 2016. Both of which were sales and services jobs.

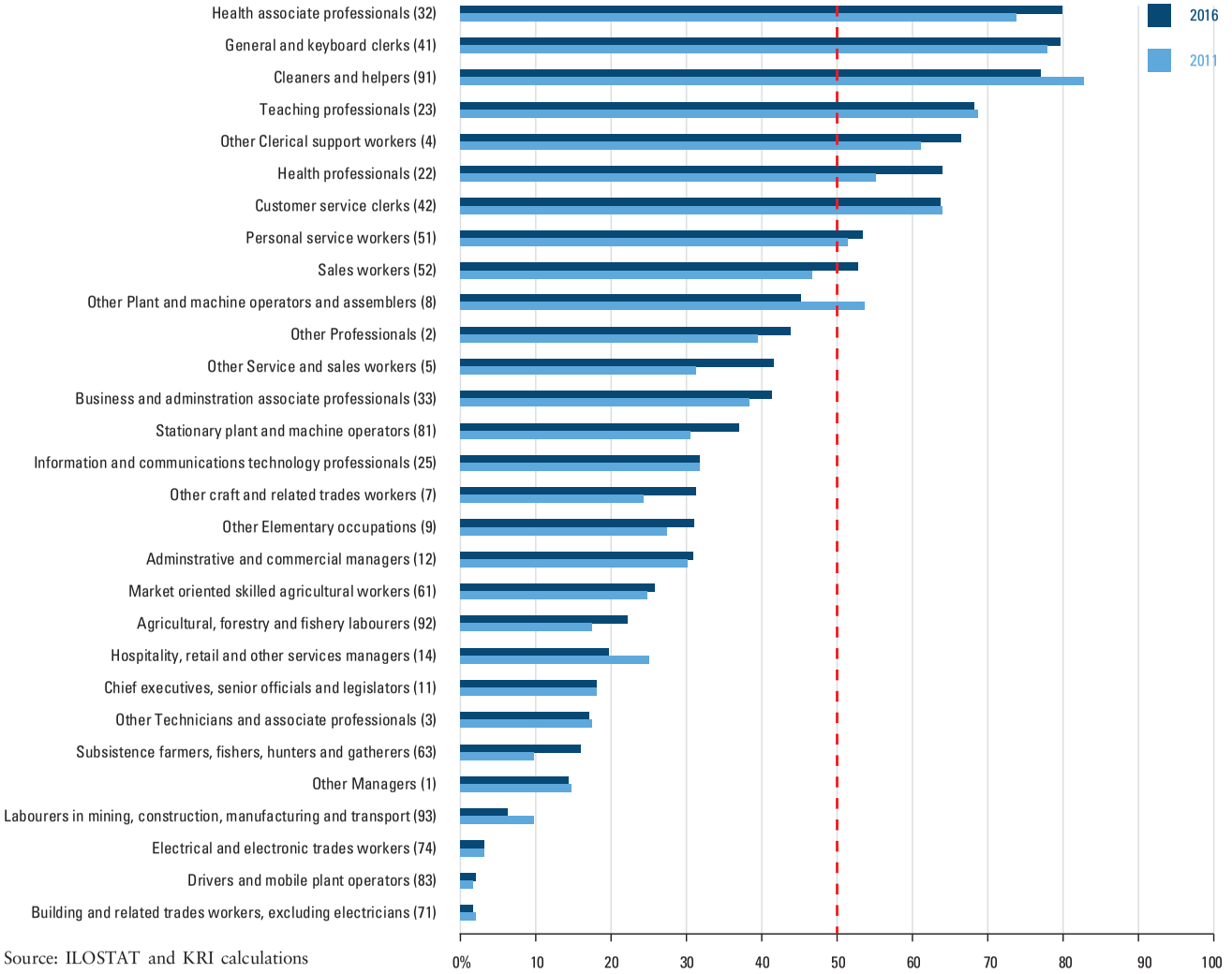
Second, of the seven occupation categories with proportionally more women than men, all of them are the typical "feminine" jobs. Almost 80% of health associate professionals—which include occupations such as nursing and midwife—are women; 79.5% general and keyboard clerks; 77.1% cleaners and helpers; and 68.6% teaching professionals. By contrast, the majority of more senior-level occupations are occupied by men—almost 82% of chief executives,

senior officials, and legislators, as well as 80.5% hospitality, retails, and other services managers are men.

Thirdly, between 2011 and 2016, women had gained higher presence in most occupations. However, all managerial occupations—those that are supposedly higher ranked and paid—experienced a deterioration in women's representation, with the highest decline as high as 5.4 percentage points for hospitality, retail, and other services managers, dropping from 24.9% to 19.5%. In other words, women's representation at the higher-level positions have shrunk within the past five years.

This gender divide in occupation corresponds with the "disappearing women" phenomenon discussed in the previous section. At ages where most senior positions are due, the relative absence of women would, to a large degree, lead to lower women's visibility in those occupations, because the pool of women candidates available for consideration is limited to begin with. With that, we would expect that as progress is made over time, women's representation at the top would see a corresponding improvement. The fact that it has actually shrunk in the past five years therefore calls for further research to identify the presence and root causes of the glass ceiling for women at work.

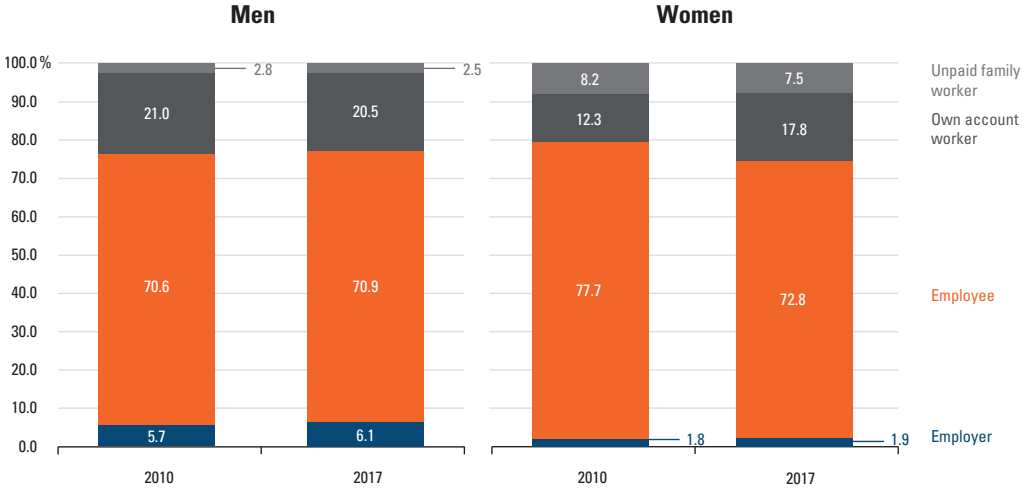
Figure 2.24: Proportion of women in each occupation, 2011 and 2016



Source: ILOSTAT and KRI calculations

By status in employment, in 2010, 77.7% of women in Malaysia worked as employees, but this proportion has since dropped to 72.8% in 2017 (Figure 2.25). Instead, women own account workers—that is, independent or self-employed workers—have seen a drastic rise over the period, recording a 5.5 percentage points increase from 12.3% to 17.8%. Men own account workers, however, did not experience the same rising trend as women did over the years.

Figure 2.25: Status in employment, by sex, 2010 and 2017

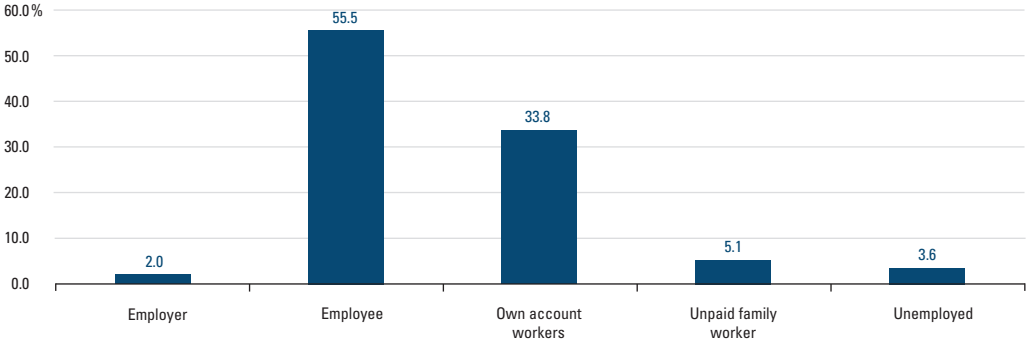


Source: Department of Statistics Malaysia

Recall from the first section that the progress in women's labour force participation rate within the same period was prominent. Women's labour force increased by 1.2 million between 2010 and 2017. Whilst more than half of this increase was due to the increase in women employees, another significant one-third came from the rise in women own account workers (Figure 2.26). Nationally, among all types of employment, own account workers in Malaysia grew the most by 30.8%, from 1.8 million to 2.4 million in the same period. Of this increase, 74.9% are women. Whilst this changing landscape of work undoubtedly offers new economic opportunities for women, it also raises concern about the trade-off between job flexibility and security, which is associated with the lack of guaranteed income and the more traditional form of work arrangements of independent work[30].

30 Further discussion on the implications of the rise of independent work on the landscape of the workforce and workers' vulnerability can be read from KRI (2017).

Figure 2.26: Change of women workers in each status of employment as a percentage of total change in labour force, 2010 – 2017



Source: Department of Statistics Malaysia and KRI calculations

Also notable is the relatively large proportion and number of female unpaid family workers—classified by the ILO as a form of vulnerable employment—compared to men. In 2017, there are 366,800 female unpaid family workers, twice the number of their male counterparts at 183,200 men. Notably, whilst women account for only about 40% of the labour force, they take up 66.7% of all unpaid work (Figure 2.27).

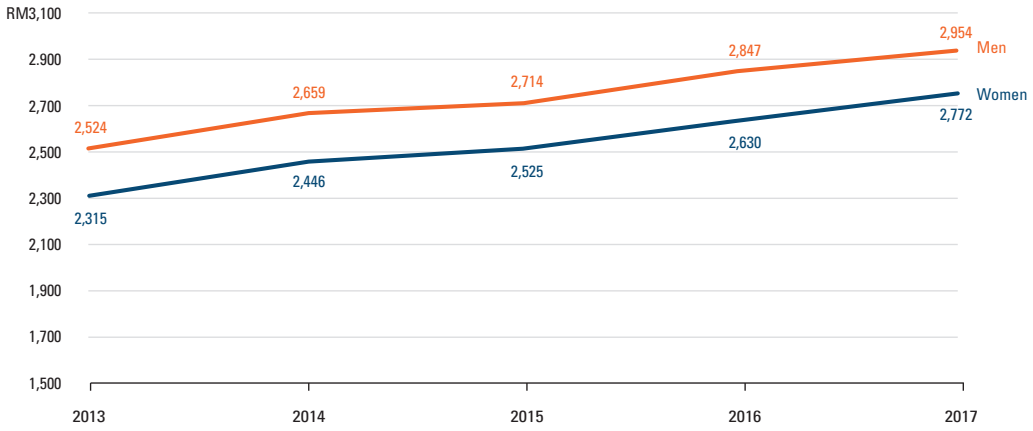
Figure 2.27: Percentage of men and women, by status in employment, 2017

Source: Department of Statistics Malaysia and KRI calculations

Are women paid as much as men?

Another crucial topic in the global gender inequality discourse is the issue of unequal pay. Like virtually everywhere else worldwide, the gender wage gap has persisted in Malaysia, with women earning less than men throughout time. In 2013, Malaysian women on average earned 8.3% less than men. Four years later, the gender pay gap stands at 6.2%, where women's mean monthly salaries and wages marks RM2,772, and men's, RM2,954 (Figure 2.28).

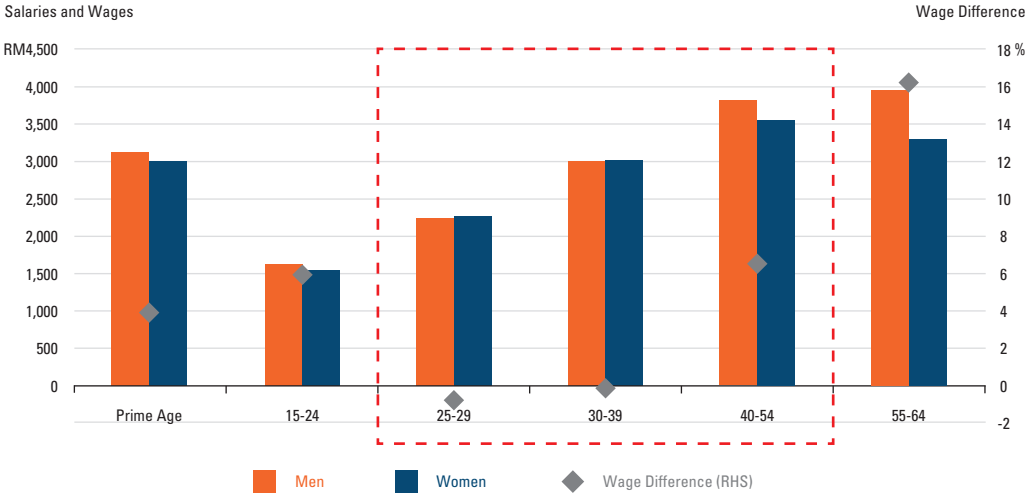
Figure 2.28: Malaysian mean monthly salaries and wages (in 2017 prices), by sex, 2013 – 2017



Source: Department of Statistics Malaysia, CEIC, and KRI calculations

Comparing aggregate mean wages between men and women, however, risks masking the true wage gap—or the lack thereof—that signals pay discrimination purely on gender basis, as this does not compare like with like. Differences in remuneration between individuals can be attributed to a host of factors, including distinction in education, skill, experience, occupation and many more. It follows that identifying the genuine wage gap demands comparison between individuals with characteristics that are as similar as possible. Unfortunately, limitations of data restrict such analysis in this section. Instead, we present the wage comparison between men and women of similar age group, education level and occupation separately as a preliminary step towards better understanding the closer reality of gender pay gap in Malaysia. We find that the disaggregated comparisons reveal gender pay gaps that are more prominent than the overall gap, indicating that the headline number obscures the greater disparity experienced by different groups of men and women.

Figure 2.29: Mean monthly salaries and wages and wage differences, by age group and sex, 2017

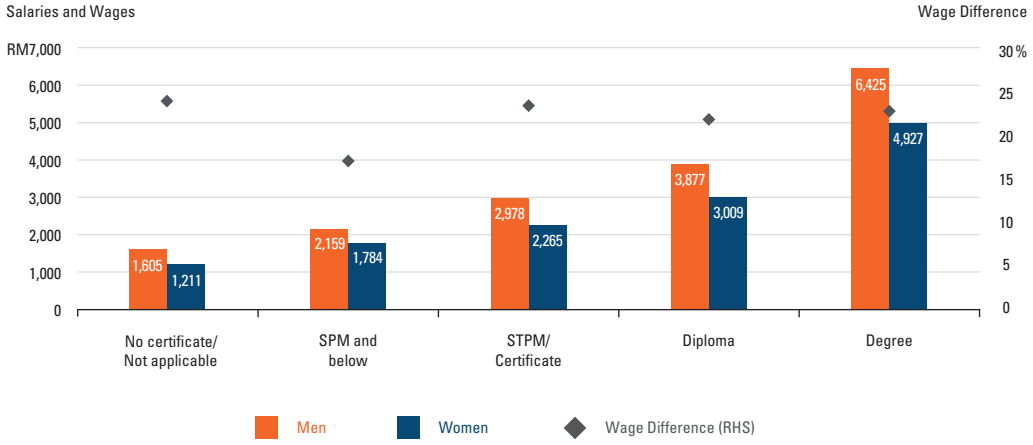


Source: Department of Statistics Malaysia and KRI calculations
Note: Wage difference shows the difference between men's and women's mean monthly salaries and wages as a percentage of men's wages.

We start by investigating gender wage gap by age group. Within prime-age labour force, women aged 25 to 39 on average earn 0.2 to 0.8% higher wages than men. Interestingly, this is reversed drastically for those aged 40 to 54, where women's mean wages become 6.5% lower than men's. Amongst all age groups, those aged 55 and beyond records the largest gender wage gap, standing at 16.4%.

The dramatic reversal of gender pay gap between those before and after their 40s is something that warrants attention. Is the wage disparity observed among the older groups a result of certain life events that take place in women's life at these ages, or a consequence of their occupational decisions influenced by generational factors, such as education level and social norms? Given that wages data are only available from 2012 onwards, synthetic cohort analysis adopted previously is unfeasible here to disentangle both effects. This calls for more research to advance understanding on the phenomenon observed.

Figure 2.30: Mean monthly salaries and wages and wage differences, by highest certificate obtained and sex, 2017



Source: Department of Statistics Malaysia and KRI calculations

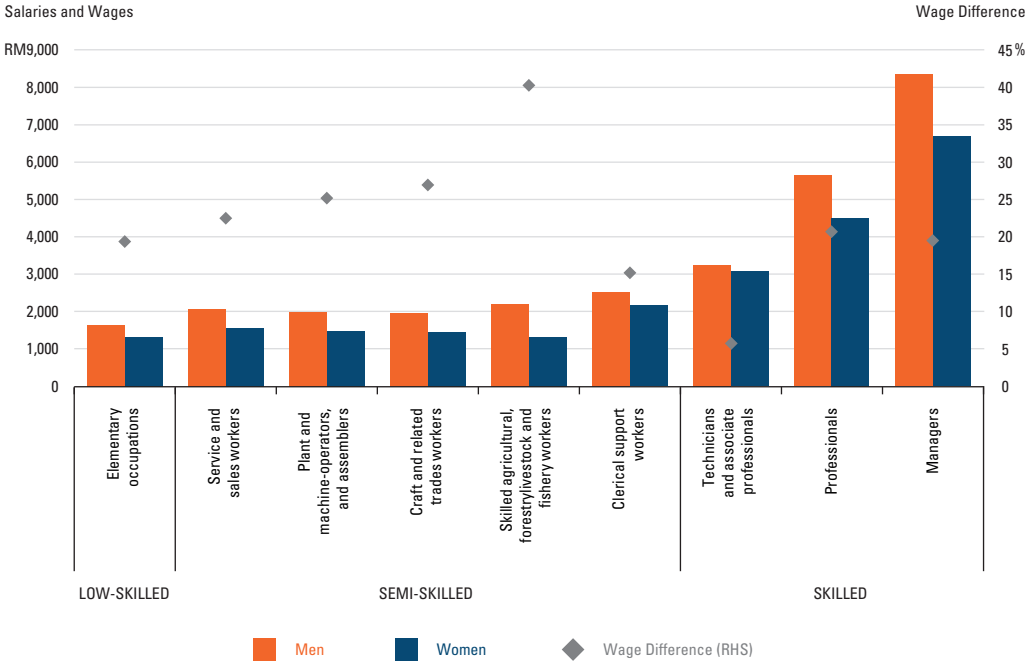
As for education level, higher education is associated with higher wages for both men and women. At all levels of education, women are on average paid a lower wage than men. Gender pay gap ranges from 17.4% for those with STPM or Certificate, to 24.5% for those without any certificate (Figure 2.30). Again, despite the fact that women made up a larger proportion of total graduates in Malaysia, overall, female degree holders are still paid remarkably lower than their male counterparts—23.3% or RM1,498 to be exact.

Another factor that is of importance in determining wage level is occupation. This perhaps provides a better comparison of like individuals, since we are comparing men and women who perform the same job and are therefore likely to be of similar education level as well. Figure 2.31 shows that within each occupation, gender pay gap is evident. It ranges from 5.5% for technicians and associate professionals, to 40.4% for skilled agricultural workers. What is worth noting here is that occupations with some of the lowest wage gaps are also those with relatively high women's representation, such as professionals (20.6%), technicians and associate professionals (5.5%), and clerical support workers (15.7%) (Figure 2.31). Managers, on the other hand, is an obvious outlier. Given the low women's presence in the occupation (see Figure 2.24), female managers are still compensated relatively comparably to men amongst

all occupations, recording a wage gap of 19.8%. This could possibly be due to their higher bargaining power associated with their role as decision makers.

The above observation is important in explaining the relatively narrow overall wage gap in Malaysia. As a high proportion of women are engaged in occupations with lower wage gap (see Figure 2.23), it is no surprise that wage gap is narrowed at the aggregated level, and in this case to a substantial extent. Clearly, focusing on the overall wage gap obscures the much larger wage disparity faced by different groups of women, the neglection of which would potentially ill-inform any policy decision.

Figure 2.31: Mean monthly salaries and wages and wage differences, by occupation and sex, 2017



Source: Department of Statistics Malaysia

Overall, it is worth highlighting from this section that women's occupational destinations are still fairly concentrated in the traditional "feminine" jobs, and women's representation at senior-level positions remains low throughout the years. This is especially evident when even within the field of hospitality and other services—the supposedly "feminine" sector—male managers still outnumbered female substantially. Such gender segregation by occupation often implies important underlying distinction in opportunities for women and men[31], which could also potentially affect gender gaps in income—as we have briefly discussed earlier.

With this, we should be mindful that not all gender inequalities points to outright gender discrimination within the labour market. More often than not, social norms, gender stereotypes, and structural constraints that shape women's and men's career decisions play a significant role in producing the gender inequality patterns observed today. Without advanced understanding of these nuances and factors at play, efforts to help unlock women's potential in the economic realm may be ineffective.

31 ILO (2017)

2.1.3 Counting on women: The economic case for women empowerment

To many, gender equality is but an important cause that matters for fairness and women's rights. Whilst this *is* true and important, equally strong is the economic case for women's empowerment. For a country which seeks continued progress socially and economically, here are some reasons why paying more attention on empowering women might help.

Including more women in the labour force helps growth

Empirical evidence of the economic and social benefits of women's empowerment abound. A large body of international research found that affording women equal opportunity to education, health and economic advancement not only benefit women themselves, but also the greater society. Women's access to economic opportunities, for example, often lead to better education and health outcomes for children, especially in developing countries[32]; closing gender gaps in employment and education promotes exports diversity, and hence economic growth[33]; reducing gender inequalities, too, leads to lower income inequalities and thus more sustainable growth[34].

The greater overall benefits brought about by gender equality is very much likely to be true in Malaysia. Adopting the methodology of Aguirre et al. (2012), we find that raising women's employment level by, say, 30%—a shift that will narrow but not completely close gender gap in labour force participation—would raise Malaysia's GDP by around 7 to 12%.

Indeed, empowering women economically unlocks multitudes of economic benefits in diverse ways. Particularly, at a time when the future is increasingly shaped by rapid technological advancement, gender equality is of great importance as an innovation driver. Box 2.2 discusses this idea in greater detail.

32 See, among others, Duflo (2012) and Swamy (2014).

33 IMF (2016)

34 IMF (2015)

Box 2.2: Does gender equality matter for innovation?

"There is no greater indicator of an innovative culture than the empowerment of women. Fully integrating and empowering women economically and politically is the most important step that a country… can take to strengthen its competitiveness." (14)[35]
- Alec Ross

Innovation is fundamental for sustained economic development—for countries of all income classes alike, having an innovation-driven growth is key to remaining competitive, particularly for a future that is increasingly shaped by rapid technological advancement[36]. As such, understanding the determinants of an innovation-friendly environment is critical for economies seeking to thrive in the climate of tomorrow. A wealth of literature has documented the importance of women empowerment for economic growth[37], but the impact of gender inequality on innovation has received limited attention. We argue that side-lining women from opportunities could significantly undermine the full potential of a country's human capital, and impede its ability to develop and execute new ideas.

Using cross-country data, our analysis provides evidence for the argument. Two key findings are observed from the results. First, gender inequality is strongly negatively associated with innovation. In other words, the more gender unequal a country is, the lower its innovation level. This result holds even after taking into account structural factors such as country's development level and population size, as well as institution and infrastructure development. Specifically, a smaller gender gap in labour force participation rate and better women's health outcome are positively associated with higher innovation. However, equality in educational attainment only matters insofar as women have equal access to economic opportunities as men. Second, another factor that stands out in the analysis is institutions[38], which shapes

35 Ross (2016)

36 For example, as discussed in ADB (2017).

37 For a comprehensive summary of relevant literatures, see Bandiera and Natraj (2013): Does Gender Inequality Hinder Development and Economic Growth? Evidence and Policy Implications.

38 Institution is measured with Human Freedom Index by the Cato Institute, the Fraser Institute, and the Friedrich Naumann Foundation for Freedom. It presents a broad measure of human freedom, understood as the absence of coercive constraint across various aspects, such as rule of law, security and safety, movement, religion, expression, access to sound money, freedom to trade internationally etc. For more information, refer to Vasquez and Porcnik (2016).

the personal, civil and economic freedom in a country. Results show that a more open country tends to be more innovative as well. Again, this holds true after accounting for all other factors, though the association with innovation is weaker than gender inequality. Detailed explanations on the analysis can be found in the accompanying Technical Note 2.

Figure 2.32: Relationship between Global Innovation Index and Gender Inequality Index, 2017
The more gender unequal a country is, the lower is its innovation level

Source: Global Innovation Report and United Nations Human Development Report

Evidently, promoting gender equality, especially in the economic and health domains matters for the cultivation of an innovative environment in the country. Whilst more in-depth research is required to identify the extent to which these relationships are causal, the strong negative association between gender inequality and innovation speaks volumes about the potential determinants of an innovative culture. In fact, leaving women out of the development equation is tantamount to squandering the potential, voices, and ideas of half our population—a resource too large to be overlooked especially in today's context. These findings provide valuable insights for Malaysia as we strive to strengthen our competitiveness in the pursuit to become a high-income economy.

Women's advancement as a remedy for ageing population

Malaysia is fast becoming an ageing country, resulted by both an increase in people's life expectancies and declining fertility rates[39]. An important implication of this is the end of the demographic dividend, a situation where the productive population of the country faces a greater burden to support the needs of the non-productive population[40]. This, at the same time, limits the economy's growth capacity.

A potential solution to this is to encourage more women participation in the economy. Figure 2.33 shows the projection results of what we term the non-labour force population-to-labour force (NLF) ratio—an indicator to measure the burden of our labour force to provide for the rest of the population[41]. A ratio of 150%, for example, implies 150 dependents for every 100 labour force participants.

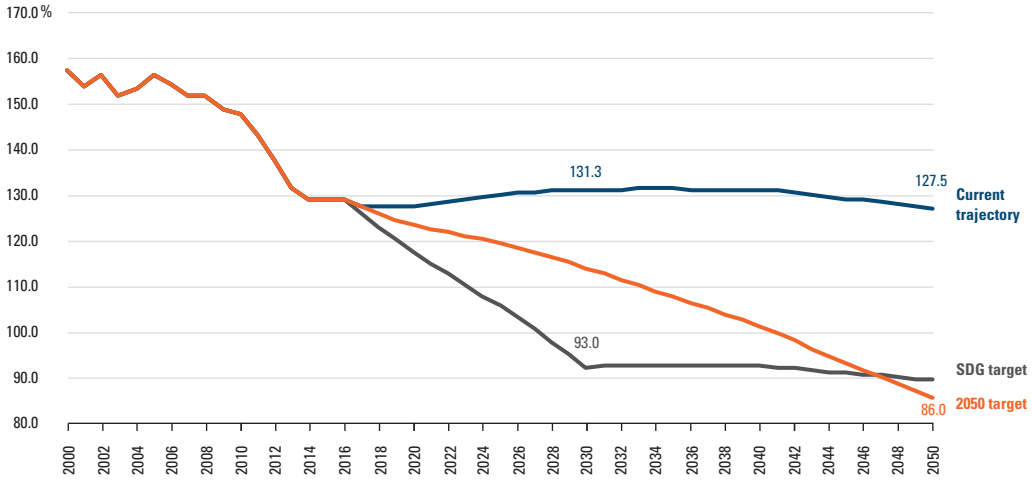
Our estimation shows that, if we closed gender gap in participation gradually in the next 12 years to achieve parity by 2030—following the United Nation's Sustainable Development Goals (SDGs)—at the end of the term, the NLF ratio would be 29.0% lower than what is originally projected. That is, without more women labour force, there would be 131 dependents for every 100 labour force participants; the number reduces to 93 dependents if parity is achieved. If this is all too ambitious, achieving parity by 2050 even, would eventually alleviate 32.5% of the burden. The new NLF would mean 86 dependents, compared with the original 128.

39 KRI (2016)

40 Ibid

41 The NLF ratio is different from the total dependency ratio, which is the ratio of non-working age population over working age population. The NLF ratio is used here to capture the effect of increasing working-age women's participation in the labour force on the burden of labour force participants to provide for the rest of the population. Because total dependency ratio uses working-age population (which includes people both in and out of labour force) as the measure of productive population, it does not capture such effect.

Figure 2.33: Non-labour force population-to-labour force (NLF) ratio, 2000 – 2050



Source: Department of Statistics Malaysia, CEIC, and KRI estimation
Note: Non-labour force population includes the entire population minus those in the labour force.

Discussion

Statistics evidently show that significant progress has been made in recent years to empower women economically. However, the fact that gender gaps still largely persist in the labour force, with different groups of women being affected to different degrees, suggests that more needs to be done to push things forward.

From our analysis, one of the core reasons underlying the gender inequality pattern in Malaysia is the disproportionate responsibility for unpaid care work borne by women. The impact extends beyond labour force participation to directly or indirectly affect women's access to different occupational opportunities and status of employment, as well as the wages they receive. It stands to reason, therefore, that further effort in economically empowering women would only be effective if this issue is addressed appropriately.

What can be done to alleviate women's challenge to balance family and work? First, recall that a significant proportion of the increase in women's economic participation can be explained by the rise in women own account workers. This implies, among others, that flexibility in work arrangements is instrumental in enabling women who are willing to join the labour force to do so. This could

be offered either through flexible hours or work places, childcare facilities at work or the like. Second, redistributing family responsibilities between men and women is as important as any other labour market measures to enable women's economic empowerment, and at the same time to ensure the strengthening of family institutions. This would involve, among others, ensuring policies aimed at facilitating work-home balance, such as said flexibility arrangement and parental leave are accessible options not only for women, but for men as well.

As the economy continues to face long-term challenges such as ageing population and rapid technological advancement, attaining an inclusive and equitable labour market has become increasingly crucial. It follows that addressing the tension between care responsibilities and women's economic participation is of utmost importance. It matters not only for expanding the capabilities and opportunities for both women and men to contribute jointly on the professional and domestic fronts, but also for the sustainability of our growth model by ensuring the well-being of all is taken care of.

2.2 Foreign Workers and the Economy—A Review

Global public discourse on the economic impact of immigration tends to be negative[42], due to concerns of foreign workers replacing native workers and subsequently suppressing wages. In addition, immigration has the potential for even broader adverse economic impact over the long term. The availability of cheap low-skilled foreign labour could discourage businesses from investing and adopting new technologies. While these worries are not unjustified, economic studies on this issue tend to find that foreign workers have a limited impact on wages and employment. The evidence suggests that foreign workers generally complement rather than replace native workers and generate a higher level of economic activity.

The same parallel exists in Malaysia. In this section, we attempt to provide an objective review of the facts that are available on this matter. First, we use the latest official statistics on foreign workers available to look at how foreign workers fit into the current labour market in Malaysia[43]. Secondly, the channels through which foreign workers could affect economic outcomes are discussed, supported by a review of existing studies on this topic both globally and for the case of Malaysia. Finally, we propose three directions of research that could enrich our understanding on this issue, with emphasis on policy relevance.

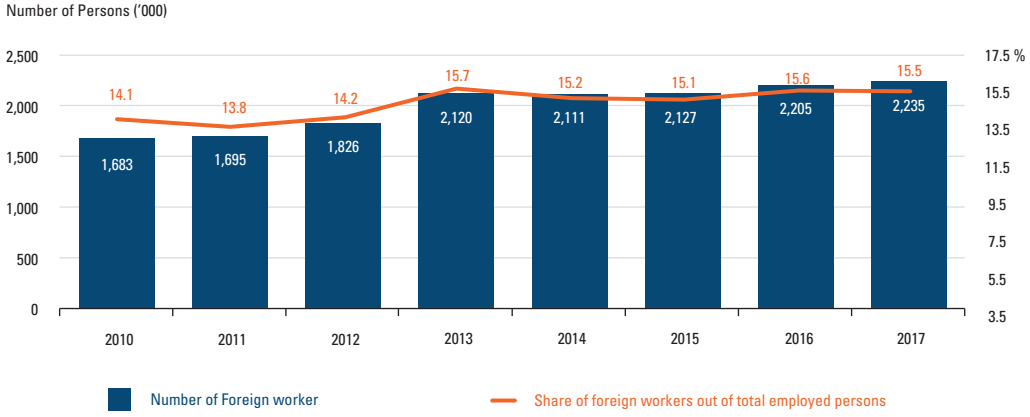
42 See, for example, OECD (2014) and Somerville and Sumption (2008)

43 In this section, the LFS is used exclusively unless stated otherwise because of its availability for the years examined. Also, the breakdown of native and foreign workers by various parameters allows for comparison.

2.2.1 Knowing the foreign workers—where are they from, and what do they do?

Based on official statistics, foreign workers represent around 15% of all employed persons in Malaysia. The share of foreign workers relative to total number of employed person peaked in 2013 at 15.7% and hovered at around 15% since. In 2017, the figure was 15.5%. From 2010 to 2013, the number of foreign workers increased from almost 1.7 million to 2.1 million. From 2013 to 2017, the increase has been smaller in magnitude with the latest figure at around 2.2 million.

Figure 2.34: Number and percentage of foreign workers in Malaysia, 2010 – 2017

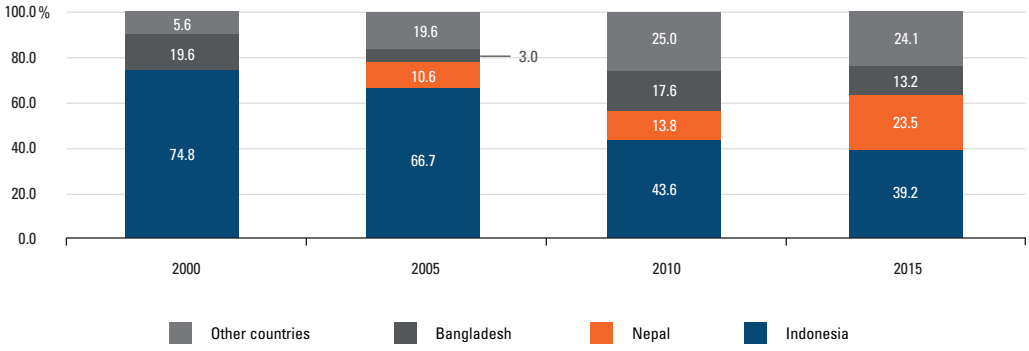


Source: Department of Statistics Malaysia and KRI calculations

In 2000, almost three-quarters of all foreign workers were Indonesians. The composition of foreign workers has since diversified from a higher participation of Nepalese and Bangladeshi workers. In 2015, Indonesians remain the dominant group (39.2%), followed by Nepalese (23.5%), and Bangladeshis (13.2%). The recent decline in the number of Indonesian workers is partly due to a ban on labour migration to Malaysia by the Indonesian government from 2009 to 2011 following human rights violations concerns, and more stringent regulations in place[44].

44 International Labour Organization (2016)

Figure 2.35: Distribution of foreign workers, by country of origin, 2010 – 2015



Source: MOHA (n.d.) and KRI calculations

Almost 70% of all foreign workers work in urban areas. However, in rural areas, the share of foreign workers out of total employment is larger than in urban areas, due to high concentration of foreign workers in the agricultural sector.

Figure 2.36: Distribution of foreign workers, by urban/rural, 2010 – 2017

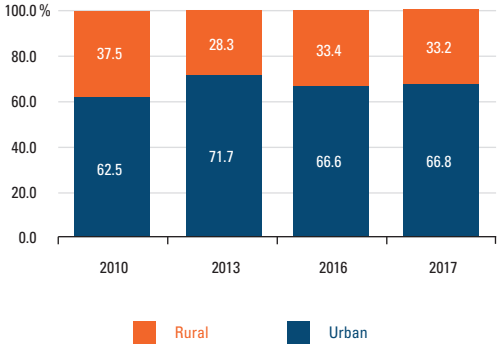
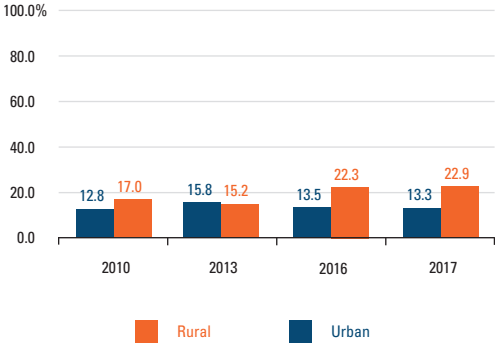


Figure 2.37: Share of foreign workers out of total employment, by urban/rural, 2010 – 2017



Source: Department of Statistics Malaysia and KRI calculations

The agriculture and construction sectors hire foreign worker the most. In 2010, the agriculture and construction sectors employed 52% of all foreign workers[45]. In 2017, this was still the case with the agriculture and construction sectors employing 40.5% of all foreign workers, although, a sizable part of foreign workers (35.9%) were employed in services while the remaining 23.0% were in manufacturing. However, it is important to note that the official statistics exclude workers in communal housing, therefore, possibly undercounting the number of foreign workers in agriculture[46]. Foreign workers constitute a large share of total employment in agriculture at 37.4%, construction at 23.6% and 20.5% in manufacturing. In contrast, the share of foreign workers in mining and services is relatively small, at 12.5% and 8.9% respectively.

Figure 2.38: Distribution of foreign workers, by sector, 2010 – 2017

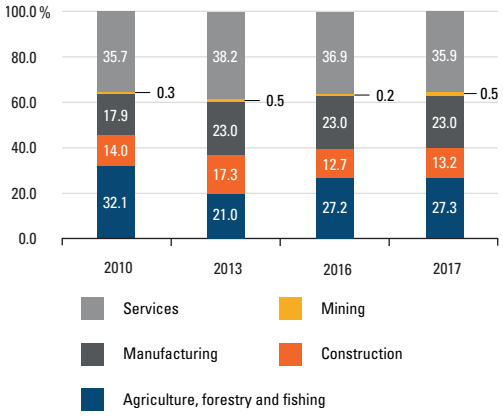
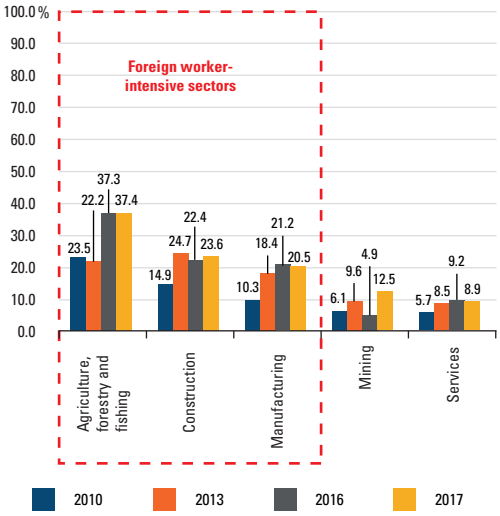


Figure 2.39: Share of foreign workers out of total employment, by sector, 2010 – 2017



Source: Department of Statistics Malaysia and KRI calculations

45 Del Carpio et al. (2015)

46 Ibid. Data on foreign workers mainly come from the Ministry of Home Affairs (MOHA) and the Labour Force Survey (LFS). MOHA data documents foreign workers with Temporary Work Passes living in communal and private housing, and thus includes only low-skilled workers. LFS data captures both documented and undocumented foreign workers living in private households, but, would not be able to record data from workers in communal housing, largely the foreign workers who work in agriculture. Other sources include estimations from the Economic Planning Unit (EPU) based on remittance payments data from Bank Negara Malaysia, but, is only available for a few sectors. Additionally, EPU data might include native workers since remittance payments can include transactions of both foreign and native workers.

In 2017, around half of all foreign workers were educated up to the primary level. However, there is a declining share of foreign workers with primary education and below, from 60.4% in 2010 to 50.0% in 2017. On the other hand, the share of foreign workers with secondary education has increased, from 33.8% in 2010 to 44.3% in 2017. Only 5.6% of all foreign workers had tertiary education in 2017. Of all the workers educated up to the primary level, almost 50% were foreign workers in 2017. In comparison, of all the employed persons with secondary education, 12.3% were foreign workers, and 3.1% of all tertiary-educated employed persons were of foreign-origin. Over time, foreign worker intensity for those with an education up to the primary level has increased. Foreign worker intensity has also increased for those educated up to the secondary level, but less so than the primary level. This is explained by the widening gap between the educational attainment of local and foreign workers, with the former being increasingly secondary and tertiary educated.

Figure 2.40: Distribution of foreign workers, by education level, 2010 – 2017

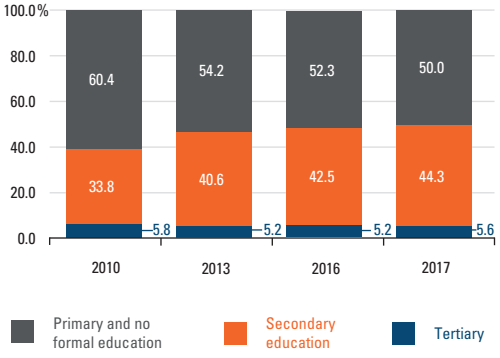
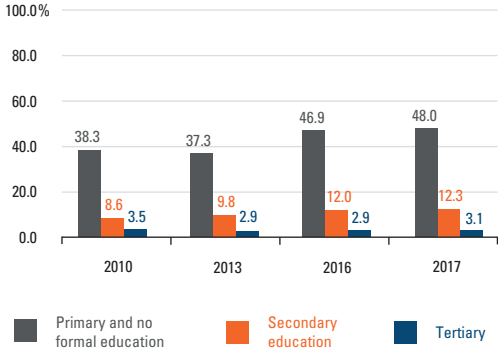


Figure 2.41: Share of foreign workers out of total employment, by education level, 2010 – 2017



Source: Department of Statistics Malaysia and KRI calculations

Low-skilled jobs are dominated by foreign workers. In 2013, 76.7% of low-skilled employed persons were foreign workers, although this has fallen to 51.0% in 2017. This is an important point—around one in two unskilled workers are foreign workers, potentially reflecting how foreign workers play a complementary role to local workers, who are mostly in skilled and semi-skilled jobs. However, of all the foreign workers, most tend to be in semi-skilled jobs[47], even though they make up less than 20% of all semi-skilled employed persons. Around 64.5% of foreign workers were in semi-skilled jobs in 2010, but this share has declined to 52.9% in 2016. Similarly, the share of foreign workers in skilled jobs has also declined. Only the share of foreign workers working in low-skilled occupations went up, from about 28.2% in 2010 to 42.3% in 2016.

Figure 2.42: Distribution of foreign workers, by skill level, 2010 – 2017

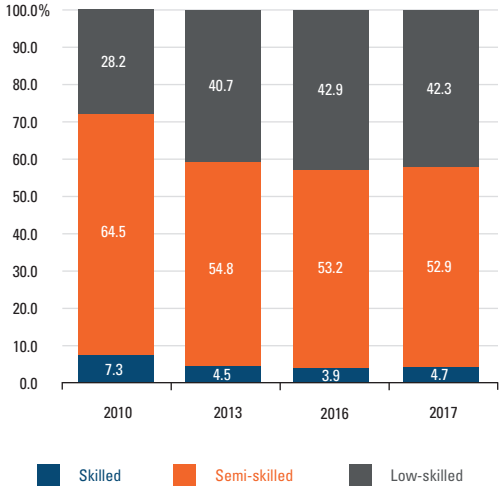
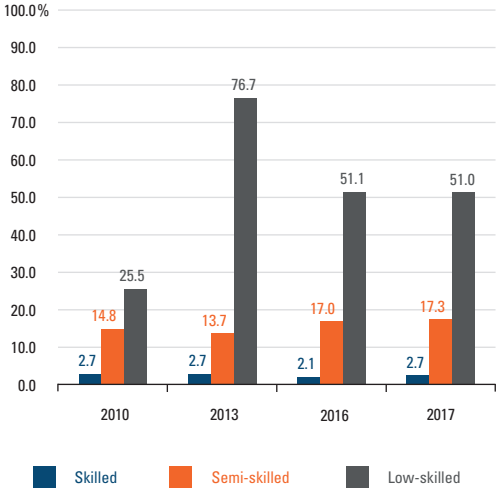


Figure 2.43: Share of foreign workers out of total employment, by skill level, 2010 – 2017



Source: Department of Statistics Malaysia and KRI calculations

47 The classification of occupations by skill level is based on the LFS

2.2.2 Changes in labour supply and demand between 2010 and 2017

Looking at the changes in the labour force and number of workers employed between 2010 and 2017 gives an idea of how the supply and demand of foreign workers have evolved. Parallels between education and skill level can be drawn. For instance, it is not unreasonable to generally assume that everyone can work in low-skilled jobs, while only secondary and tertiary educated individuals can work in semi-skilled jobs, and most tertiary educated individuals can work in skilled jobs. The Malaysian labour force was about 10.6 million strong in 2010 and 12.7 million in 2017, while the foreign labour force stood at about 1.7 million in 2010 and 2.3 million in 2017. Out of the 10.6 million Malaysians in the labour force in 2010, 10.2 million were employed, while 12.2 million were employed in 2017. About 1.6 million foreign workers were employed out of the 1.7 million in 2010, while almost all foreigners in the labour force were employed in 2017.

From 2010 to 2017, the number of Malaysians in the labour force with tertiary education increased the most by about 1.3 million. Malaysians with secondary education in the labour force increased by 1.2 million, while there was a decrease of about 438,000 Malaysians in the labour force with primary education. However, in the same period, the number of employed Malaysians in semi-skilled occupations increased the most by 1.3 million, while those employed in skilled occupations increased by just 713,000, even though more than half of all Malaysians in the labour force have tertiary education. This points to a possible mismatch in labour demand and supply, in that not all tertiary educated individuals entered skilled occupations. It is likely that some tertiary educated individuals entered semi-skilled jobs instead.

On the other hand, the number of foreigners in the labour force with secondary education increased the most by 423,000 from 2010 to 2017, while those with education up to the primary level increased by 105,000. There was an even larger increase of 473,000 in the number of foreign workers employed in low-skilled occupations. Additionally, there was an increase of 96,000 foreign workers in semi-skilled occupations. This change could be the result of foreign workers educated up to the secondary level entering low-skilled and semi-skilled occupations.

Overall, the key takeaway from this section is that at the aggregate level, foreign workers do not occupy the same occupational space as Malaysians. Foreign workers tend to go into low-skilled jobs, where half of all employed persons are of foreign-origin, while native workers go into skilled and semi-skilled occupations. While it is true that there is a large increase of foreign workers in semi-skilled jobs, this represents less than 20% of semi-skilled employment. So even as the skills mismatch leaves tertiary educated Malaysians in semi-skilled jobs, on aggregate they do not face a high likelihood of being replaced by foreign workers. Malaysians in low-skilled jobs, on the other hand, could stand to lose.

Figure 2.44: Net change in labour force, by education level, 2010 – 2016

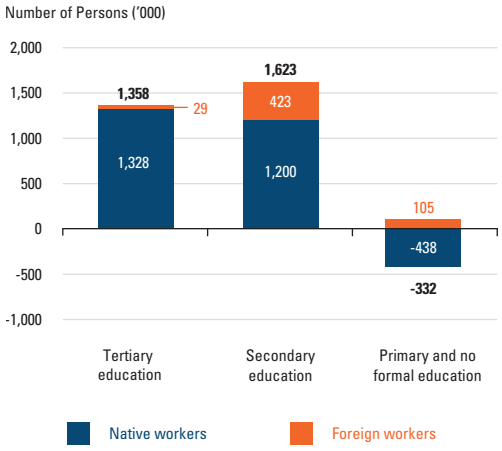
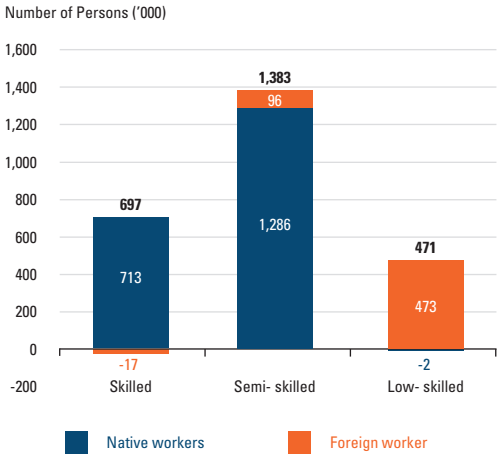


Figure 2.45: Net change in employed persons, by skill level, 2010 – 2017



Source: Department of Statistics Malaysia and KRI calculations

2.2.3 How do foreign workers affect the economy?

The most evident way through which foreign workers can affect the economy is through labour market outcomes, that is, the impact on average wages and employment of natives. Globally, the broad consensus is that foreign workers have a small and limited impact on average wages and native employment[48]. Three factors can explain the limited effects of foreign workers.

Firstly, most studies find that foreign workers are imperfect substitutes for native workers. By extension, this means that they do not compete for the same jobs, even within skill levels as certain industries tend to employ more foreign workers. Hence, the impact on native employment tends to be limited.

Secondly, immigration can lead to greater economic activity. Following the fact that foreign workers are imperfect substitutes for native workers, it is likely that there are certain economic activities that would not have existed had there been an absence of foreign labour. Furthermore, foreign workers can help firms reduce production costs, thus increase output, and their presence would mean an increase in consumption and demand for goods and services overall

Finally, the presence of foreign workers leads to task specialisation[49]. The ability of foreign workers to take up low-skilled jobs creates new opportunities for native workers to be supervisors of these low-skilled workers. Although a minor portion of low-skilled native workers could be initially displaced by foreign labour, they are not necessarily worse-off in the long term as they take on better jobs.

Unlike the impact of immigration on labour market outcomes, the issue of foreign workers and its effect on productivity and technology upgrading by firms are less extensively studied. Most have focused on the role of high-skilled rather than low-skilled foreign workers, and the impact is generally positive[50].

48 Ozden and Wagner (2014)

49 This is discussed in in Somerville and Sumption (2008), pp 28-29. As existing literature in this is less extensive, it is worthwhile to mention an important study on this factor on the US – Peri and Sparber (2009).

50 See, for example, Mitaritonna et al. (2017) for the case of France, and Gauthier-Loiselle and Hunt (2009) as well as Kaushal and Fix (2006) for the case of the US.

For Malaysia, the World Bank's *Immigration in Malaysia: Assessment of its Economic Effects and a Review of the Policy and System Report* is the most extensive study on the impact of foreign workers in the economy (Del Carpio et al. 2013), covering the period between 1990 and 2010[51]. This study suggests that immigration has a favourable impact on Malaysian labour market outcomes depending on the sector. An increase in foreign workers leads to small increases in native employment and wages. A 1% increase in foreign workers led to 0.1% increase in full-time employment and 0.3% increase in part-time employment for Malaysians. This effect manifested strongly in the services, agriculture and mining sectors, while there was no apparent rise in the employment of natives in the manufacturing sector. As for wages, a 10% increase in foreign workers raised the average wage of Malaysians by around 0.15%. This was particularly evident in the agricultural and low-skilled services sectors.

Further dissection of the data reveals that older, male native workers with secondary education in low-skilled services, agriculture and mining sectors were the main beneficiaries of immigration. The large number of unskilled foreign workers with minimal education fill up jobs that natives are overqualified for. This frees up natives to take on supervisory roles. On the other hand, the least educated, lowest-skilled Malaysians—those who compete directly with foreign workers—were significantly disadvantaged as they experienced job displacement and wage suppression.

At the firm level, the report found mixed results of immigration on firms' productivity, suggesting that employment of foreign workers do not necessarily lead to increased productivity. Particularly, while no statistically significant impact was found in ICT services and accommodation sectors, firm productivity in the smaller construction and plantation establishments were clearly lowered. One possible explanation posited was that foreign workers complement natives better in some sectors than in others.

51 An older study by the National Economic Action Council (NEAC 2004) was done in 2004 covering the period between 1991 and 2002. This study surveys Malaysian employers, and finds a favourable perception of foreign workers, in that they keep businesses afloat and complement native workers. On a macroeconomic level, the study finds that foreign workers contribute about 5% to GDP but have a limited impact on overall wages, and a small negative impact on overall labour productivity. See also Ozden and Wagner (2014) and World Bank (2015).

Other studies on the Malaysian labour market come to similar conclusions regarding the economic impact of immigration. It is found that immigration has generally increased economic activity by contributing positively to GDP[52], the scale effect of which outweighed the substitution effect in local labour markets[53]. Second, there was a marginal impact on wages, but it was inconclusive whether this impact is positive or negative—some studies showed marginal benefits for natives[54], while others, focusing only on manufacturing sector, found small negative effects on overall wages[55]. Third, there was a lack of evidence on the impact of immigration on labour productivity. The existing few focused on different components of labour productivity, but it is unclear whether the effect is positive or negative overall[56].

Overall, the empirical studies on Malaysia are broadly consistent with the global evidence on the economic impact of foreign workers. The overall effect on labour market outcomes—wages and employment—are limited, given that foreign workers are mainly occupying different economic roles in general compared to natives. Nevertheless, it is important to highlight that the impact is uneven and not all Malaysians are affected equally. In particular, the lowest-skilled and least educated native workers are found to be negatively affected by the presence of foreign workers in our workforce.

52 See Ahsan et al. (2014) and World Bank (2015), for examples.

53 Evidences from Del Carpio et al. (2013), Ozden and Wagner (2014), and World Bank (2015)showed that every 10 new foreign workers in a given sector-state created around 4 to 6 native employments.

54 See Ozden and Wagner (2014).

55 See Athukorala and Devadason (2012), and Yean and Siang (2014).

56 For example, in terms of labour skill upgrading especially, Devadason (2009) found no impact in manufacturing sector, while World Bank (2015) suggested that it has occurred based on the overall educational, sectoral, and occupational distribution of immigrant and Malaysian workers.

Table 2.1: Global and Malaysian evidences on the economic impact of immigration

	Labour Market Outcomes	Productivity
Global evidence on economic impact of immigration	(1) **Marginal effects on native employment and wages, can be positive or negative.** This is because: • Foreign workers are imperfect substitutes for natives; • Immigration can lead to more economic activity while low cost labour disincentivises firms from upgrading; and • Native workers tend to specialize in skilled jobs. (2) **Distributional effects—some are better off, some worse off:** • Displaced natives are not necessarily worse off in the long term as they take on better jobs.	(1) **Limited studies on impact on labour productivity:** • In developed countries, high-skilled foreign workers are highly associated with innovation;
Malaysia evidence on economic impact of immigration	(1) **Positive effects on native employment and wages:** • Magnitude of employment effects vary across studies; • Small positive effect on native wages; • National average wages are lowered marginally from lower foreign worker wages. (2) **Distributional effects—not everyone benefits:** • Low-skilled native workers educated up to the primary level are most likely to be disadvantaged.	(1) **Limited and inconclusive evidence on labour productivity.** Some findings: • Productivity of native workers increases while foreign worker productivity decreases; • Leading to an overall decline in productivity; • Firm productivity depends on how well foreign workers complement native workers; and • Skills upgrading of native workers is encouraged by task specialisation.

Box 2.3: The Economic Impact of Foreign Workers in Malaysia—An Econometric Analysis

Previous comprehensive studies on the impact of foreign workers in Malaysia were conducted using granular data unavailable to the public. In recent years, more labour statistics have been released by DOS, which begins to allow for more formal econometric analysis on the impact of foreign workers on the economy even without access to granular non-public statistics. This box outlines our formal statistical analysis on the association between foreign workers and four relevant economic indicators, two of which are labour market outcomes, namely native employment and overall average wages and the other two being overall labour productivity and capital intensity. The period between 2010 and 2016 is examined across 18 industries. Further details of the estimation, including model specification and specification tests, are outlined in Technical Note 3.

Results—limited economic impact

Firstly, in terms of labour market outcomes, there was no significant impact of foreign workers on native employment, that is, there was insufficient evidence to establish than an increase in foreign worker employment correlates with lower native employment.

On wages, however, foreign workers seem to have a small negative effect. A unit increase in the share of foreign workers out of total employment in each sector and year leads to a 3.8% decrease in overall average wages. This is unsurprising given that foreign workers are primarily employed in low-skilled jobs which tend to have lower wages. This does not necessarily mean that the supply of foreign workers suppressed overall wages as native wages have grown in the same period. Once industry-specific effects are controlled for, the share of foreign workers out of total employment no longer has a significant effect on wages.

There was also no significant impact on labour productivity. This should not be surprising given that most studies are often inconclusive about the impact of foreign workers on labour productivity. There is also no meaningful impact on capital intensity.

Overall, these findings are consistent with the existing body of studies on this topic in Malaysia. The influx of foreign workers in the country is likely to generate only marginal impact, if any at all, on both labour market outcomes and productivity in the shorter horizon.

2.2.4 Discussion

Despite almost universal acknowledgement of the public and policy-makers on the significance of foreign workers to the Malaysian economy, research and understanding on the matter remain fragmentary. This is largely due to the confluence of two inter-related limitations—the lack of sufficiently comprehensive micro-level statistics on documented foreign workers, and the absence of reliable information on undocumented foreign workers which could well have non-trivial effects on the labour market and wider economy. As such, policy research on this matter is vital—because many areas are not studied adequately. Here, we identify three research directions going forward that are particularly important for policies.

Firstly, it will be useful to see the effect of foreign workers on different segments of the Malaysian workforce. Not all Malaysians are affected equally by the large presence of foreign workers in the country. Some Malaysian workers may be negatively affected depending on their education and skill levels. As highlighted in the World Bank study (Del Carpio et al., 2013), the least educated, lowest-skilled Malaysians were significantly disadvantaged as they experience job displacement and wage suppression. Based on the latest available statistics, close to one million Malaysians are in this category, many of them in the rural areas. This is not a small number. An in-depth understanding of how they are affected is key for informed policy interventions.

Secondly, future research should analyse how foreign workers affect Malaysia's development beyond the labour market. DOS official statistics show that there are currently more foreign workers than Malaysian-Indians. Going by EPU's estimates, which include undocumented foreign workers, shows a number which is even larger than the entire Malaysian-Chinese working population. It is important to emphasise again that even though the foreign population is significant, systematic understanding of the lives and welfare of the two million documented and many more undocumented foreign workers in Malaysia is next

to non-existent. For instance, are foreign workers leading decent and dignified lives, and if not, should a policy be in place to support them? How is the large presence of migrants affecting the development of our society, and the utilisation of public spaces, goods and services? Studies on these topics are likely to be more tractable and with results that are more meaningful for policies when done at the micro-level, focussing on specific geographical locations or economic sectors.

Finally, how foreign workers affect the structural transformation of the Malaysian economy is a highly consequential research question. While often not explicitly mentioned, existing empirical studies almost always focus on the short-term impact of foreign workers on the economy, even when the discussion is on the impact of productivity. As far as we know, there are no studies investigating the long-term impact of foreign workers on the choice of production technology of the country and the growth potential on the Malaysian economy more generally. Specifically, suppose an economy has a selection of feasible production technologies to choose from, and it will optimise based on what it has in relative abundance. Adoption of low-skill based technologies, given our dependence on foreign workers may possibly be slowing down our convergence to advanced economies. This is not a trivial question—the state of economic well-being for future generations of Malaysian households' hinges crucially on how the country overcome some of the structural challenges that it has—including in relation to the labour market—and transition towards becoming an advanced economy. This is the topic that we will explore in the last part of this report.

References

ADB. 2017. *Asian Development Outlook 2017: Transcending the Middle-Income Challenge*. Philippines: Asian Development Bank.

Aguirre, DeAnne, Leila Hoteit, Christine Rupp, and Karim Sabbagh. 2012. *Empowering the Third Billion: Women and the world of work in 2012*. New York: Booz & Company.

Athukorala, Prema-chandra, and Evelyn S. Devadason. 2012. "The impact of foreign labor on host country wages: The experience of a southern host, Malaysia." *World Development 40* (8):1497-1510.

Azizah Kasim. 2012. *Dasar pekerja asing di Malaysia: Perlunya Anjakan Paradigma*. Bangi: Penerbit Universiti Kebangsaan Malaysia.

Bandiera, Oriana, and Ashwini Natraj. 2013. "Does Gender Inequality Hinder Development and Economic Growth? Evidence and Policy Implications." *World Bank Research Observer* 28 (1): 2-21.

Bartelsman, Eric J, Jonathan Haskel, and Ralf Martin. 2008. "Distance to which frontier? Evidence on productivity convergence from international firm-level data." *CEPR Discussion Paper* No. DP7032.

Brookings Institution. 2017. "The 51% Driving Growth through Women's Economic Participation." *The Hamilton Project*. Washington D.C.: Brookings Insitution

Bureau of Economic Analysis. 2012. *Bureau of Economic Analysis*. U.S. Department of Commerce. Accessed January 01, 2018. https://www.bea.gov/faq/index.cfm?faq_id=1009.

Caselli, Francesco, and Wilbur John Coleman. 2006. "The world technology frontier." *The American Economic Review* 96 (3):499-522.

Del Carpio, X, R Karupiah, M Marouani, C Ozden, M Testaverde, and M Wagner. 2013. "Immigration in Malaysia: Assessment of its Economic Effects, and a Review of the Policy and System." Washington D.C.: World Bank.

Del Carpio, Ximena, Çaglar Özden, Mauro Testaverde, Mohamed Marouani, Bjorn Nilsson, and Mathis Wagner. 2015. "Foreign Workers in Malaysia: Labour Market and Firm Level Analysis." *Malaysian Journal of Economic Studies* 52 (1):1.

Department of Statistics. 2016. *Labor Force Survey*. Putrajaya: Department of Statistics.

Devadason, Evelyn S. 2009. *Socio-economic Effects of Foreign Workers on the Host Economy: The Case of the Malaysian Manufacturing Sector. FEA Working Paper* No. 2009-26. Kuala Lumpur: Fakulti Ekonomi & Pentadbiran Universiti Malaya.

Devadason, Evelyn Shyamala. 2012. "Socio-Economic Effects of Foreign Workers on the Host Labour Market: The Malaysian Perspective." https://ssrn.com/abstract=2026346

Duflo, Esther. 2012. "Women Empowerment and Economic Development." *Journal of Economic Literature* 1051-1079.

Dutta, Soumitra, Bruno Lanvin, and Sacha Wunsch-Vincent. 2017. *The Global Innovation Index 2017: Innovation Feeding the World*. Ithaca, Fontainebleau, and Geneva: Cornell University, INSEAD, and World Intellectual Property Organization.

EPU. n.d. "Population & Labour Force." Economic Planning Unit, Last Modified 17 May 2017. http://epu.gov.my/ms/statistik-ekonomi/kependudukan-tenaga-buruh.

Gauthier-Loiselle, Marjolaine, and Jennifer Hunt. 2009. "How Much Does Immigration Boost Innovation?". *IZA Discussion Paper* No. 3921. Bonn: Institute for the Study of Labor

Goldin, Claudia, and Joshua Mitchell. 2017. "The New Life Cycle of Women's Employment: Disappearing Humps, Sagging Middles, Expanding Tops." *Journal of Economic Perspectives* 31: 161-182.

ILO. 2016. *Review of labour migration policy in Malaysia*. Tripartite Action to Enhance the Contirbution of Labour Migration to Growth and Development in ASEAN, Thailand: ILO Regional Office for Asia and the Pacific.

—. 2017. *World Employment and Social Outlook: Trends for Women 2017*. Geneva: International Labour Organization .

IMF. 2015. "Catalyst for Change: Empowering Women and Tackling Income Inequality." *IMF Staff Discussion Note, October*. Washington D.C.: IMF.

—. 2016. "Gender Equality and Economic Diversification." *IMF Working Paper,* July. Washington D.C.: IMF.

Kaushal, Neeraj, and Michael Fix. 2006. The contributions of high-skilled immigrants. Washington, DC: Migration Policy Institute. http://www.migrationpolicy. org/ITFIAF/TF16_Kaushal. pdf.

Kazandjian, Romina, Lisa Kolovich, Kalpana Kochhar, and Monique Newiak. 2016. "Gender Equality and Economic Diversification." *IMF Working Paper*. Washington D.C.: IMF.

Kerr, Sari Pekkala, and William R Kerr. 2011. Economic impacts of immigration: A survey. *NBER Working Papers* No. 16736. National Bureau of Economic Research.

KRI. 2016. *State of Households II*. Kuala Lumpur: Khazanah Research Institute.

—. 2017. *An Uneven Future? An Exploration of the Future of Work in Malaysia*. Kuala Lumpur: Khazanah Research Institute.

Longhi, Simonetta, Peter Nijkamp, and Jacques Poot. 2005. "A Meta - Analytic Assessment of the Effect of Immigration on Wages." *Journal of economic surveys* 19 (3):451-477.

Mitaritonna, Cristina, Gianluca Orefice, and Giovanni Peri. 2017. "Immigrants and Firms' Outcomes: Evidence from France." *European Economic Review*. 96:62-82.

MOHA. n.d. "1.5 Foreign Workers by Sector." Economic Planning Unit, Last Modified 17 May 2017. http://epu.gov.my/sites/default/files/1.5.1.pdf.

MOHE. 2018. *Higher Education Statistics 2017*. Putrajaya: Ministry of Higher Education.

MPC. 2016. Productivity Report 2015/2016. Petaling Jaya: Malaysia Productivity Corporation.

Munoz Moreno, Rafael, Ximena Vanessa Del Carpio, Mauro Testaverde, Harry Edmund Moroz, Loo Carmen, Rebekah Lee Smith, Caglar Ozden, Kamer Karakurum-Ozdemir, and Pui Shen Yoong. 2015. *Malaysia - Economic monitor : Immigrant labor*. Washington, D.C. : World Bank.

NEAC. 2004. *Impact of Foreign Workers on the Malaysian Economy*. Putrajaya: NEAC.

OECD. 2014a. *Unpaid Care Work: The missing link in the analysis of gender gaps in labour outcomes*. Paris: Organisation for Economic Co-operation and Development.

—. 2014b. *Migration Policy Debates: Is Migration Good for the Economy?* Paris: Organisation for Economic Co-operation and Development.

Ozden, Caglar, and Mathis C. Wagner. 2014. "Immigrant versus natives? Displacement and job creation." *World Bank Policy Research Working Papers*. Washington, D.C. : World Bank Group.

Peri, Giovanni, and Chad Sparber. 2009. "Task specialization, immigration, and wages." *American Economic Journal: Applied Economics* 1 (3):135-169.

Pholphirul, Piriya, and Pungpond Rukumnuaykit. 2017. "Does Immigration always Promote Innovation? Evidence from Thai Manufacturers." *Journal of International Migration and Integration* 18 (1):291-318.

Ross, Alec J. 2016. *The Industries of the Future*. New York: Simon & Schuster UK .

Somerville, Will, and Madeleine Sumption. 2008. *Immigration and the labour market:* London: Migration Policy Institute/EHRC.

Stiglitz, Joseph E., Amartya Sen, and Jean-Paul Fitoussi. 2009. *Report by the Commission on the Measurement of Economic Performance and Social Progress*. The Commission on the Measurement of Economic Performance and Social Progress.

Swamy, Vighneswara. 2014. "Financial Inclusion, Gender Dimension, and Economic Impact on Poor Households." *World Development* 56: 1-15.

UNDP. 2001. *Gender in Development Programme: Learning and Information Pack*. New York: United Nations Development Programme.

UNIFEM. 2000. *Progress of the World's Women 2000*. UNIFEM Biennial Report, New York: United Nations Development Fund for Women.

Vasquez, Ian, and Tanja Porcnik. 2016. *Human Freedom Index 2016: Global Measurement of Personal, Civil, and Economic Freedom*. Washington D.C., Vancouver BC, and Berlin: Cato Institute, Fraser Institute, and Friedrich Naumann Foundation for Freedom.

WEF. 2017. *The Global Gender Gap Report 2017*. Geneva: World Economic Forum.

World Bank. 2012. *Malaysia Economic Monitor: Unlocking Women's Potential*. Washington D.C.: World Bank .

—. 2015. *Malaysia Economic Monitor: Immigrant Labor*. Washington, D.C.: World Bank.

Yean, Tham Siew, and Liew Chei Siang. 2014. "The Impact of Foreign Labor on Labor Productivity and Wages in Malaysian Manufacturing, 2000-2006." *Managing International Migration for Development in East Asia*. pp. 136-158

PART 03

PART 3

MALAYSIA'S DEVELOPMENT JOURNEY: PAST, PRESENT AND FUTURE

Viewed from a long-term perspective, Malaysian households have undoubtedly experienced remarkable improvements in their economic prospects, livelihoods and quality of life. Importantly, these improvements did not happen in isolation, but rather occurred on the back of strong economic growth since Independence. Malaysia's economic development, with the active participation of its citizens, was underpinned by the transformation of Malaysia's economic structure, enabling it to evolve and adapt according to needs of the time and Malaysia's comparative advantages relative to the world economy. Structural transformation of Malaysia's economy has led to sustained economic growth through the decades and has provided the bedrock for much of the improvements in the state of households we see today. Malaysians' welfare is inextricably linked to the economic development, and thus the structural transformation of the economy. Therefore, this is a fundamental issue if Malaysia is to secure the welfare of its people in the long run.

This chapter explores the Malaysian development journey through three different time frames. First, Malaysia's economic progress and the improvement in the welfare of Malaysian households since Independence. Second, where Malaysia stands today relative to other nations, specifically through the lens of the defining features of an advanced economy. And finally, a reflection on the key elements to securing our future—all the while being mindful of the uncertainty this country and the world will face in the days to come.

3.1 Development in the Past: How Has the Economy Changed?

This section explores the history of Malaysia's economic development, and illustrates how household incomes are closely linked to the structure of the national economy. The overall well-being of households in terms of health, education and access to basic facilities have also improved over the years.

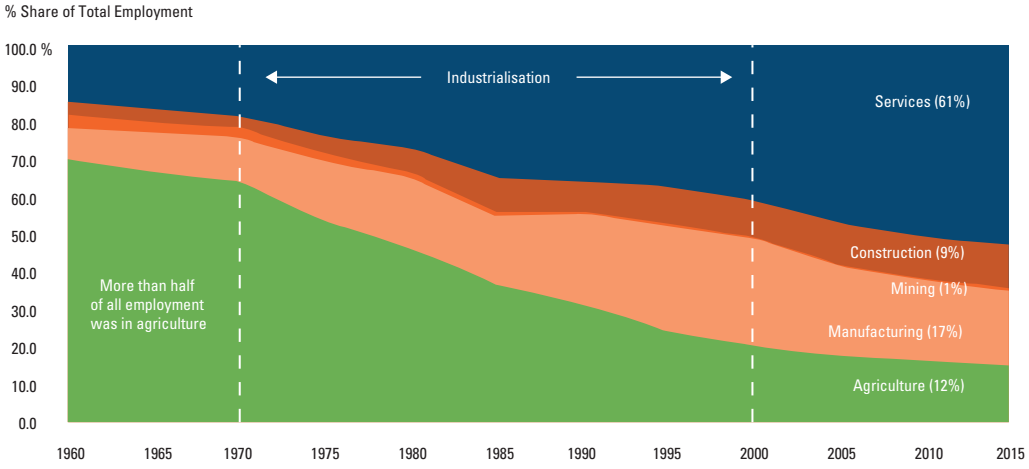
3.1.1 Households' livelihoods are deeply linked to the economic progress of the nation

When Malaysia emerged from its colonial roots to form a fully-fledged independent nation, the country was essentially rural, traditional and relatively poor[57]. The country started off with a generally efficient administrative system and bureaucracy to support an economy dedicated to specialised rent-seeking resource productions of tin and rubber—legacies from the days of British colonial rule[58,59] . Yet, even in its earliest days, the roots of a massive, nationwide structural change had already begun. After the post-war years and subsequent reconstruction period, Malaysia began experiencing a relative decline in agriculture's share and a relative increase in the industrial sectors' share of the national GDP, in fact this began as early as 1955[60].

Changes in the structure of the economy have a profound effect on the livelihoods of households. For many Malaysian households, employment is an important source of income, and structural changes in the sectors they work in will generally be reflected in the changing fortunes of Malaysian households. In the few years following Independence, the agricultural sector made up a lion's share of total employment in Malaysia, amounting to almost 60% of all employment in the country (Figure 3.1). However, as noted earlier, agriculture's share in employment was already declining before 1957. The decline was part of a wider decades-long trend, and by the 1970s, this trend picked up speed and truly went into full force. This marked the beginning of Malaysia's era of industrialisation[61].

57 Lafaye de Micheaux (2017)
58 Sultan Nazrin Shah (2017)
59 Drabble (2000)
60 Ibid
61 Ibid

Figure 3.1: Share of employment by economic sectors, 1960 – 2015

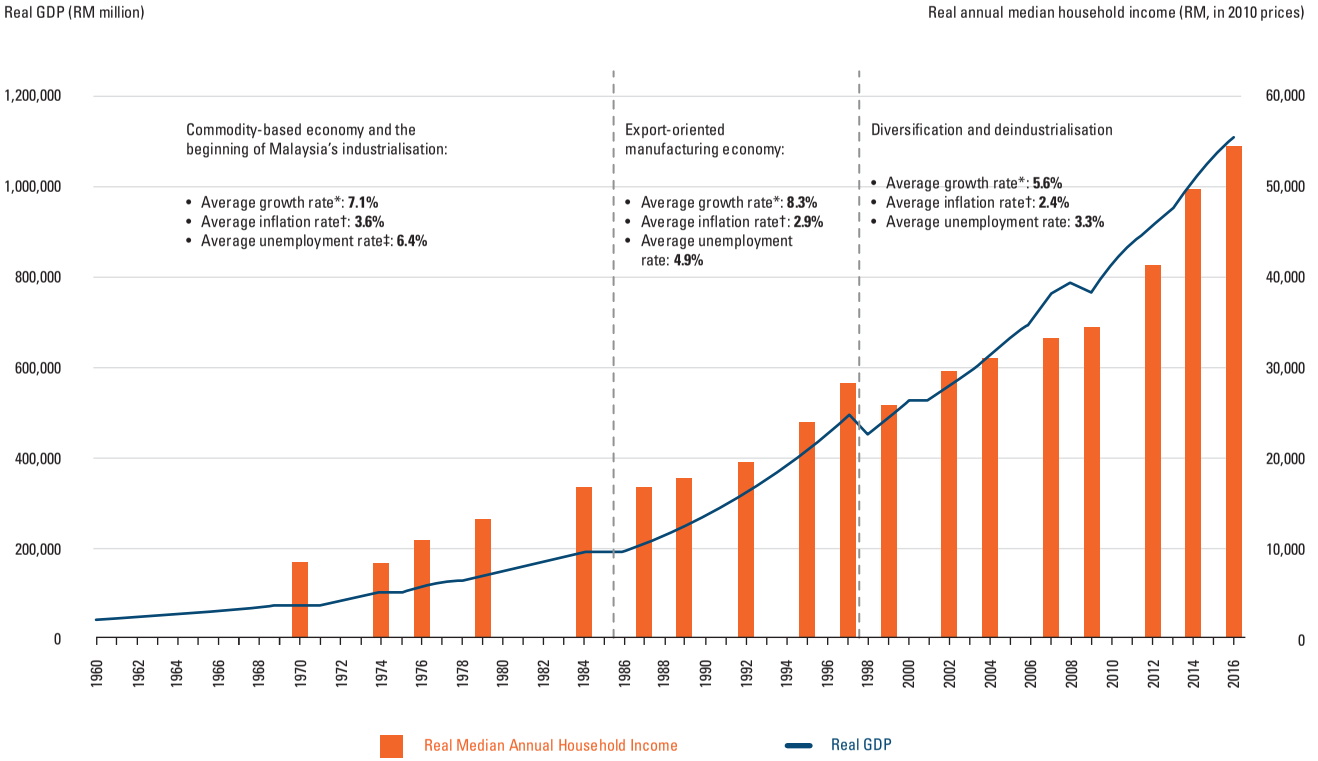


Sources: KRI (2017)

From the 1970s to the early 2000s, more and more Malaysians started to work in the rapidly growing industrial sectors. At the same time, the proportion of Malaysians working in the services sector also grew, as new swathes of services were now in demand to service the industrial sectors of the economy. In the midst of these rapid increments in industrial and services employment shares, the proportion of Malaysians working in the agricultural sector began to shrink from 52.8% in 1970 to 16.7% in 2000. This downward trend continued all the way to 2015, where agricultural sector's employment share stood at 12.5%. Since 2000, the growth in employment share of the industrial sector appears to have halted, whereas employment share of the services sector has kept on growing until today, pointing towards increased diversification and an emergent services industry at the turn of the century.

A natural consequence of general employment patterns mirroring the nation's economic structure is that household incomes mirror national income. Figure 3.2 illustrates the co-movements in real GDP growth with annual real median household incomes.

Figure 3.2: Real GDP and real annual median household income, 1960 – 2016



Sources: World Bank World Development Indicators, Economic Planning Unit, Department of Statistics Malaysia
Note: The passage of the Promotion of Investments Act in 1986 is used as the marker for the beginning of the export-oriented manufacturing era.
* Growth rates for the years of 1985, 1998 and 2009 are removed due to the skewing effect of economic downturns.
† 2010 prices are used as the base prices.
‡ Average unemployment rates for the years 1960, 1965, 1970, 1975, 1980 and 1985.

Nominal median monthly household incomes saw a dramatic rise throughout the industrialisation phase, rising from RM166 in 1970 to RM2,049 in 2002. This continued well into 2016, where nominal median monthly household incomes reached RM5,228—a larger than 30-fold increase from 1970 levels. When measured in 2010 prices, real monthly median household income registered a three-fold increase from 1970 to 2002 and a six-fold increase from 1970 to 2016; from a real monthly median household income of RM711 in 1970 to RM2,466 in 2002 to RM4,538 in 2016[62]. As Malaysian households experienced higher incomes throughout the years, so did Malaysia's GDP. Malaysia's real GDP (measured in 2010 prices) grew by almost eight-fold, from RM69b in 1970 to RM555b in 2002, and nearly 16-fold to RM1.1tr in 2016.

Figure 3.2 also shows economic growth experienced by Malaysia under different time periods. The varying degrees of economic growth points to the structural transformation of the Malaysian economy that took place during those periods, adapting to the conditions, circumstances and demands of the era. These transformations can be loosely clustered into three time-periods, based on the dominant economic activity of the time[63]:

- 1960 – 1985: A primary, resource-based economy that slowly began to modernise and industrialise. The first process of industrialisation was primarily import-substitution which kickstarted the capital-intensive character of many pioneer industrial companies in Malaysia. This then evolved into the beginnings of Malaysia's export-oriented industrialisation.

62 DOS, KRI staff calculations

63 Adapted from Drabble (2000) and Yusof and Bhattasali (2008)

- 1986 – 1998: A manufacturing-based economy geared for a trade-centred growth. Here, export-oriented industrialisation had taken off, and its effects had materialised in full force. The passage of the Promotion of Investments Act of 1986 further bolstered Malaysia's position in the economic world by capturing a golden opportunity created from global economic conditions following the Plaza Accord of 1985[64]—an agreement that reduced Japan's trade competitiveness—and reaffirming Malaysia's position as an attractive location for overseas investments. This in turn allowed industrial sectors to thrive and dominate, allowing industries such as electrical and electronic (E&E), chemicals, and palm oil products to take a foothold in the Malaysian economic landscape.

- 1998 – Present day: Weathering through two major economic crises, the Asian and Global Financial Crises, the economy underwent major reforms to increase the resilience and robustness of its existing sectors. During this period, growth in the industrial sectors have tapered off, and the economy has begun deindustrialising[65]. Malaysia's economy has started to diversify, marked by an increasing share of employment in the services sector.

The immediate feature that one can then observe from Malaysia's development journey is how tightly linked the income of its citizens to the ebbs and flows of the overall economy. This underscores the fact that improvements in the state of Malaysian households over the decades has not occurred in isolation to the rest of the country, but rather is intrinsically tied to the economic development and transformation of the nation.

64 Chua et al. (1999)

65 Menon and Ng (2015)

3.1.2 Households' wellbeing over the years

While economic growth is important, a holistic view of development provides a more realistic reflection of improvements in the nation and its people. A holistic perspective entails looking beyond increasing GDP or rising household incomes. Instead, it combines a multifaceted perspective of the enrichment of people's lives, such as improvements in material living standards, health, education, personal activities, political voice, social relationships and security. Beyond subjective well-being, the concept of development is also tied to the concept of capabilities, in which people are free to pursue and realise their ambitions, per their values and beliefs[66].

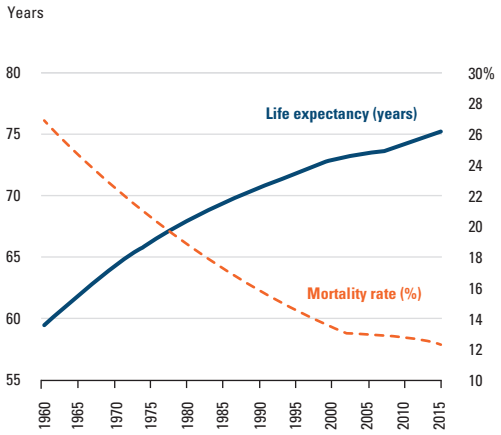
Assessments of well-being are vital to understanding how much better-off individuals are in a country. These can be measured through objective measures—such as assessing life expectancy and morbidity rates to understand the general state of health in a country—or subjective measures—such as rating individuals' perception of happiness and sense of security to comprehend the socioemotional wellbeing of citizens[67].

This segment, however, focuses on the tangible measures of development, encapsulating the notion of development from a rural and traditional economy to an upper-middle income country on the cusp of high-income nationhood. In this regard, improvements of Malaysians' well-being over the years have been remarkable.

66 Stiglitz et al. (2008)

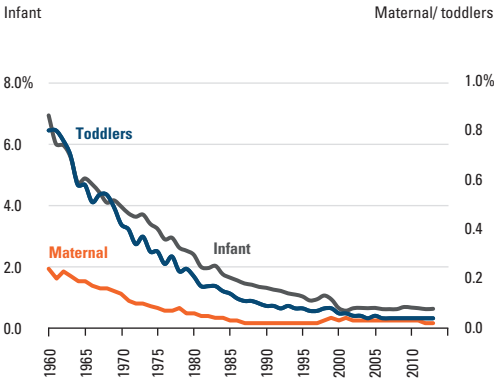
67 Ibid

Figure 3.3: Average life expectancy and average mortality rates, 1960 – 2015



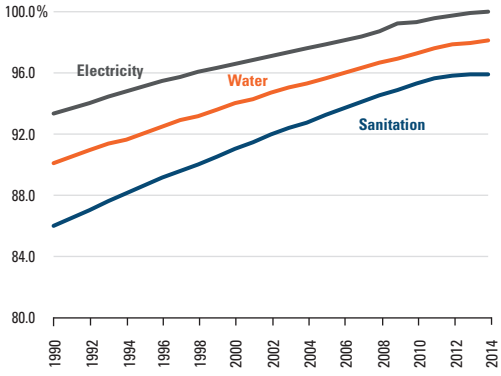
Source: World Bank
Note: Life expectancy is the number of years a newborn is expected to live given mortality patterns. Mortality rate is the probability of dying between the ages of 15 and 60.

Figure 3.4: Maternal, toddler and infant mortality rates, 1960 – 2013



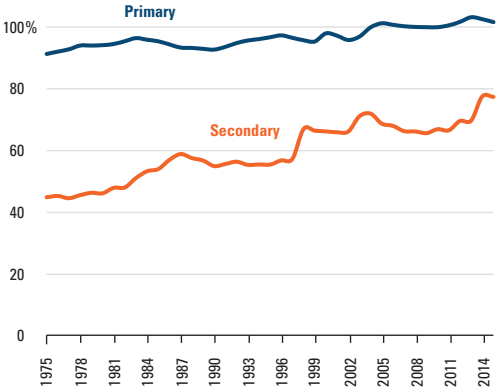
Source: DOSM
Note: Maternal death refers to death due to complications of pregnancy, childbirth and the puerperium. Toddler refers to children between the age of 1-4, infant refers to children below 1 year old.

Figure 3.5: Population access to sanitation facility, water source, electricity, 1990 – 2014



Source: DOSM
Note: Improved sanitation include flush/pour flush and ventilated improved pit latrine facility. Improved water source includes piped water on premise, public taps, protected springs and rainwater collection.

Figure 3.6: Primary and secondary gross enrolment rates, 1975 – 2015



Source: DOSM
Note: Ratio of total enrolment (regardless of age) to population of corresponding age group. For primary school, missing data for 1976, 1986 and 1997 replaced with average rate pre- and post- year.

The first important observation that can be inferred from these datasets is that health outcomes have greatly improved over the years. Malaysians today have much longer life expectancies. In the 1960, the average life expectancy was 59 years, whereas by 2015, life expectancy had increased to 75 years. Average mortality rates have also declined from 27% in 1960 to 12% in 2015 (see Figure 3.3). Figure 3.4 shows how improvements in health outcomes have occurred via the reduction of mortality incidence among infants, toddlers and mothers due to better care for the young and higher immunisation rates against diseases, such as measles and hepatitis among children[68].

Malaysians have also enjoyed near universal access to important utilities. Figure 3.5 shows household access to electricity, clean water and improved sanitation facilities reached near universal levels; in 2014, 100%, 98% and 96% of the population had access to electricity, clean water and sanitation facilities respectively. Rural households experienced the largest access growth, from 85.5% improved water source and 95.9% improved sanitation facilities access in 1990, to 93% and 96% population access in 2014, respectively[69]. In our modern world, access to these basic necessities are essential for households to participate in society and live out meaningful lives. What is also important is that households today live in far more comfortable conditions, made possible by the use of modern machines and appliances that utilise these resources.

Malaysians have also become increasingly educated. In terms of schooling, most Malaysians today attend primary and secondary schools, providing a foundation for many to develop their human capital (see Figure 3.6). Schooling matters because an educated society is the foundation of a successful society: one with better health and a more productive workforce in the modern economy.

68 World Bank (1990 and 2016) reported an increase of immunization rates increase for Hepatitis (85% in 1990 to 98% in 2016, among one-year-olds) and measles (70% in 1990 to 96% in 2016 among children aged 12-23 months)

69 DOS (1990 and 2014)

Box 3.1: The Wealth of the Malaysian Economy

National income, typically measured by GDP, is commonly used as a measure economic progress. However, the income component alone does not provide a complete picture of the country's economic development. Just as businesses assess their performance through cashflow statements and balance sheets and individuals' creditworthiness can be identified from their incomes and net assets, a comprehensive assessment of a country's economy should include its income component, measured by GDP, as well as its wealth component, measured by the total assets and liabilities in the economy[70].

Why should one look into wealth? Wealth matters because it indicates whether incomes can be sustained in the long run. This is essentially the basic financial definition of an asset's value: the stream of discounted future incomes that can be generated from the asset. From this angle, a country whose streams of income comes primarily from extraction of natural resources may have large streams of income in the short run. During times of high commodity prices, this would be reflected as impressive GDP figures. However, if it does not save and reinvests proceeds from these activities into alternative sources of incomes, the country is at danger of depleting its natural wealth and deprive incomes of future generations.

An important source of information on the wealth of economies globally is the World Bank's *The Changing Wealth of Nations* reports[71]. These reports provide estimates of national wealth clustered into four groups: produced capital, natural capital, human capital and net foreign assets. Some of the example of assets falling under these asset groupings are as follows:

70 Lange et al. (2018)

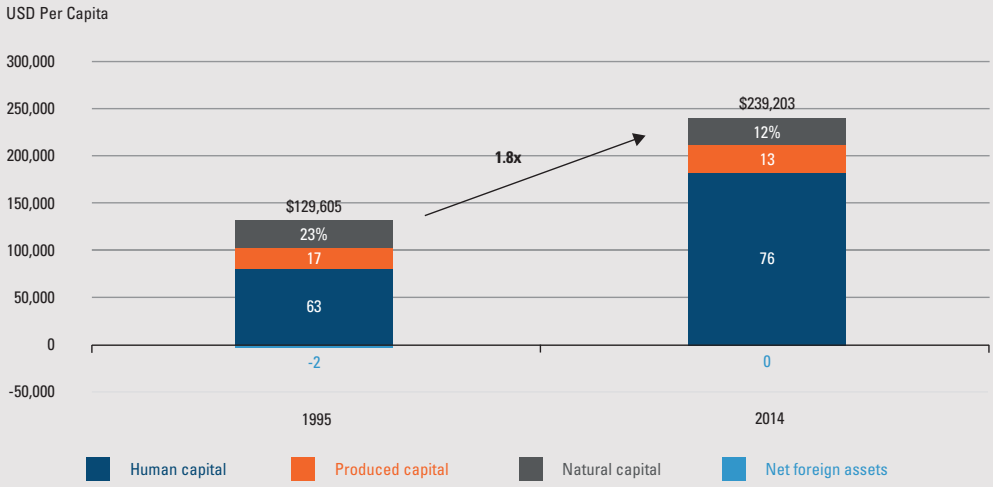
71 Ibid.

Table 3.1 : The components of national wealth and its calculation

Component	Asset types
Produced capital and urban land	Machines, buildings, equipment, residential and non-residential urban land at market prices
Natural capital	Energy, minerals, agricultural land, forests, protected area, valued at discounted sum of rents generated over lifetime of asset
Human capital	Value of skills and experience, disaggregated by gender and employment status. Using regression earnings, expected earnings is calculated and the discounted value of lifetime earning is estimated
Net foreign assets	The sum external assets and liabilities including portfolio equity, debt security, foreign direct investment and other financial capital held in other countries.

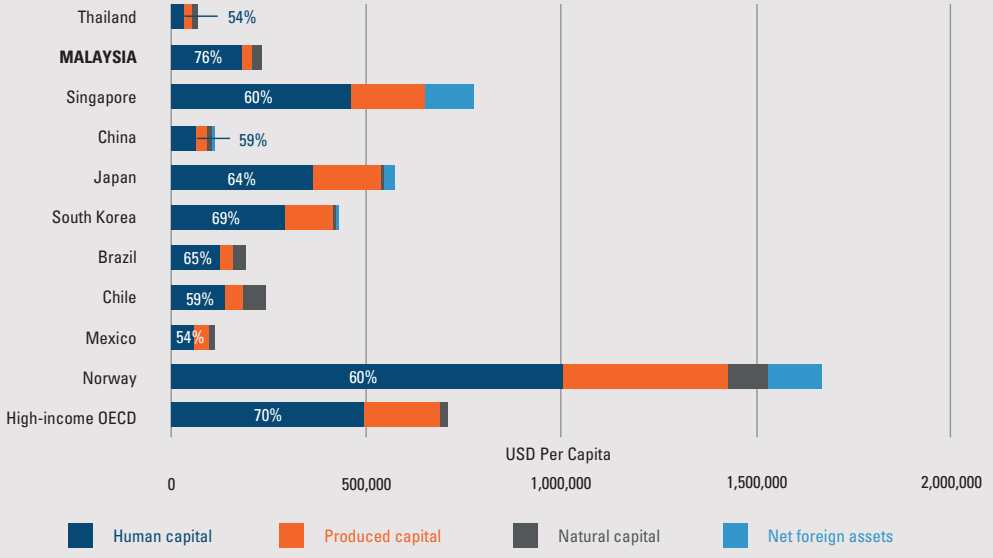
Figure 3.7 shows the estimated per capita wealth of the Malaysian economy between 1995 and 2014. Between the two years, estimated wealth per capita has risen by 1.8 times the level in 1995. In contextualise these figures, the Malaysian GDP per capita in 2014 is 1.6 times per capita GDP in 1995, indicating that our wealth has increased by more than our income between this period. Most of Malaysia's wealth also comes in the form of human capital, which expanded by 13% between the two years.

Figure 3.7: Malaysia's wealth, 1995 – 2014



Source: World Development Indicators
Note: Constant 2014 USD

Figure 3.8: Wealth of Malaysia and selected countries, 2014



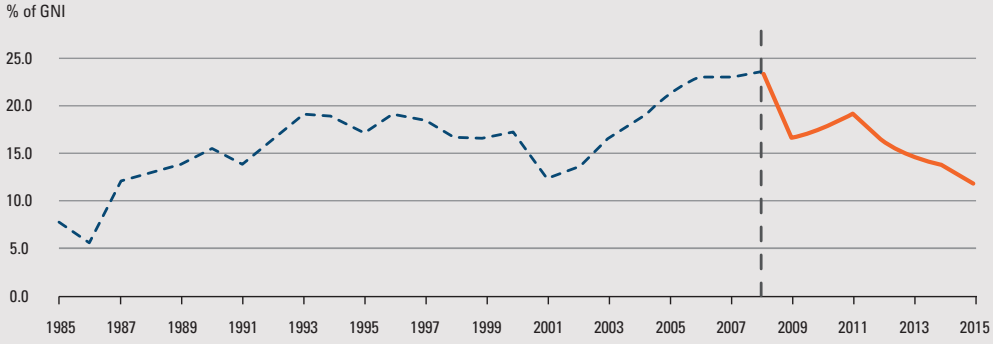
Source: World Development Indicators
Note: Constant 2014 USD

Relative to other countries, Malaysian wealth per capita—standing at USD239,202—is only one third of the OECD average of USD708,389. Malaysia's level of wealth is also below countries like Norway and South Korea. While the concentration of our wealth in the form of human capital is higher than other countries, our level and proportion of produced capital from total wealth is lower.

Beyond measures of national wealth, the World Bank report also estimates adjusted net savings (ANS), defined as a country's gross national savings, net of depreciation of produced capital, depletion of subsoil assets and deforestation, air pollution damage to health and credited for education expenditures. In other words, total wealth indicates the stock of accumulated assets in the economy, whereas ANS is a measure that tracks the flow of assets and how the wealth of nations changes over time. Typically measured as a percentage of gross national income (GNI), a positive ANS is deemed desirable as it indicates an increment in a nation's wealth.

Figure 3.9 shows the ANS trend for Malaysia since 1985. Historically, it has always been positive. However, Malaysia's ANS has experienced a downward trend since 2011. If this decline continues, ANS could potentially threaten the sustainability of Malaysia's development.

Figure 3.9: Malaysia's adjusted net savings, 1985 – 2015



Source: World Development Indicators

To piece together the larger picture, the economic development of a country should also include the level of wealth in the economy, in addition to national and household incomes. The wealth of a nation provides a bearing for the direction of future income streams and highlights the long-run sustainability of a nation's income stream. It reveals the core of a nation's economy and provides citizens a way to understand the economic well-being of the present and the future.

3.2 Malaysia in the Middle: Where Are We Now?

The previous section highlights the fact that Malaysia has come a long way from a rural, traditional and relatively poor country to a relatively prosperous economy in the 21st century. As a result, Malaysian households have benefitted greatly both in monetary and non-monetary terms. The cumulative effects of these structural changes over the years have led us to the Malaysia we know today: a relatively affluent upper-middle income country.

In 1989, the World Bank began categorising countries as low, lower middle, upper middle and high-income nations based on their per capita gross national income (GNI). Malaysia was categorised as a lower middle-income country during the first five years from 1987 to 1991. The country then progressed to become an upper middle-income country in 1994 and has remained in that category ever since. While the World Bank has reported that Malaysia is expected to reach the high-income threshold sometime between 2020 and 2024[72] , how has Malaysia really fared in relation to other peer nations, in terms of economic indicators and fundamental factors important to most high-income economies?

3.2.1 Malaysia as a middle-income country

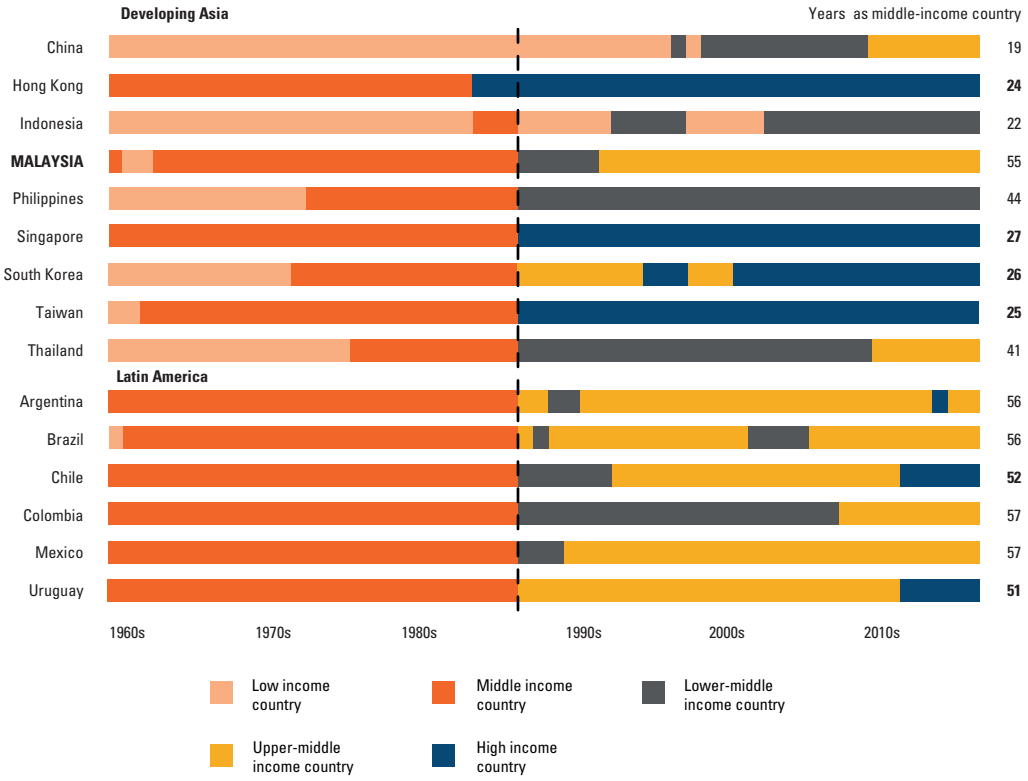
A study by the ADB estimated that Malaysia has been a middle-income country for 55 years between 1960 to 2017[73]. This poses a difficult question Malaysia must ask itself: how can we move beyond being a middle-income country?

72 World Bank (2017)

73 Estrada et al. (2017)

As seen in Figure 3.10, stagnating in a middle-income status is not an unfamiliar phenomenon among many developing countries, and it encapsulates the difficulty of sustaining rapid growth once a country has progressed past its low-income status into middle-income status.

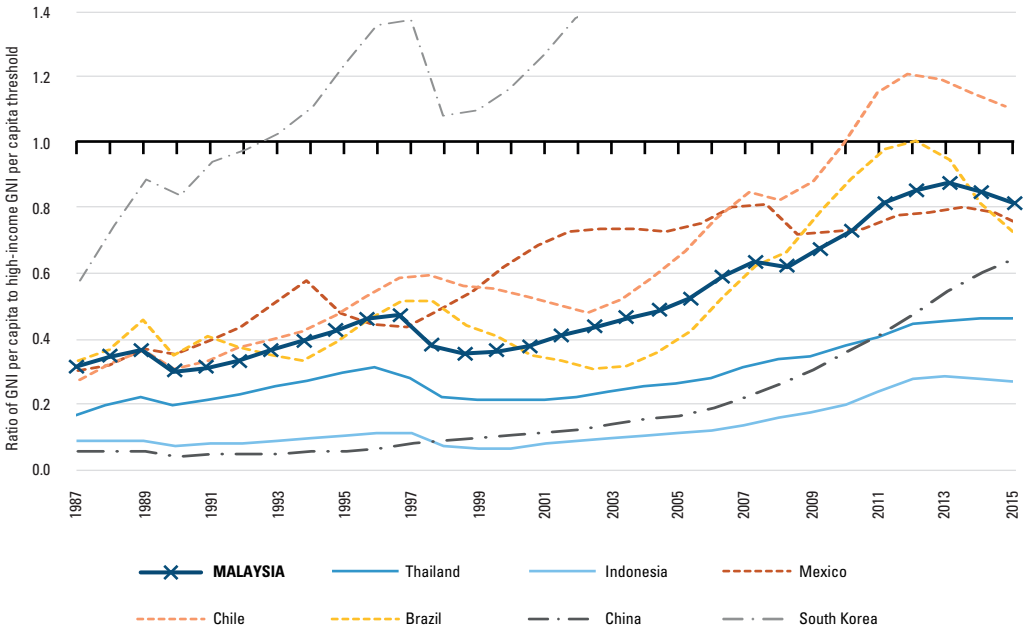
Figure 3.10: Income group classification and length of middle-income status, Malaysia and selected countries. 1960 – 2016



Sources: World Bank, Asian Development Bank
Note: Country income classification before 1987 follows classification used in Estrada et al. (2017), which classifies country income levels using purchasing power parity in constant 2011 dollars from Penn World Tables 9.0. Country income groups post-1987 uses the World Bank classifications. Numbers on the right-hand side of the table represents the number of years classified as a middle-income country and bolded numbers indicate that the country has reached a high-income status.

However, within each country's World Bank income group exists a heterogenous cluster of countries. Figure 3.11 shows how countries have fared in relation to the high-income threshold. Countries such as South Korea and Chile have managed to transition from upper-middle income status to high-income status in 1993 and 2011, respectively, while Malaysia appears to slowly approach the threshold. Interestingly, this comparative analysis indicates that Malaysia more closely resembles Latin American economies such as Brazil, Chile and Mexico, rather than Southeast or East Asian economies.

Figure 3.11: Distance to high-income threshold. 1987 – 2016



Source: World Development Indicators

Each country's income group can also be identified based on non-income measures. High-income countries are characterised by having an older population, where the share of individuals aged 65 and above is close to 12%. 2016 data for Malaysia indicates that the proportion of individuals aged 65 and above stands at half that value (Figure 3.12). Individuals in high-income nations also stay in schools longer, four times the average of individuals in a low-income

nation. Malaysia's population has close to a high-income country's average years of schooling. (Figure 3.13). However, on infrastructural matters, high-income countries lead the pack by a large margin. High-income nations tend to have more paved roads, a generic indicator of infrastructure provision to support economic activities and linkages. While the state of infrastructure in Malaysia is better than the middle-income and low-income average, the country has more room for infrastructural expansion to reach the level of high-income countries (Figure 3.14).

Figure 3.12: Share of population age 65 and above in population, Malaysia (2016) and other income groups

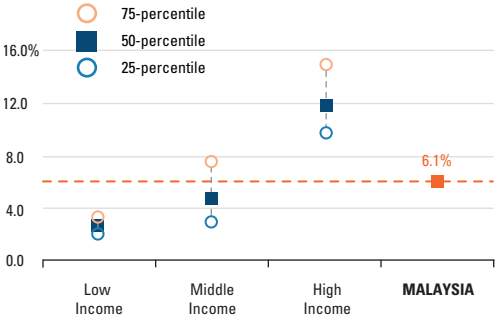


Figure 3.13: Years of schooling for Malaysia (2015) and other income groups

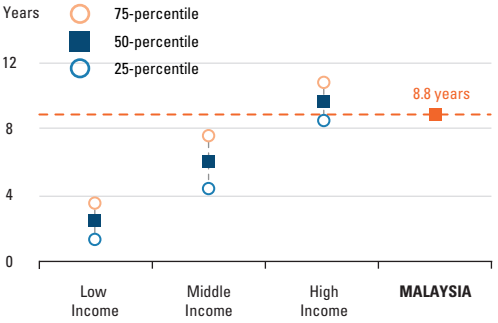
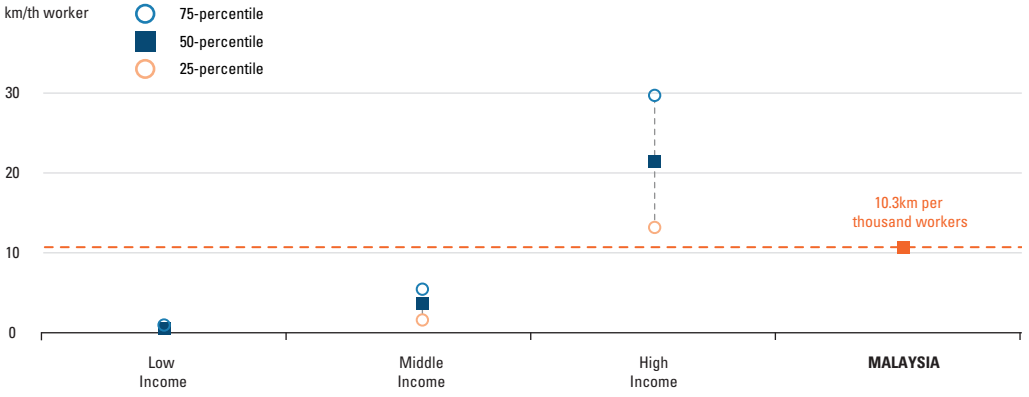


Figure 3.14: Paved roads in km/thousand workers for Malaysia (2015) and other income groups



Source: Estrada et al. (2017), Department of Statistics Malaysia, KRI staff calculations

Essentially, there are heterogeneities in demographic, human capital and infrastructure characteristics among different income groups. These differences indicate that societies living in different countries face different socioeconomic circumstances and resources. Transitioning from one group to another therefore requires significant changes in these conditions as well.

3.2.2 Common features of modern high-income economies

Malaysia's development occurred on the back of strong economic growth. However, growth that powers a country's development from a low-income economy to a middle-income economy might not necessarily enable a country to develop a high-income economy.

The road towards strong, sustained economic growth is not a well-defined path. Different countries, under different set of circumstances, will need develop their own unique paths. There are, however, several common characteristics between countries' developmental journeys. In the Growth report, produced by the Commission on Growth and Development, these characteristics are countries that leverage on the world economy, have stable macroeconomic environments, are future oriented in their economic outlooks, possess well-functioning markets, and have leadership and governance structures[74]. In 2010, Malaysia's National Economic Advisory Council published the New Economic Model for Malaysia which address the strategic policy directions Malaysia needs to undertake in order to achieve a sustainable, inclusive, high-income economy[75].

These perspectives have put a great emphasis onto the economic strength of a country. Whilst necessary, that alone is not sufficient. A more comprehensive notion of development for instance is the Vision 2020. It introduced an ideal of development unique to Malaysia, not restricted only in the economic sense, but developed along multiple dimensions: politically, socially, spiritually, psychologically and culturally. As laid out by the fourth and seventh Prime Minister, Tun Dr Mahathir Mohamad, this ideal entails a vision of a developed Malaysia "in terms of national unity and social cohesion, in terms of our economy, in terms of social justice, political stability, system of government, quality of life, social and spiritual values, national pride and confidence"[76] .

74 Commission on Growth and Development (2008)

75 National Economic Advisory Council (2010)

76 Tun Dr Mahathir Mohamad (1991)

This report supplements this discussion by providing some updates to this issue based on some of the reports published by ADB[77], the World Bank[78] and Bank Negara Malaysia[79]. From these reports, several common themes thread different development journeys of advanced economies—noted here as a having well-developed institutions and state capability, a robust knowledge-based economy, high-quality human capital and a modern infrastructure—and are synthesised in Figure 3.15. This section illustrates where Malaysia currently stands in relation to these features with other nations, highlighting the country's progress and areas for further development.

Figure 3.15: Common features of advanced economies

Adapted from various sources.

3.2.3 Malaysia in context: Institutions and state capability

It has long been recognised that economic growth is closely linked to the amount of human capital, physical capital, and technology that workers and firms in that country have access to. But an equally important element of a nation's development is recognising the fact these endowments do not magically turn themselves into economic output; that it is the men and women utilising these endowments that ultimately produces welfare enhancing economic activity and how society, on a macro level, organises itself to induce these behaviours from the men and women of this country. Ultimately, how a society generates wealth depends on the amount of endowment a society has and how that society organises itself to use these endowments productively.

To adequately address the age old question of what drives a country's development, the question of how a society organises itself should be taken seriously. In this regard, institutions—and by extension, the government or the

77 ADB (2017)

78 Lange et al. (2018), Cirera and Maloney (2017) and World Bank (2018)

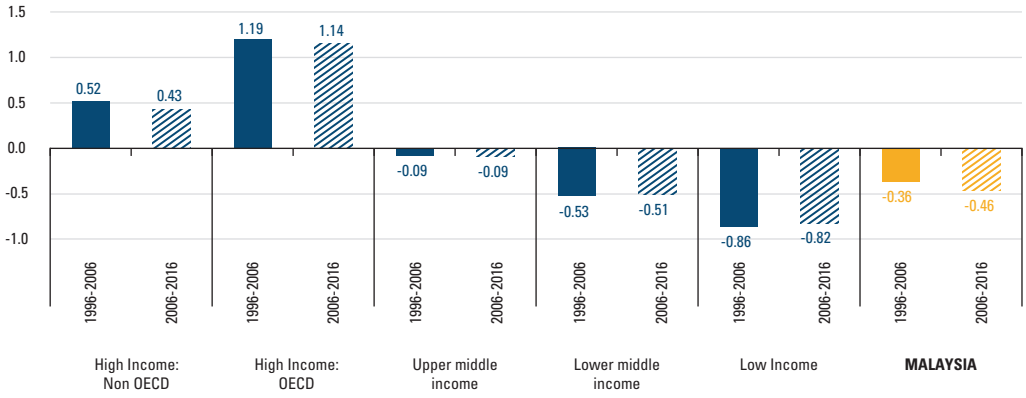
79 Bank Negara Malaysia (2010)

state in general—play an exceptionally important role in a country's development: they shape incentive structures within society which consequently determine the actions and behaviours of agents under different circumstances[80]. These in turn produces the outcomes we observe in the economy and our everyday life. Institutions are essentially the rules of the game in a society.

Institutions therefore hold a lot of weight in determining the trajectory of a country's development. Hence, it is crucial that society have a strong say in the direction of its institutions and how they govern over the societies they are meant to serve. Since a society's own future is at stake, important pillars such as freedom of expression, accountability and curbing corruption are all integral parts of a society's ability to maintain a strong check-and-balance system over institutions. In the case of Malaysia, these pillars have worsened over the past decade compared to the decade before it, as seen in Figures 3.16 and 3.17. These figures reflect an erosion of society's trust over the check-and-balance systems in place over the country's institutions over the past decade.

Figure 3.16: Comparison of average 'Voice and Accountability' score of Malaysia between 1996 – 2006 and 2006 – 2016 against other country income groups over the same time period

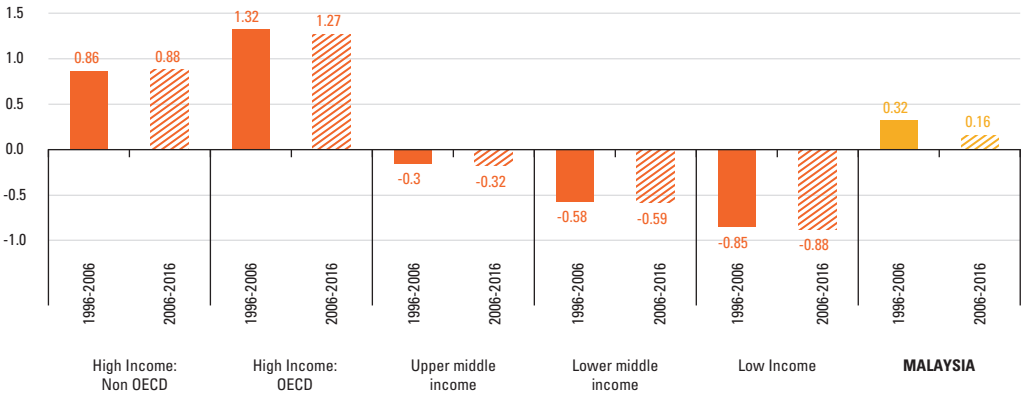
'Voice and Accountability' score ranges from -2.5 (weak) to 2.5 (strong governance performance)



Source: World Governance Indicators
Note: 'Voice and Accountability' score reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

80 Acemoglu and Robinson (2008)

Figure 3.17: Comparison of average 'Control of Corruption' score of Malaysia between 1996 – 2006 and 2006 – 2016 against other country income groups over the same time period



Source: World Governance Indicators
Note: 'Control of Corruption' score reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

These figures add an important dimension to Malaysia's development progress, in which our democratic principles desperately needs to be built upon. Institutions do not function in a vacuum. Institutions can only function within societies that bestow them the mandate for their existence, which they in turn exercise their powers over society.

Another dimension of institutional strength is its capability and effectiveness in carrying out its functions, solving society's problems and providing society's needs. Indeed economists have noted that Malaysia is "stuck" in low-levels of state capability and experiencing stagnant growth state capability levels over the decades. Table 3.2 maps out Malaysia position relative to other developing nations in developing its state capability.

Table 3.2: The level and growth of state capability of Malaysia relative to 101 other historically developing countries

State capability levels	Growth in state capability: Rapid negative growth	Slow negative growth	Slow positive growth	Rapid positive growth
Strong		the Bahamas, Bahrain, Brunei	Chile, Qatar, Singapore, South Korea	United Arab Emirates
Middle	Argentina, Costa Rica, Guyana, Iran, Moldova, Mongolia, Morocco, Namibia, the Philippines, South Africa, Sri Lanka, Thailand, Trinidad and Tobago	Brazil, China, Cuba, Egypt, India, Israel, Jamaica, Jordan, Kuwait, Lebanon, **MALAYSIA** Mexico, Oman, Panama, Peru, Suriname, Tunisia, Vietnam	Albania, Algeria, Armenia, Botswana, Colombia, Croatia, Ghana, Indonesia, Kazakhstan, Russia, Saudi Arabia, Ukraine, Uruguay, Turkey	
Weak	Belarus, Dominican Republic, Gambia, Guatemala, Guinea, Kenya, Libya, Madagascar, Nicaragua, Papua New Guinea, Paraguay, Senegal, Syria, Venezuela	Azerbaijan, Bolivia, Cameroon, Ecuador, Gabon, Malawi, Mali, Mozambique, Pakistan	Angola, Bangladesh, Ethiopia, Tanzania, Uganda, Zambia	
Very Weak	Ivory Coast, Yemen, Zimbabwe	Haiti, Nigeria, North Korea, Somalia, Togo	Democratic Republic of the Congo, Iraq, Sudan, Sierra Leone	Guinea-Bissau, Liberia, Niger

Source: Adapted from table 1.1 of Andrews, Pritchett and Woolcock (2017)
Note: The table is obtained from Andrews, Pritchett and Woolcock (2017), which is a composite index based on the average rescaled indicators of state capability from Quality of Government, Failed State Index and World Governance Indicators.

From Table 3.2, we can observe that Malaysia is not alone in facing this difficult problem. In tackling this problem, the real challenge lies in developing *real* state capability. Economists have noted that efforts to improve state capability across developing countries have often yielded little results. They have largely been hollow, such as reforms yielding little material change, or failed, due to implementation stress under excess pressures to execute "best practice" policies[81]. Sustainable, long-term centric solutions requires iterative improvements for local problems with local solutions, and creating a safe environment across the institution encouraging experimentation and positive advances. This iterative process over time builds state capability, allowing it to tackle even greater problems than before.

This ties back to the original ethos behind Tun Dr Mahathir's vision that whilst Malaysia ought to aspire to be amongst the league of developed nations, simply importing solutions—often custom-made for another country's problems—is not the only way to develop a nation[82]. It is important that Malaysians strike a balance between learning from the experience of others as well as producing to our own solutions to solve our own unique circumstances.

3.2.4 Malaysia in context: Knowledge-based economy

Diversification and industrialisation played an important role in Malaysia's development from a low-income to a middle-income country in the past. At this stage of development, national income improvements were driven mainly by high investments, leading capital flows into the country and bringing in frontier production technologies to run the country's industrial sectors. This enabled Malaysia's industrialisation phase, with an emphasis on export-oriented manufacturing activities.

Driven by innovation, advanced countries are primarily knowledge-based, where countries intensively produce, distribute and use knowledge and information. Consequently, progress is underpinned by high-technological investments and industries, as well as large productivity gains[83]. The economy also exhibits less

81 Andrews et al. (2017) labelled these situations as isomorphic mimicry and premature load bearing.

82 Tun Dr Mahathir Mohamad (1991)

83 OECD, 2016

reliance on physical inputs and natural resources, and are greatly influenced by intellectual capabilities[84].

Transitioning from a middle to high-income economy means that the country would need to move beyond its role as a hub of production to become a hub of creation. The nature of growth during this transition would shift from investment-led growth, centred on capital accumulation and technology adoption, to innovation-led growth, centred on productivity enhancements and new value creation[85]. As Malaysia progresses towards the economic frontier, the country needs to pay closer attention to these sources of growth.

The capacity to innovate and create a knowledge-based economy relies on various factors, which revolves on whether the economy is diversified and intensively knowledge-based, through active **research and development** activities, **motivated entrepreneurs** and **high economic complexity**.

Research and Development (R&D)

Generally, emerging economies would plug themselves into the global value chains and adopt technologies created by economies at the technological frontier. This was the case of Malaysia during the past few decades. As economies continue to develop, they too reach the technological frontier. The primary dimension of long-term growth then shifts from price competition to innovation, fuelling growth-enhancing activities and the associated societal spill overs[86]. Innovation therefore plays a central role in future economic growth, and R&D becomes a key indicator of knowledge creation and investment in innovative activities.

Following this logic, funding for R&D is an important element for innovation. Malaysia's R&D expenditure in 2015 stands at 1.1% of GDP, less than the levels seen in high-income nations such as Japan and South Korea or the OECD average (Figure 3.18). Additionally, almost two thirds of R&D activities in Malaysia are done by businesses. It is more common amongst large firms, especially exporters and producers of chemical products[87].

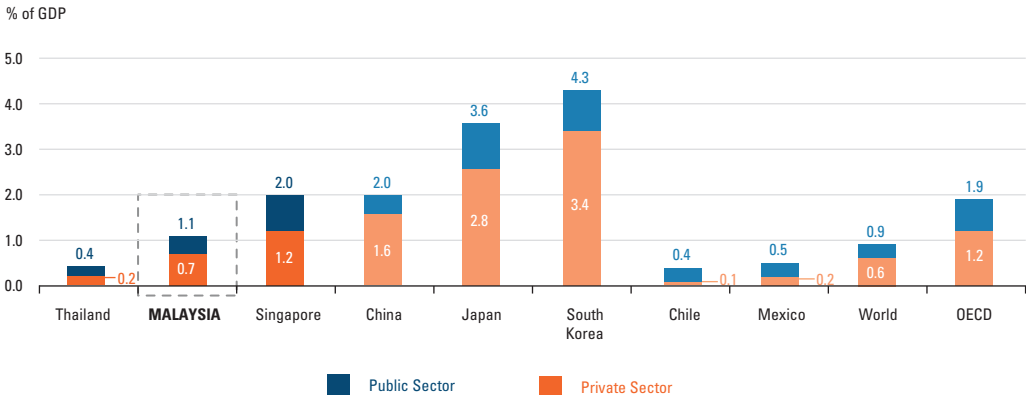
84 Powell and Snellman (2004)

85 Aghion and Bircan (2017)

86 OECD (2012)

87 World Enterprise Survey, 2015

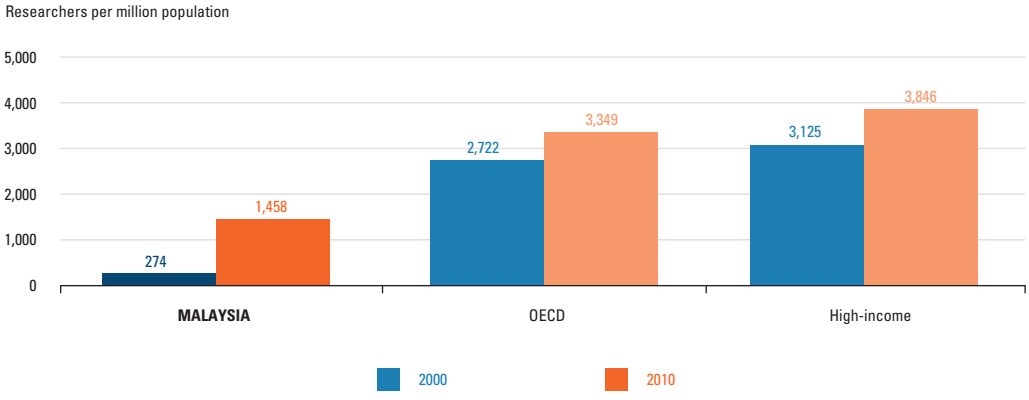
Figure 3.18: Gross expenditure on R&D, total and by businesses, selected countries, 2015



Source: Global Innovation Index

In terms of number of researchers per population, while the gap between the Malaysia and high-income economies have narrowed over the years, the gap is still a significant one (Figure 3.19). As of 2010, high-income economies have more than double the number of researchers per population compared to Malaysia.

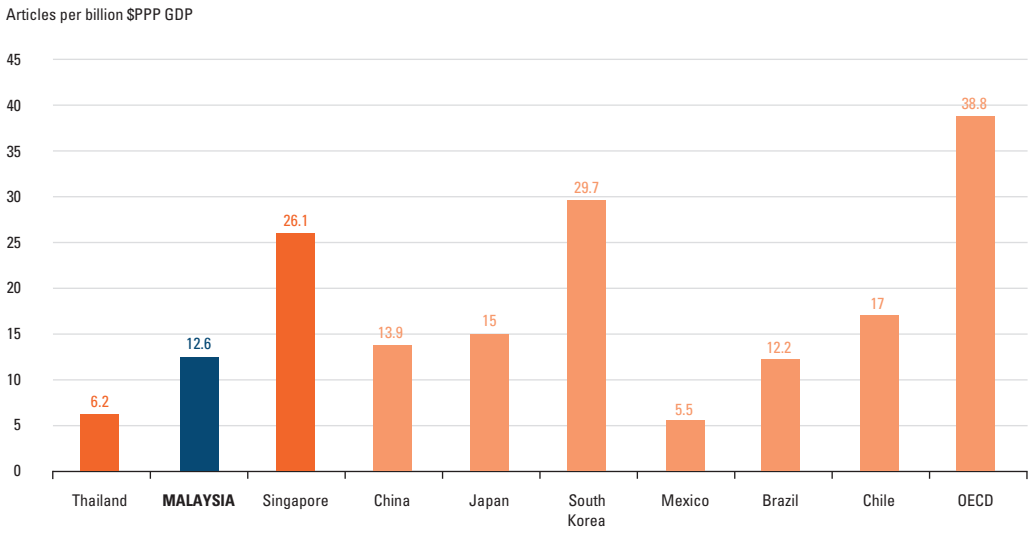
Figure 3.19: Researchers per million population, Malaysia and selected averages, 2000 and 2010



Source: World Bank (2000 and 2010)

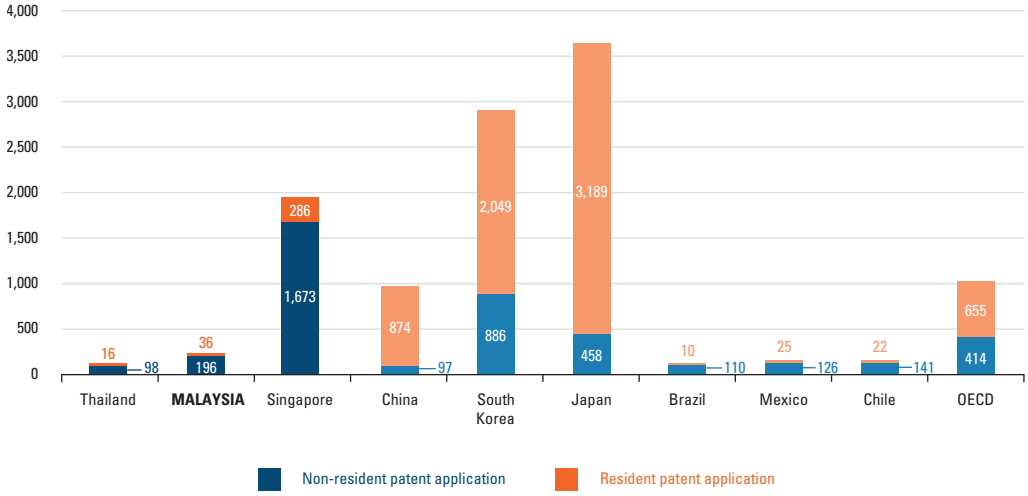
Those inputs have translated an output of 12.6 journal articles per billion PPP$ GDP in 2016 (Figure 3.20). Another lens of R&D output are patent applications, which indicates the ability to transform research ideas into marketable outputs. Patent applications in Malaysia are higher to other comparable peer nations, but greatly lags behind high-income nations. For an active participant of the global supply and value chains, Malaysia's resident-based patenting capacity is limited in comparison to countries at the research frontier end of these chains, such as South Korea and Japan (Figure 3.21). These indicators show that whilst Malaysia has made great strides in R&D, there remains a significant amount of work that needs to be done in this area.

Figure 3.20: Number of scientific and technical journal articles per billion PPP$ GDP, selected countries, 2016



Source: Global Innovation Index

Figure 3.21: Resident and non-resident patent applications per million population, selected countries, 2016



Source: World Development Indicators

The variables covered here are only an overview of R&D inputs and outputs and provide a rough gauge of Malaysia's research capabilities relative to peer and advanced economies. A comprehensive picture of R&D in Malaysia should include other vital features such as policies, institutions, technology transfers and other vehicles for technological upgrading[88]. Nonetheless, from the indicators seen earlier, R&D activities and its associated outcomes are one of the areas Malaysia lags remains behind advanced economies.

88 Lai and Yap (2004)

Entrepreneurship

The experience of Malaysia's economic development shows that when Malaysia's economic structure fundamentally changes and evolves, the livelihoods of households changes significantly as well. This is no different when a developing country transforms into a developed one. Structural change, the types of transformation that creates advanced economies, are essentially driven by entrepreneurs[89]. Why is this the case? Generally, entrepreneurs are driven by necessity or opportunities. In countries where employment is scarce or the quality or remuneration from work is unsatisfactory, entrepreneurs are likely to be necessity-driven entrepreneurs. On the other hand, opportunity-driven entrepreneurship are mostly voluntary entrepreneurs who seek for improvement-driven opportunities[90]. Therefore, entrepreneurs—when driven by opportunity rather than necessity—invest resources into business ideas, take on risks, expand existing or create new demand, compete and in the process, change the structure of an economy[91].

Entrepreneurship is another facet of a knowledge-based economy as it is the medium of how ideas are transformed into an economic activity. In advanced countries, it is a regular feature of the economy and highly encouraged and supported by the government[92]. Where does Malaysia fare then, with respect to entrepreneurship?

Over the years, bureaucratic burden of starting a business has gradually fallen. Time taken to set up a business are now shorter—in 2010, it takes an average 13 days and nine procedures to start a business in Malaysia, but these have declined to 5.5 days and three procedures in 2016[93]. Meanwhile, the cost of business start-up procedures, seen in Figure 3.22, has dropped over the years. While Malaysia is generally on par with peer countries such as Thailand and Vietnam, Malaysia still lags behind other developing and developed nations such as Brazil, Chile, China and Singapore.

89 Altenburg et al. (2016)

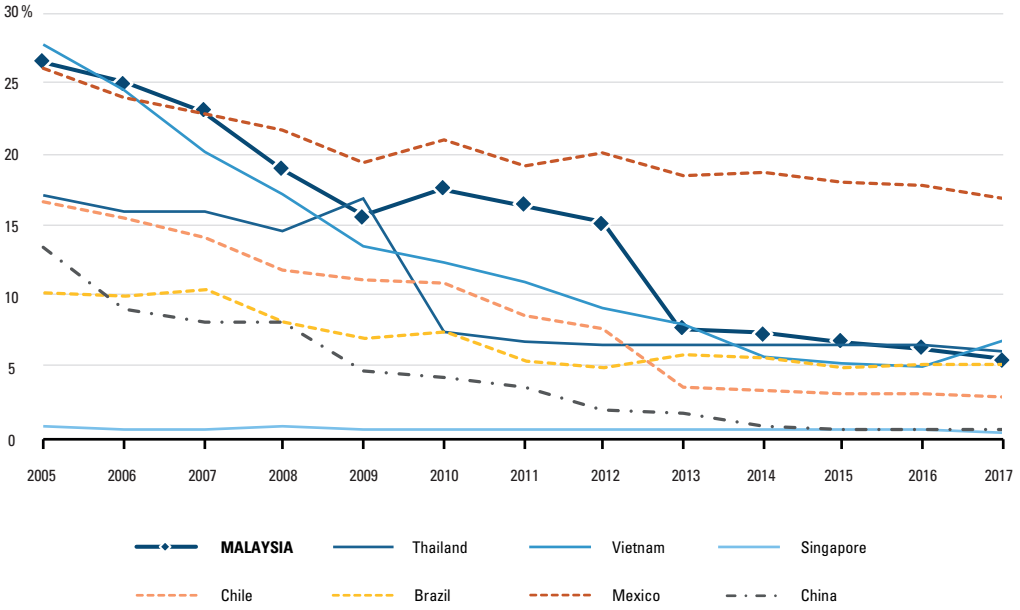
90 Global Entrepreneurship Monitor (2018)

91 Altenburg, et al. (2016)

92 Ibid.

93 Global Competitiveness Index (2007 and 2016)

Figure 3.22: Cost of business start-up procedures as a percentage of income per capita, 2005 – 2017



Source: World Bank Doing Business Database
Note: The World Bank Doing Business database defines the cost of business start-up procedures includes all official fees and fees for legal or professional services if such services are required by law or commonly used in practice. Fees for purchasing and legalising company books are included if these transactions are required by law.

Entrepreneurial attitude is another determinant to the creation of new businesses. To understand the behaviour of potential entrepreneurs, the Global Entrepreneurship Monitor (GEM) surveys individuals between the age of 18 and 64 years old on entrepreneurial intentions[94] and perceived opportunities[95] to start a business. Between 2010 and 2016, both these measures dropped from 5.1% to 4.9%, and 40.1% to 25.4%[96] respectively. Using these datasets, ADB has reported that high-income countries have a much higher entrepreneurial

94 Defined as the percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who are latent entrepreneurs and intend to start a business within three years. Definition from Global Entrepreneurship Monitor (2018).

95 Defined as the percentage of 18-64 population who see good opportunities to start a firm in the area where they live. Definition from ibid.

96 Global Entrepreneurship Monitor database

motivational index[97] and nearly doubles the ratio for middle-income countries[98].

In Malaysia, the average percentage of opportunity-driven firms is five times the average percentage of necessity-driven firms, higher than other advanced economies. However, the survey also revealed that new businesses in this country do not innovate. From 2011 to 2017, only 16% of new businesses introduce new products amounting roughly half of those reported for advanced countries such as the United States and the United Kingdom. This represents an area for Malaysians to look into and explore potential new opportunities based on businesses that drive innovation.

Figure 3.23: Average motivational index, selected countries, 2010 – 2017

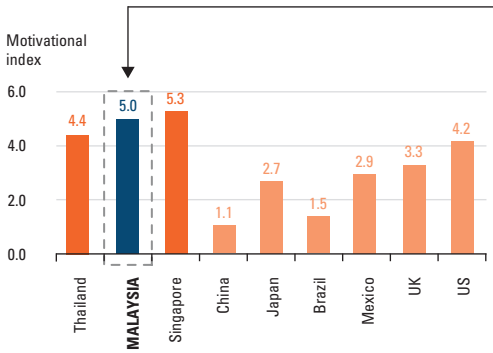
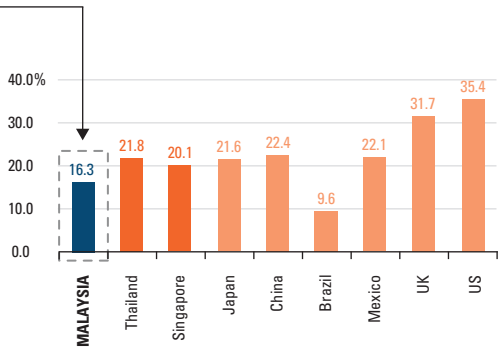


Figure 3.24: Average innovation in new businesses, selected countries, 2011 – 2017



Source: Global Entrepreneurship Monitor database

Entrepreneurship, if leveraged on properly, could play an important role in transforming the nation into an advanced knowledge-based economy. Whilst it is difficult for the state to fully anticipate the direction of change[99], the state could facilitate and support entrepreneurial activities through efforts such as financial support, overcoming coordination and information failures and even efforts to reduce the costs and societal stigma of failure. These efforts would enable Malaysia to harmonise the developmental gains of entrepreneurship with the broader objective of inducing structural upgrading of the economy.

97 An index constructed from surveys of nascent entrepreneurs or owner-manager of new businesses and is made up of the ratio of percentages of individuals who seek improvement-driven opportunities to the percentage of individuals who are motivated by the need to be employed. Definition from Global Entrepreneurship Monitor (2018).

98 ADB (2017)

99 Altenburg et al. (2016)

Economic complexity

Structural upgrading of an economy would often entail a production of more complex goods and services. This ties in well with the concept of a knowledge-based economy; extensive technical know-hows combined with the capability of combining different inputs to form new, higher value products leads to creation of knowledge-intensive, complex economic ecosystem. Economic complexity is therefore a gauge of the country's structural progress and a progression from simpler economies to more complex ones entails a structural upgrading along the value chain.

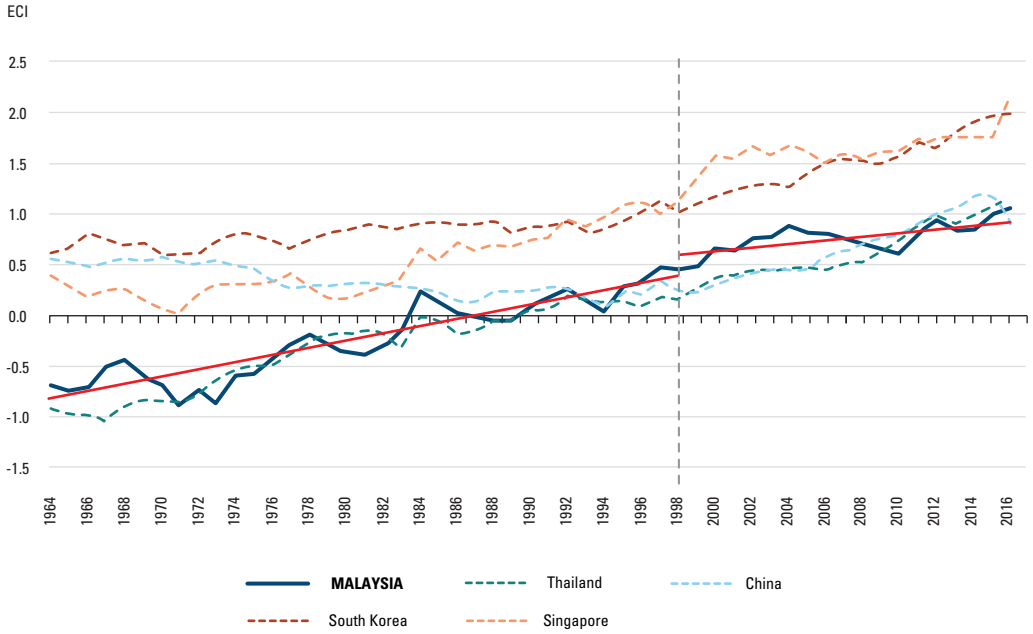
Following this line of thinking, the Economic Complexity Index (ECI), developed by Hausmann et al. (2014), is an attempt to measure and capture this complexity. The ECI utilises a country's international trade data and with it, attempts to underpin the inherent trade-off between diversity and ubiquity within a country's production structure geared for trade; how many different types of goods does a country produce and how common these goods are produced globally[100]. Essentially, a complex economy is one that produces and sells a diverse mix of products which are less common relative to the world, indicating a country's ability to leverage on its various specialised knowledge to drive the economy.

Malaysia's ECI has seen steady increases over the years, albeit not to the levels of nations such as Japan and South Korea. As seen in Figure 3.25, the trend of rising ECI for Malaysia was prominent in the years before 1998. From the early 2000s onwards, this trend become more modest and muted[101]. This ties with observations made earlier in this chapter; rising ECI coincided with Malaysia's industrialisation years and a greater emphasis on exports. This industrialisation phase meant that the country upgraded its economic activities and produced goods that are complex, resulting in an overall higher level of economic complexity. After 1998, the restrained ECI growth coincided with deindustrialisation in Malaysia.

100 Hausmann et al. (2014)

101 Economic Planning Unit (2014)

Figure 3.25: Economic complexity index (ECI), selected countries, 1964 – 2016



Source: Observatory of Economic Complexity
Note: Economic complexity index (ECI) is an index that measures the complexity of a country's economy based on the diversity and ubiquity of the products they export relative to the world market. For instance, countries with a range of high-value skills and technical know-how are able to produce a great range of complex products, indicating the level sophistication of a country's economy.

ECI—which captures only the complexity of a country's international trade in goods—is only one of many various lenses one could use to measure complexity. That said, the ECI tells a lot about the country's economy and in general, economic complexity has been found to have a positive effect on national income levels[102]. Given Malaysia's situation seen in Figure 3.25, the economy's complexity is deemed insufficient to drive the economy towards high income status by 2020[103]. Without economic complexity, the production structure of the economy may not be agile enough to adapt to various changes in the global environment, potentially inhibiting growth in the long-run.

102 Hausmann et al. (2014)
103 Cheah and Shuhaimen (2018)

3.2.5 Malaysia in context: High-quality human capital and modern infrastructures

The creation of a knowledge-intensive economy requires two other important complements: high-quality human capital and modern infrastructures. For advanced economies, economic growth largely stems from productivity. The quality of human capital employed ensures productivity growth, which in turn is largely tied the quality of knowledge acquired. It would be difficult for a country to create or capture value without a competent labour force and investment in knowledge and innovation. A highly productive and creative society lies at the heart of advanced economies and their capabilities are only enabled by the existence of modern infrastructure systems. These infrastructure systems are the catalyst which allows modern economic activities to be possible.

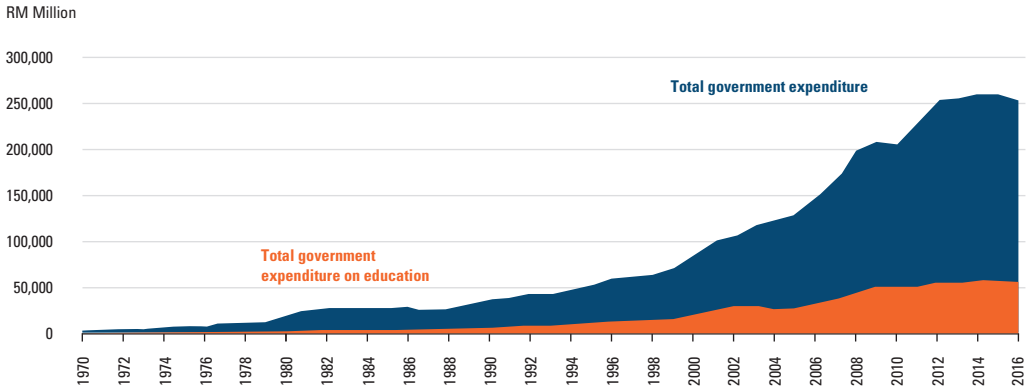
The next section provides an overview of the state of Malaysia's education and infrastructure, to contextualise the nation's position in comparison to advanced economies.

High-quality human capital

The need for education from an economic developmental perspective stems from the need to have agents of sufficient proficiency and competency to absorb, operate and adapt production technologies that spur industrialisation and growth. However, the transition towards a high-income economy requires human capital levels that enables agents to catalyse technological advancements for the purposes of value creation and productivity improvements[104]. This provides the foundation of a knowledge-based economy, which can only be made possible if workers are educated and highly skilled. Moreover, as discussed in Box 3.1, advanced economies also have distinctively high levels of human capital wealth, which captures the importance of high-quality human capital in the economic wealth of a country.

104 ADB (2017)

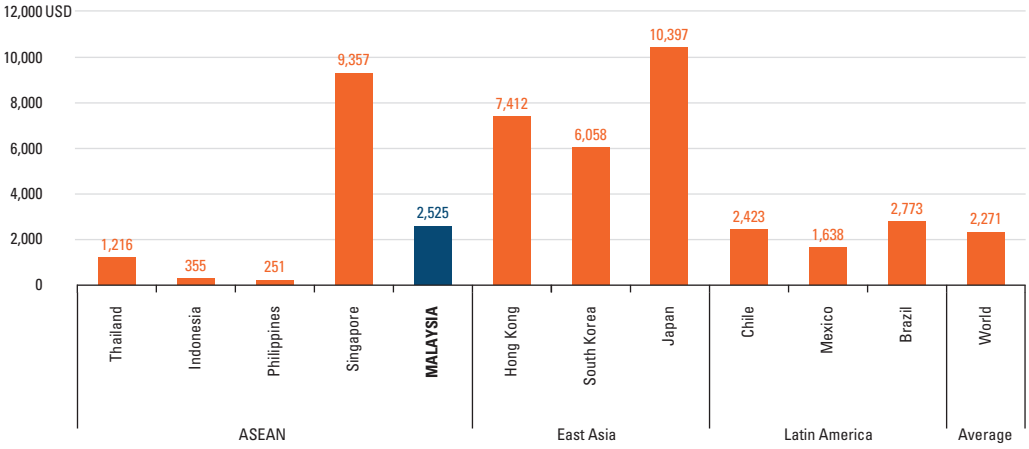
Figure 3.26: Malaysia's total government expenditure and government expenditure on education, 1970 – 2016



Source: Bank Negara Malaysia

Figure 3.26 shows the Malaysian levels of public expenditure on education and this figure has been growing steadily from RM0.5 billion in 1970 to RM55.6 billion in 2016. Throughout this period, education spending has consistently made up between 18% to 26% of total current government expenditure. Nonetheless, compared to other countries, Malaysian government spending on education when normalised by the number of students is still relatively low, registering at USD2,525 (Figure 3.27). This amount is still small relative to the spending in advanced economies such as South Korea USD6,508 and Japan USD10,397, but higher than Singapore USD9,357.

Figure 3.27: Government spending on education per total number of secondary school students, 2016

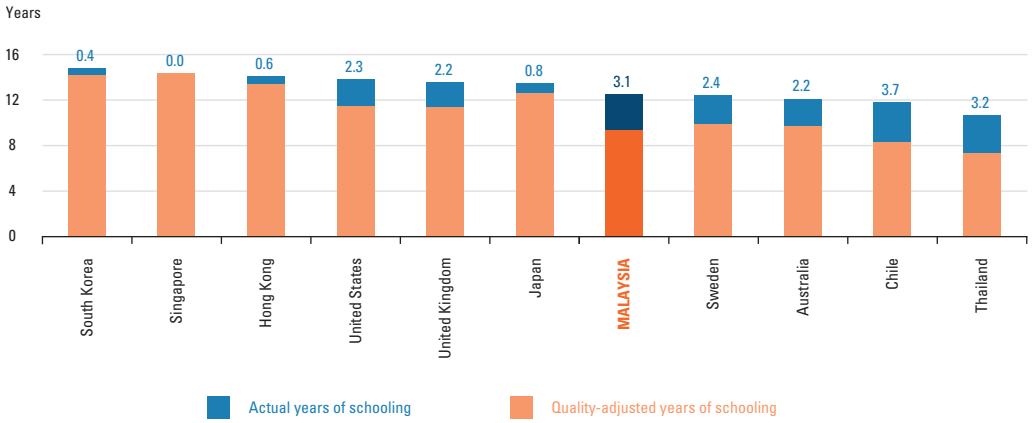


Source: Global Innovation Index

Malaysians are also staying longer in schools; the mean number of schooling years rose from seven years in 1992 to 10 years in 2014[105]. However, the longer schooling years is only meaningful the quality associated to each year of schooling is sufficiently high to raise cognitive abilities and promote economic growth[106]. One way to assess education quality is to adjust actual schooling years to learning outcomes indicated by a country's performance in internationally-comparable test scores, such as the Trends in International Mathematics and Science Study (TIMSS). The comparison between Malaysia and other countries for actual and quality-adjusted schooling years is shown in Figure 3.28. It indicates potential deficiency in the Malaysian education system, where students have three years of schooling that do not contribute to their educational achievement.

105 Human Development Index, UN
106 ADB (2017)

Figure 3.28: Schooling years and the gap from quality-adjusted schooling years, 2015

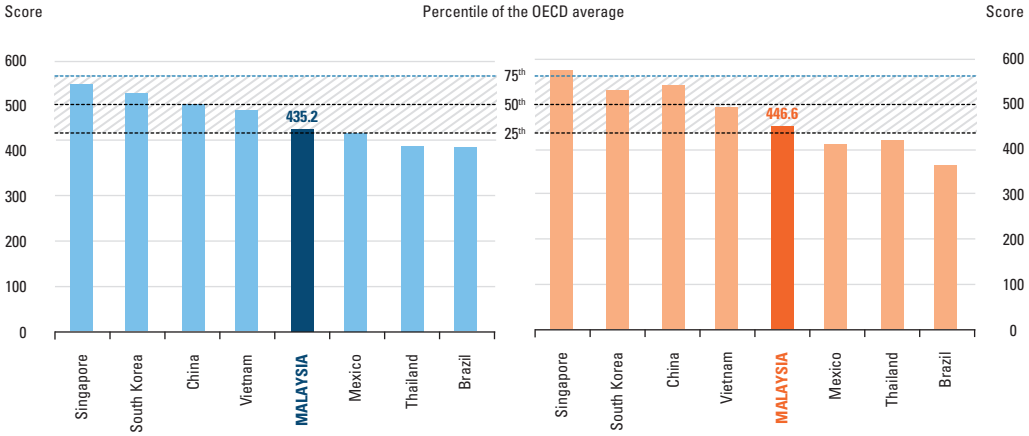


Source: Adapted from World Bank (2018)
Note: Number on top of the bar is the difference between actual and quality-adjusted schooling. Using the ratio of country's average TIMSS Math score to Singapore's average score (highest Math score in 2015), the average year of schooling (from Barro and Lee, 2013) is adjusted. Gap is 0 for Singapore because Singapore is used as the base score. This method assumes a linear relationship between an additional schooling year and learning quality.

Moreover, concerns in the quality of Malaysia's education system in becomes evident in the performances of Malaysian students in another internationally-comparable test, the Programme for International Student Assessment (PISA). In Figure 3.29, PISA in 2015 indicates that the mean reading score for Malaysia is only at the 25th percentile for the OECD average score, while Mathematics score for Malaysia is only slightly above the 25th percentile of the OECD average score. This observation indicates that the learning outcomes of the education system in this country lags the outcome of advanced countries. If Malaysia is to embark on the journey to be an advanced nation, it is essential to develop an education system that guarantees high-quality human capital development.

Figure 3.29: Median PISA Reading score, selected countries, 2015

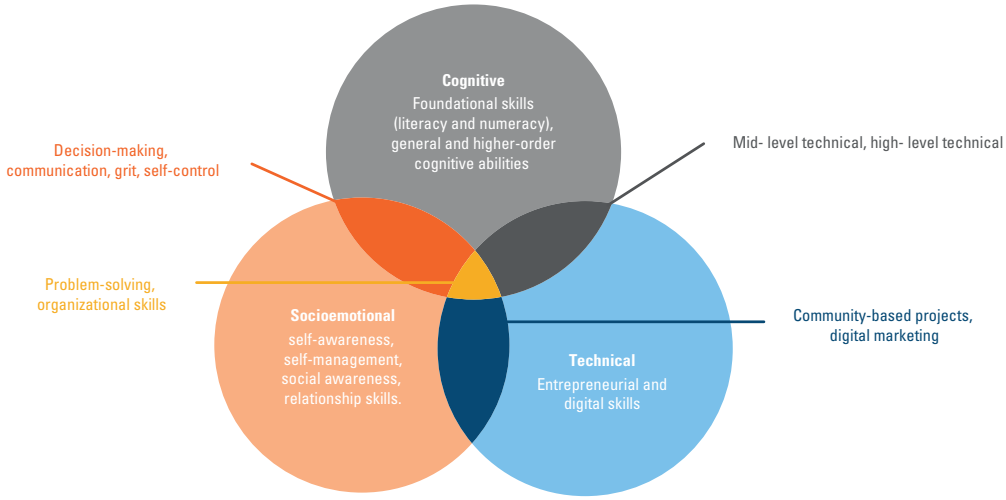
Figure 3.30: Median PISA Mathematics score, selected countries, 2015



Source: Adapted from World Development Report (World Bank, 2018).
Note: PISA defines baseline proficiency reading score at 407 for reading and 420 for Mathematics. PISA evaluates students who are above 15-years old and have undergone through 9 years of formal education. Therefore, the age and level of education at which students are evaluated are different across different countries.

Beyond the attainment of content knowledge and performance in test scores, learning also encompass the ability to utilise knowledge. Skill development is an essential element of learning, where various types of skills such as cognitive, socioemotional and technical skills interact to enhance one's utilisation of knowledge. For instance, to solve a problem, one must assess all the available information about the problem (cognitive skill), interact with other individuals related to the problem (socioemotional skill) and implement a solution to solve the problem (technical skill) (Figure 3.31).

Figure 3.31: Concept diagram of interaction between different skills in skill development and learning



Source: Adapted from World Bank (2018)

One of the ways to encourage skill development is through workplace training. However, based on a survey of 1,000 Malaysian firms conducted in 2015 by the World Bank, less than half of firms offer formal training for its workers, as compared to 79.2% in China[107].

Given the rapid pace of technological advancement and changing nature of work, education and learning requires continuous and adaptive individual commitment. Malaysians must be encouraged and supported to continuously learn and relearn throughout their lives. This requires a culture that appreciates, encourages and cultivates this habit, supported by enabling policies that are accessible to Malaysians from all walks of life[108]. Therefore, a major shift in the way our society thinks about education and learning is necessary to ensure high-level of human capital development to support economic advancement.

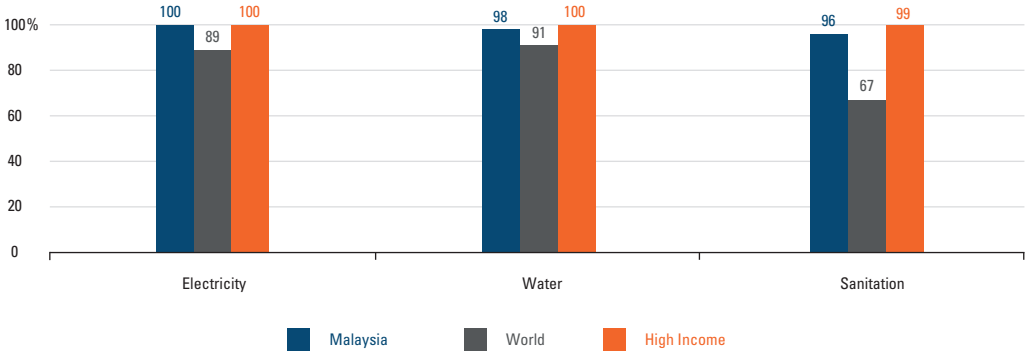
107 World Enterprise Survey for Malaysia (2015) and various years for other countries.
108 "The Times They Are A-Changin", KRI

Modern infrastructures

Infrastructure refers to the network of facilities that enables the linkage and movement of the various factors of production. In the economic literature, studies found that infrastructure and development outcomes have strong positive correlations[109]. Aside from connectivity, sufficiently large investments in advanced infrastructures enables the creation of knowledge externality and product diversification, further supporting the development towards high-income status[110].

The nature of infrastructures required by a country evolves along its path of development. Poorer countries require basic infrastructure that provide electricity, water supply and sanitation facilities to assist economic activities. Indeed, by 2014, population access to these facilities is high in Malaysia and very close to the access level in high-income nations (Figure 3.32).

Figure 3.32: Access to electricity, improved water source and improved sanitation facility, Malaysia and other countries average, 2014



Source: World Development Indicators

At the firm-level, conducive infrastructural support has also been provided such that most firms did not experience constraints in terms of electricity and transportation. As reported by World Enterprise Survey (WES) in 2015, only 9% of firms identify electricity as a major business constraint, while 14% of firms identify transportation as a major business constraint. In context, the average response among OECD countries surveyed between 2006 and 2016

109 Straub (2008)

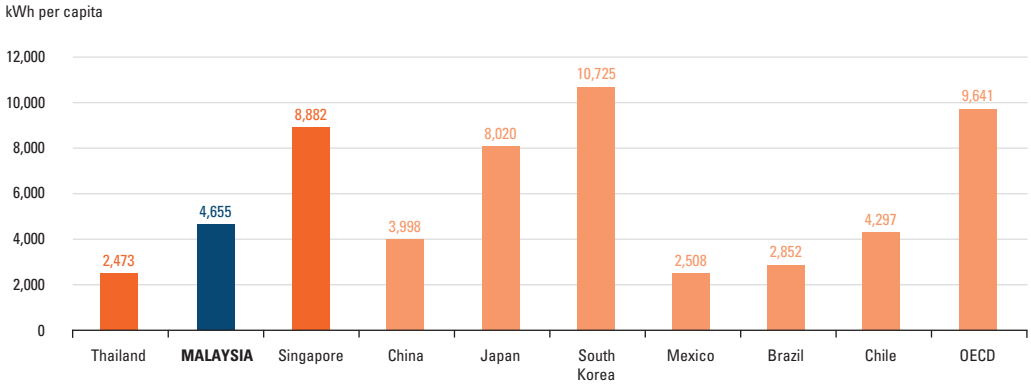
110 Agénor and Canuto (2015)

was 20% for electricity constraint and 11% for transport constraint[111].

However, middle-income countries that aspire to be a high-income nation, including Malaysia, must focus on a different set of infrastructures. More advanced economic activities will require greater electricity utilisation and power-generating facilities. Moreover, advanced nations need high levels and quality of infrastructure for internet and communication technology (ICT) to complement their knowledge-based economic activities.

In Malaysia, consumption of electricity has increased by steadily from 1989 to 2016, mostly driven by industrial activities[112]. Therefore, infrastructure to provide sufficient electricity output is important to complement these industries and subsequently, economic growth. However, compared to other countries, electrical output in Malaysia is only half of the average for OECD countries and other high-income advanced Asian economies (Figure 3.33).

Figure 3.33: Access to electricity, improved water source and improved sanitation facility, Malaysia and other countries average, 2014



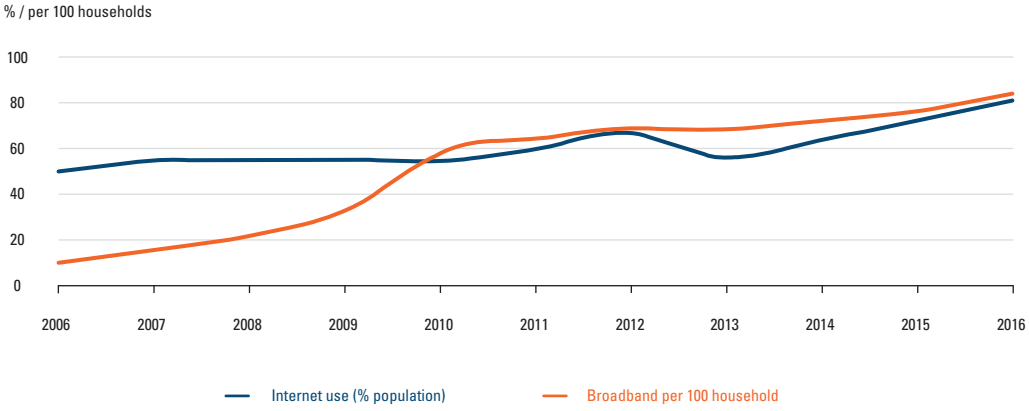
Source: Global Innovation Index

In terms of communication technology, the greater use on cellular phones indicate that flow of information is increasingly mobile and flexible in Malaysia. The percentage of internet use in Malaysia has greatly risen, from about 2% in 1997 to 79% in 2016. The rising internet use coincides with the rise of

111 WES (various years)
112 DOS (various years)

broadband access per 100 household, as shown in Figure 3.34, experiencing a five-fold increment from 2006 to 2011 and continued growth to this day. The growth of broadband subscription in Malaysia was mainly driven by the increasing use of smartphones, intense competition in the telecommunication market and wider coverage for 3G and 4G[113].

Figure 3.34: Internet use (% population) and broadband (per 100 households), Malaysia, 2006 – 2015



Source: World Bank

However, when compared with other countries, access to internet in Malaysia is still limited. Figure 3.35 and Figure 3.36 show fixed and mobile broadband subscription for selected countries, normalised to population size. Internet access for many Malaysians relative to its middle-income peers is higher but is behind the access levels in high-income countries. A potential explanation to this observation is the differences in relative Internet speed to cost in this country. For instance, Malaysia's internet cost is relatively similar to Japan[114], but our bandwidth speed per user is only half of Japan's[115].

113 Malaysian Communications and Multimedia Commission (2016)

114 Numbeo (n.d.) survey for cost of living in different countries.

115 Global Competitive Index (2016)

Figure 3.35: Fixed broadband access, selected countries, 2015

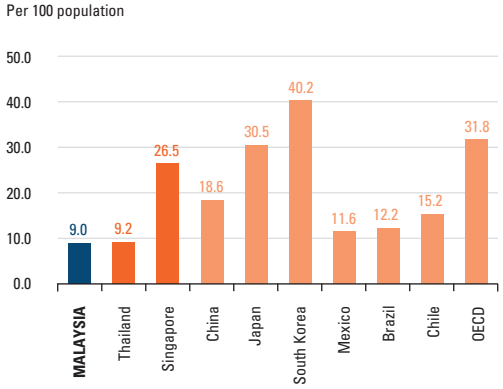
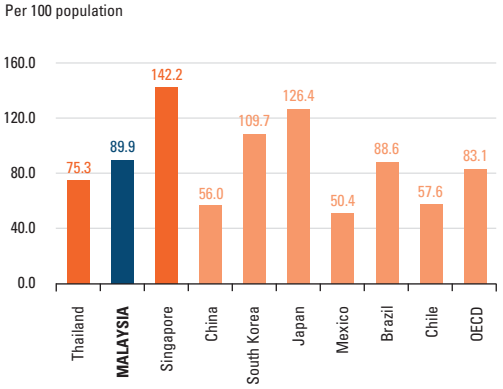


Figure 3.36: Mobile broadband access, selected countries, 2015



Source: Global Innovation Index

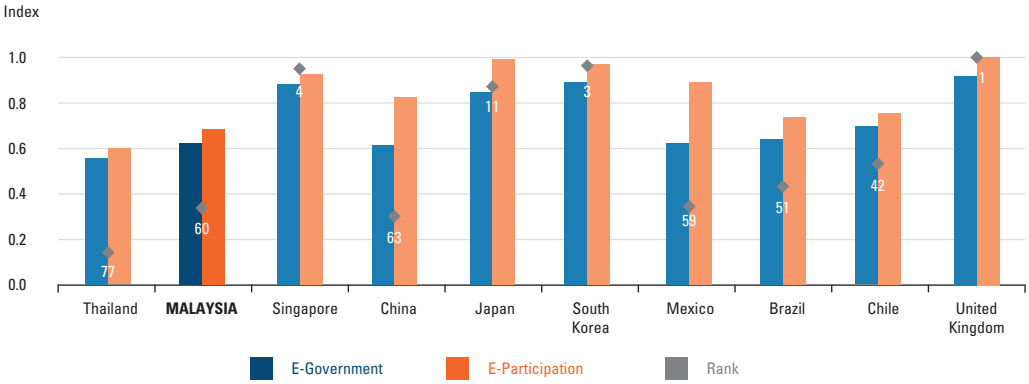
Moreover, advanced and modern infrastructure includes the development of digital services. The ability of internet to connect businesses and consumers at a faster pace and more reliably have led to the revolution in how we utilise various services in our daily lives. In many developed nations, the utilisation of digital services in the private sector is also extended to the most important service provider of all—the government's public service[116].

Due to the sheer size of government services, alongside the limitation of resources, the delivery of government services is often inefficient. Digital services potentially enhance the delivery of public services on multiple fronts—reducing bureaucratic processes, the seamless transfer of information and data between different departments and increase citizen's access and satisfaction to various public services. In Malaysia, the digitalisation of government service is currently implemented by the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), resulting in the creation of MyGovernment. This portal gives access to information and government services based on individual's life events, encompassing family institution, formal education, retirement and access to welfare and health facilities[117].

116 Examples include the UK's Digital Government Service, the US Digital Service and Estonia's e-governance.
117 www.malaysia.gov.my

For international comparison, e-Government Development Index is an indicator that measures the provision of online services, telecommunication connectivity and human capacity in a county to indicate the performance of digital government services[118]. Meanwhile, the e-Participation Index measures how online services are used in the interaction between government and citizens as well as among citizens. In 2016, Malaysia ranked 60 out of 163 countries. When compared with other advanced nations, Malaysia's provision and engagement of digital services requires significant improvements (Figure 3.37).

Figure 3.37: E-Government Development index and rank and E-Participation index, selected countries, 2016



Source: UN E-Government Knowledge Database

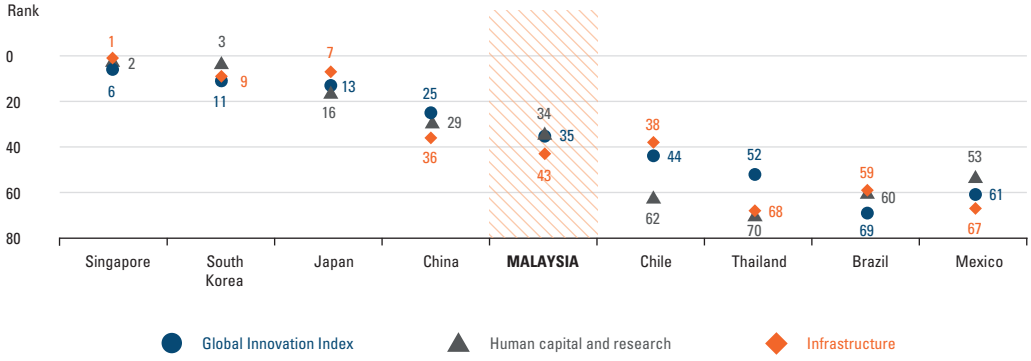
Digital government service is not merely replacing paper forms to e-forms whenever citizens apply for a specific government service. Rather, it requires a review of the bureaucratic processes in the public services. Governments ought to reconsider potential innocuous policy or regulation that complicates service delivery, as well as prioritise citizens' experience at the receiving end of the public service[119]. Successful delivery services also rely on the ability of e-government platforms to provide efficient service while maintaining the safety, flexibility and integrability of the system as a whole[120].

118 UN
119 O'Reilly (2017)
120 e-estonia.com

3.2.5 Discussion

While Malaysia has generally performed relatively well when compared to middle-income peers such as Thailand, Brazil and Mexico, there remains plenty to do in terms of developing Malaysia's capabilities in these key characteristics of advanced economies discussed earlier. In an annual review of the state of innovation for different countries in the world, the Global Innovation Index ranked Malaysia 35th for innovation, 34th for human capital and 43rd for infrastructure (Figure 3.38). Whilst the country's growth in the past has been impressive, transforming into a high-income economy entails significant structural improvements in the knowledge-intensiveness and its applications in the economy, better quality in our human capital development efforts and enhancing and modernising the capacity of our infrastructure system.

Figure 3.38: Global Innovation Index rankings in innovation, human capital and infrastructure, selected countries, 2016



Source: Global Innovation Index

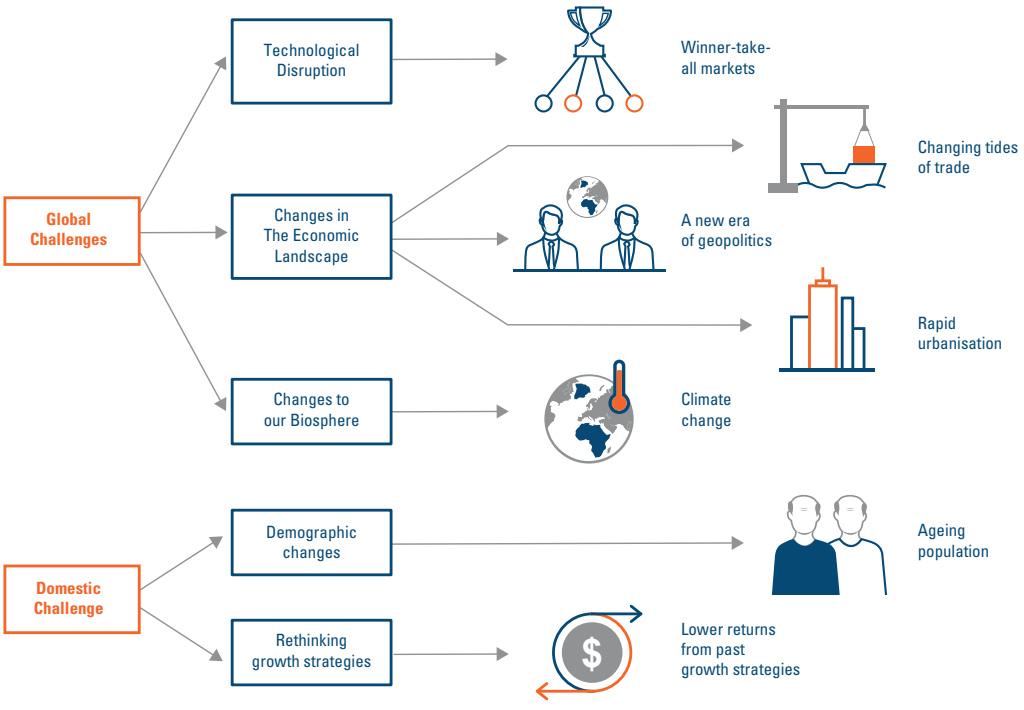
3.3 Challenges of the Future: Where Do We Go From Here?

3.3.2 Future trends and challenges—globally and domestically

Through the lens discussed in previous sections, those characteristics provide an anchor on the main issues Malaysia should now focus on in its journey towards becoming an advanced economy. However, these issues should not be taken in isolation as we venture into an increasingly uncertain future. Various global and domestic trends—ranging from technological disruptions, changes in the global economic landscape and biosphere to demographic changes in the Malaysian society and lower returns from past growth strategies (Figure 3.39)—pose a challenge to Malaysia's economy and the well-being of its people.

This section discusses some of these key trends that Malaysia is set to face in the near future.

Figure 3.39: Several of the global and domestic trends we face today



Technological disruption

It has been said often that we live now live in the information age. The ubiquity of data and information has radically transformed how we live our lives. This change is now set to radically change our economy as well.

The first trend Malaysia ought to be aware of is automation. Whilst it has tremendous potential to improve productivity, it has an equally enormous potential to make whole classes of jobs obsolete.

Secondly, the emergence of a dominant technology industry worldwide gives rise to "winner-take-all" markets. Whilst some industries experience healthy competition, the technology industry over the past decade have generally consolidated towards a handful of monopolistic players. An often-cited reason for this phenomenon is that technology firms thrive on what is known as the network effect: an effect that occurs when the value of a product or service goes up with the number of people using.

Faced with dominant established technology players from the US, Japan and South Korea as well as emerging ones such as China, Malaysia needs to be aware and adapt towards the changing circumstances and nature of any industries in the future. The potential disruption caused by revolutionary technological advances could be severe if handled poorly; mass unemployment with severely crippled economic foundation could be averted if the nation and its people stay ahead of the game and adapt to the changes of the new economic order of the era.

Changes in the economic landscape

The old global international trading landscape is changing—creation of new global value chains have plateaued, new technologies are disrupting supply chains and developed markets are increasingly turning towards protectionist policies. This radically new economic environment has been compounded with a radically new geopolitical landscape. The emergence of China as a new global superpower will have major implications on the future of Malaysia and the region.

China's use of economic development to pursue foreign policy agendas continues through their Belt and Road Initiative (BRI). The BRI is an ambitious project

seeking to rebuild the lost trans-continent trade routes. The BRI has potential to reshape the global trading order by allowing many countries, including Malaysia, to follow an alternate economic development path. It would stimulate development by leveraging on greater access to Asian markets and anchoring growth to an increasingly consumption-driven China.

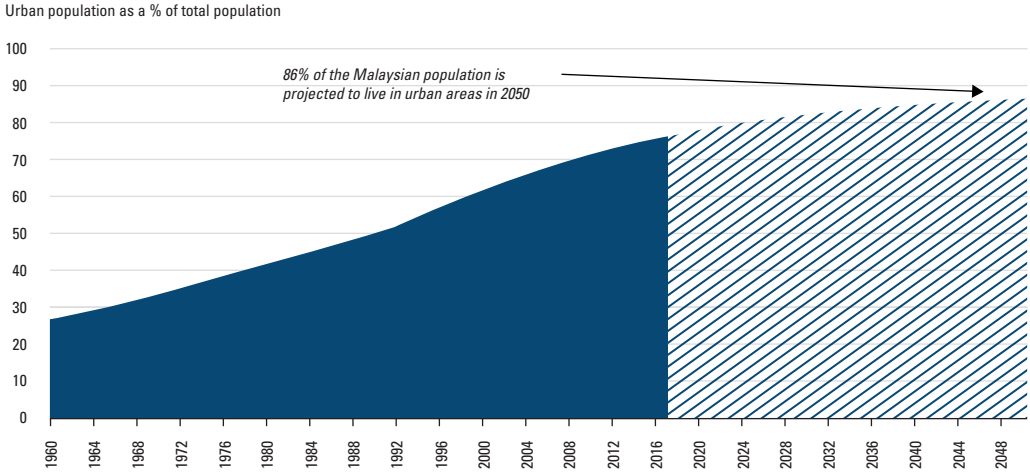
However, critics argue that the BRI is fraught with potentially insidious foreign policy agendas. By potentially overwhelming countries with FDIs that must be repaid, this strategy has the danger of burdening countries into debt-ridden relations with China. These debt-traps give China significant future geo-political leverage in the region, as seen in the case of Sri Lanka and their loss of sovereignty over Port of Hambantota[121].

Malaysia will undoubtedly stand to gain from maintaining good relations with China. However, it is important to assess these investments thoroughly to ensure that they result in beneficial outcomes for the country. In further relations with China, it is important to ensure that we continue to receive mutually equitable trade deals and be fully aware of the potential socio- and geo-political repercussions of over-reliance on any country, be it China or any other major powers in the region or the world.

The other major economic trend is the trend of rapid urbanisation. As of 2017, an estimated 76% of Malaysians live in urban areas and this projected to further increase by another 10% by 2050 (Figure 3.40).

121 Ali-Habib (2018)

Figure 3.40: Estimates and projections of Malaysia's urban population as a percentage of total population, 1960 – 2050



Source: World Bank Population Estimates and Projections

Malaysia has the fourth-largest amount of built-up land in East Asia as of 2010. The country grew at an average annual rate of 1.5% from 2000 to 2010, enlarging its urban land from roughly 3,900 square kilometres to 4,600 square kilometres between that time period[122]. As these trends persists, urban centres are becoming a central component of the nation's economy and thus, critical to its success in the future. Saturated urban areas, whose inhabitants move there in part due to economic opportunities available, will impose severe strains onto cities' resources and facilities. If mismanaged, ill-equipped cities and urban areas could erase these gains that are vital for a country's growth and the well-being of its people.

Changes to our biosphere

Climate change and its potential costly consequences are a major, global trend facing developing economies. The problem of climate change presents a threat to Malaysia on multiple fronts. For starters, most of Malaysia's coastal regions are low-lying areas that are less than 0.5 metres above the highest tide or are within 100 metres inland of the high-water mark[123]. These areas are particularly

122 Deuskar et al. (2015)

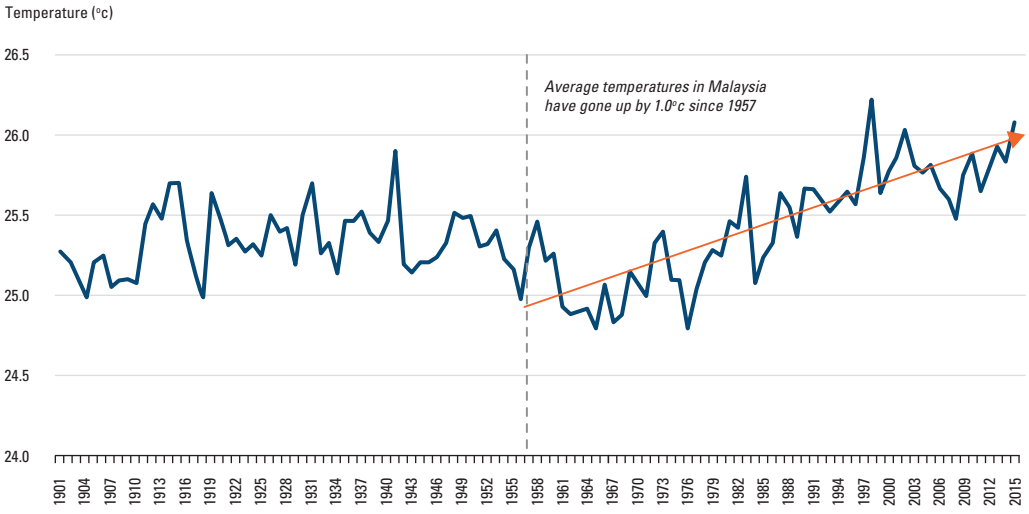
123 World Health Organization (2007)

vulnerable to rises in sea levels, geological consequence in which climate change plays a significant role in shaping.

These threats also manifest in the form of climate-sensitive diseases, which include heat-related diseases, vector-borne diseases, waterborne diseases, diseases from urban air pollution, and diseases related to extreme weather conditions such as floods, droughts, windstorms and fires. Common communicable diseases sensitive to climate and endemic in Malaysia such as cholera and malaria, meningococcal meningitis, dengue, Japanese encephalitis, leptospirosis and rickettsial infections will severely affect Malaysians' welfare and well-being[124].

What is perhaps most noticeable in our every day-to-day life is life in an increasingly warmer world. Observing average annual temperatures in Malaysia (Figure 3.41), data suggests that climate change is well underway, with temperatures heading towards greater extremes.

Figure 3.41: Average annual temperatures in Malaysia, 1901 – 2015



Source: World Bank Climate Change Knowledge Portal

124 Ibid

The extremely hot temperature, heat waves and heavy precipitation events will contribute to become more frequent. Increases in mean surface temperatures coupled with greater intensity of rainfalls will impose severe burdens to society, both in monetary and non-monetary terms.

Demographic changes

Malaysia is currently at the demographic ageing crossroads. The proportion of Malaysian population aged 65 years and above is steadily rising (Figure 3.42); the trends are similar for elderly dependency ratios in the country (Figure 3.43).

Figure 3.42: Estimates and projections of Malaysian population aged 65 years and above as a percentage of total population, 1960 – 2050

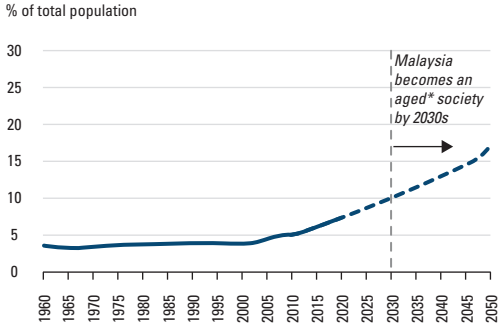
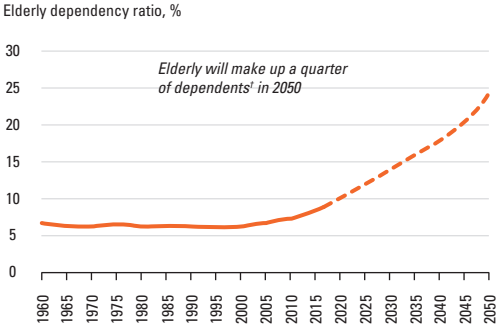


Figure 3.43: Estimates and projections of elderly dependency ratio as a percentage of the working age population, 1960 – 2050



Source: World Bank Population Estimates and Projections

* A society is considered relatively old when the fraction of the population aged 65 and over exceeds 8—10%. Definition from Gavrilov and Heuveline (2003).

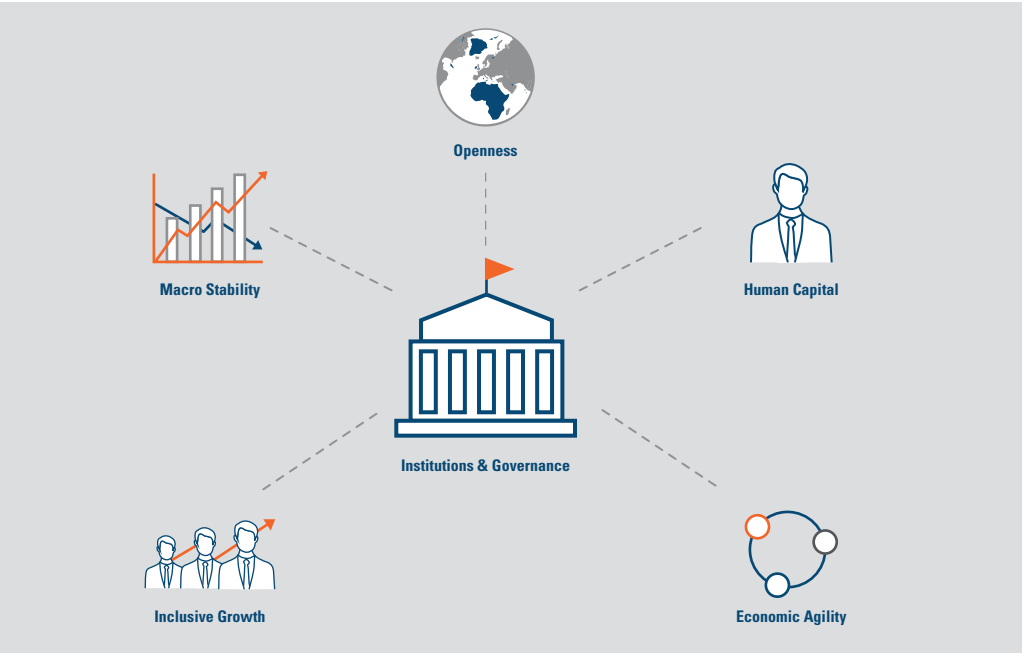
† Age dependency ratio is the ratio of older dependents—people older than 64—to the working-age population—those ages 15-64. Data are shown as the proportion of dependents per 100 working-age population.

An ageing population presents a potentially major problem for Malaysia in the future. This entails greater costs associated with a larger elderly population, most notably costs relating to healthcare and general care services. Incidence of this burden would then rest upon the working age population of the future. At the same time, a smaller proportion working age population would mean a smaller proportion of the population that is potentially economically productive members of the society. Therefore, on a national scale, the greater costs of elderly care are not being matched with greater economic activity and value creation.

3.3.1 Facing an uncertain future, the best strategy is to build and develop our core fundamentals

Given the fact that is difficult to precisely predict what the future holds, rather than reacting to events as they unfold, the best strategy for Malaysia is instead to build and develop on our core fundamentals. These fundamentals—broadly identified as openness, human capital, economic agility, inclusive growth and macro stability—are essential in ensuring economic security for Malaysians through both good and trying times.

Figure 3.44: Core fundamentals Malaysia should build and focus on



Adapted from Ali-Yrkkö et al. (2017), Lin (2012) and Commission on Growth and Development (2008).

Macro stability

Macroeconomic volatility and unpredictability damage private sector investment, consumption, and consequently, growth. Therefore, steps must be taken to stabilise the economy during periods of sharp swings, both booms and recessions. Ample policy space in macroeconomic demand management during

challenging times are needed to ensure the proper functioning of markets in any circumstances.

Openness

A small open economy like Malaysia has grown and benefitted greatly from globalisation via catering to a wider global market and participation of global value chains. Nonetheless, guided efforts towards ensuring an effective and equitable growth derived from tapping into global markets should be an important principle to adhere to.

The importance of openness becomes more potent when compared to the counterfactual strategy. Inward-looking growth strategies generally falter quickly as domestic demand is no substitute for the expansive global market, which provides a large pool of relatively stable market for developing countries. Additionally, the pattern of domestic spending may not correspond well to the strengths of domestic supply. What home consumers want to buy may not match what home producers are best at making. Since specialisation is limited by the extent of the market, focussing solely on home markets give an economy less scope to specialise in its areas of comparative advantage.

Economic agility

A country's comparative advantage will evolve over time. In any period of fast growth, capital, and especially, labour moves rapidly from sector to sector, industry to industry. Governments play a role the provision of institutional capacity to support the flow of resources, which in turn follows the ebbs and flows of market forces. A structurally agile economy, which include agile industries as well as labour force—backed by strong human capital foundations—are vital in the survival of an economy in the long run.

Flexibility to adapt, adjust and respond to changes in economic conditions will be important in the future. This calls for policies that promote a dynamic business environment with plenty of entry opportunity, intense selection among entrants, and the possibility to scale promising activities. Frictionless flow of resources, with minimal transactional costs are all part and parcel will of a structurally agile economy.

Inclusive growth

Economies do not grow smoothly and evenly, maintaining their shape as they increase their size. Instead, fast-growing economies go through a tumultuous process of creative destruction, breaking into new industries even as they abandon their traditional industrial strongholds. The challenge therefore faced by this country was how to shield its people from the worst of this tumult, without stunting the economy in the process.

The unpredictability, suddenness and volatility of change in a world with globalisation and technological advancement adds to the vulnerability faced by the country. Fundamental buffers would require actions that stimulate labour supply and strong protection mechanisms for individuals from demand shocks from the wider global economy.

Human capital

At its core, people are the ones who ultimately make up the economy. As highlighted in earlier sections, the basis of a knowledge-based economy, one that is ultimately resilient and able to leverage on any circumstances in global and local economic conditions, is build by people capable of creating, adapting and utilising the resources around them. A strong human capital base can also be argued as a strong complement to the constant technological change and global competition seen in today's world. Beyond improvements to the existing economy, human capital is the essential ingredient in bringing about the new opportunities in technology capacity as well as a dynamic business environment. These capabilities are rooted in a country's human capital development. Focus on human capital development is therefore regarded as a key policy ingredients of any country's growth strategy.

Institutions and governance

"Institutions are the fundamental cause of economic growth and development differences across countries" (Acemoglu and Robinson 2008). They are the structures that define the options available and the incentives for making one choice over another. For example, economic institutions such as property rights, rule of law, market and state support and access to education all provide both the foundation as well as the incentives for economic progress.

What is key however, is that economic policies alone cannot promise long term sustainability. Policies are determined by each incumbent government, and if the distribution of political power is left unconstrained, policies will breakdown over time to serve the class and political interests of the incumbents.

Therefore, implementation of economic institutions have to be considered alongside political institutions and the distribution of political power within them. Ultimately, successful development requires the state legitimacy and centralisation to enforce economic institutions, as well as a broad distribution of political power to serve as a check and balance against the state's absolute monopoly over power.

3.4 Conclusion

This *State of Households* report begins with a quote by the first Prime Minister of Malaysia, Tunku Abdul Rahman Putra Al-Haj. In his speech detailing the First Malaysia Plan, the speech where this quote was taken from, he called upon his countrymen and women to not rest on their laurels but instead, to ensure progress and accomplishments achieved by the country today carries on to greater heights in the future[125].

The overall development journey of Malaysia since Independence is one of significant progress and success in which millions of Malaysians now live better lives compared to the generations before them. This however, is no guarantee for security and well-being of Malaysians in the days to come, especially when one factors in the uncertainty that hangs over the future. There remains much more to be done and developing our core fundamentals are essential in ensuring progress and security for Malaysians through both good and trying times.

125 Tunku Abdul Rahman Putra Al-Haj (1965)

References

Acemoglu, Daron, and James Robinson. 2008. *The Role of Institutions in Growth and Development*. Washington D.C.: Commission on Growth and Development.

ADB. 2017. *Asian Development Outlook 2017: Transcending the Middle-Income Challenge*. Philippines: Asian Development Bank.

Agénor, Pierre-Richard, and Otaviano Canuto. 2015. "Middle-Income Growth Traps. " *Research in Economics* 69 (4):641-660.

Aghion, Philippe, and Cagatay Bircan. 2017. "The Middle-Income Trap from a Schumpeterian Perspective." *ADB Economics Working Paper Series*. 521

Ali-Habib, Maria. 2018. "How China Got Sri Lanka to Cough Up a Port". *The New York Times*. 25 June 2018. https://www.nytimes.com/2018/06/25/world/asia/china-sri-lanka-port.html.

Ali-Yrkkö, Jyrki, et al. 2017. *Riding the Wave: Finland in the Changing Tides of Globalisation*. Helsinki. Elinkeinoelämän tutkimuslaitos (Research Institute of the Finnish Economy).

Andrews, Matt, Lant Pritchett and Michael Woolcock. 2017. *Building State Capability: Evidence, Analysis, Action*. Oxford: Oxford University Press.

Altenburg, Tilman, Maria Kleinz, and Wilfried Lütkenhorst. 2016. *Directing Structural Change: From Tools to Policy*. Bonn: Deutsches Institut für Entwicklungspolitik (German Development Institute).

Bank Negara Malaysia. 2010. *Transitioning into a High Income Economy: Policy Considerations*. In pp. 96 - 100. Bank Negara Malaysia Annual Report 2009.

Cheah, Brenda Wenn Jinn, and Mohd Shazwan Shuhaimen. 2018. *Complexity and Growth: Malaysia's Position and Policy Implications*. In pp. 100 - 109. Bank Negara Malaysia Annual Report 2017.

Chua, Soo Y, Selahattin Dibooglu and Subhash C. Sharma, 1999. "The Impact of the US and Japanese Economies on Korea and Malaysia after the Plaza Accord." *Asian Economic Journal* 13 (1):19-37. http://www.umsl.edu/~dibooglus/personal/chua&dibooglu&sharma.pdf.

Cirera, Xavier, and William F. Maloney. 2017. *The Innovation Paradox: Developing-Country Capabilities and the Unrealized Promise of Technological Catch-Up*. Washington D.C.: World Bank.

Commission on Growth and Development. 2008. *The Growth Report: Strategies for Sustained Growth and Inclusive Development*. Washington D.C.: World Bank.

Deuskar, Chandan, Judy L. Baker, and David Mason. 2015. *East Asia's Changing Urban Landscape: Measuring a Decade of Spatial Growth*. Washington D.C.: World Bank.

Drabble, John H. 2000. *An Economic History of Malaysia c. 1800-1990: The Transition to Modern Economic Growth*. Palgrave Macmillan.

Economic Planning Unit. 2014. Complexity Analysis: *Study of Malaysia's Manufacturing Industries*. Putrajaya: Economic Planning Unit.

Estrada, Gemma, et al. 2017. "Asia's Middle-Income Challenge: An Overview." *ADB Economics Working Paper Series 525*.

Global Entrepreneurship Monitor. 2018. *Global Report 2017/18*. Global Entrepreneurship Monitor.

Hausmann, Ricardo, et al. 2014. *The Atlas of Economic Complexity: Mapping Paths to Prosperity*. Cambridge: MIT Press.

Lafaye de Micheaux, Elsa. 2017. *The Development of Malaysian Capitalism: From British Rule to the Present Day*. Kuala Lumpur: Strategic Information and Research Development Centre.

Lai, Mun-Chow, and Yap Su-Fei. 2004. "Technology Development in Malaysia and the Newly Industrializing Economies: A Comparative Analysis." *Asia Pacific Development Journal* 11 (2):53-80.

Lange, Glenn-Marie, Quentin Wodon, and Kevin Carey. 2018. *The Changing Wealth of Nations 2018*. Washington D.C.: World Bank.

Lin, Justin Yifu. 2012. *The Quest for Prosperity: How Developing Economies Can Take Off*. Princeton University Press.

Menon, Jayant, and Ng Thiam. 2015. "Policy-induced premature deindustrialisation in a high-income aspirant: Malaysia." *VoxEU*, 1 October 2015. https://voxeu.org/article/policy-driven-premature-deindustrialisation-malaysia.

National Economic Advisory Council. 2010. *New Economic Model for Malaysia*. Putrajaya.

O'Reilly, Tim. 2017. *WTF? What's the Future and Why It's Up to Us*. New York: Harper Business.

OECD. 2012. *Innovation for Development*. Organisation for Economic Co-operation and Developent.

Powell, Walter W, and Kaisa Snellman. 2004. "The Knowledge Economy." *Annual Review Sociology* 30:199-220.

Shah, Nazrin. 2017. Charting the Economy: *Early 20th Century Malaya and Contemporary Malaysian Contrasts*. Oxford: Oxford University Press.

Stiglitz, Joseph E., Amartya Sen and Jean-Paul Fitoussi. 2008. *Report by the Commission on the Measurement of Economic Performance and Social Progress*. Commission on the Measurement of Economic Performance and Social Progress.

Straub, Stéphane. 2008. *Infrastructure and Growth in Developing Countries: Recent Advances and Research Challenges*. *World Bank Policy Research Working Paper* 4460.

Tun Dr Mahathir Mohamad. 1991. *The Way Forward*. Kuala Lumpur.

Tunku Abdul Rahman Putra Al-Haj. 1965. *First Malaysia Plan*. Kuala Lumpur.

World Bank. 2017. *Turmoil to Transformation: 20 Years after the Asian Financial Crisis*. In *Malaysia Economic Monitor*. Washington D.C.: World Bank.

World Bank. 2018. *World Development Report 2018: Learning to Realize Education's Promise*. Washington D.C.: World Bank.

World Health Organization. 2007. *Climate Change Country Profile: Malaysia* World Health Organization Western Pacific Region. http://www.wpro.who.int/environmental_health/documents/docs/MAA_3FB0.pdf.

Yusof, Zainal Aznam, and Deepak Bhattasali. 2008. *Economic Growth and Development in Malaysia: Policy Making and Leadership*. Washington D.C.: Commission on Growth and Development.

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