KHAZANAH
RESEARCH
INSTITUTE

18 June 2019

Discussion Paper 3/19

# A Rising Tide Lifts All Boats?

## Intergenerational Social Mobility in Malaysia

Hawati Abdul Hamid, with Jarud Romadan Khalidi, and Jomo Kwame Sundaram

Khazanah Research Institute

Discussion Paper 3/19 18 June 2019

A Rising Tide Lifts All Boats? Intergenerational Social Mobility in Malaysia

This discussion paper was prepared by the following researchers at the Khazanah Research Institute: Hawati Abdul Hamid, Jarud Romadan Khalidi and Jomo Kwame Sundaram. The views expressed in this paper are those of the authors alone, and do not necessarily reflect the official views of Khazanah Research Institute.

An earlier version of this paper was presented at the Association of Chartered Certified Accountants (ACCA)'s Annual Virtual Conference for the session Social Mobility and the Public Sector on 29 Nov 2018.

We are grateful to many people for enabling us to complete this work. We would be especially remiss if we did not mention Dr Muhammed Abdul Khalid, who led the survey and the 'churning' analysis of Malaysian social mobility, culminating in the 2016 KRI publication, *Climbing the Ladder: Socio-economic Mobility in Malaysia*. Among others who have assisted us, we thank Zera Zuryana for her help with data collection, as well as Ryan Chua and Nazran Zhafri Ahmad Johari for copy-editing the drafts.

This work is available under the Creative Commons Attribution 3.0 Unported license (CC BY3.0) http://creativecommons.org/licenses/by/3.0/. Under the Creative Commons Attribution license, you are free to copy, distribute, transmit, and adapt this work, including for commercial purposes, under the following attributions:

Attribution: Please cite the work as follows: Hawati Abdul Hamid, Jarud Romadan Khalidi and Jomo Kwame Sundaram. 2019. A Rising Tide Lifts All Boats? Intergenerational Social Mobility in Malaysia. Kuala Lumpur: Khazanah Research Institute. License: Creative Commons Attribution CC BY 3.0.

Translations: If you create a translation of this work, please add the following disclaimer along with the attribution: This translation was not created by Khazanah Research Institute and should not be considered as an official Khazanah Research Institute translation. Khazanah Research Institute shall not be liable for any content or error in this translation.

## CONTENTS

## FIGURES

## TABLES

Discussion Paper

# A Rising Tide Lifts All Boats?
# Intergenerational Social Mobility in Malaysia

Hawati Abdul Hamid, with Jarud Romadan Khalidi, and Jomo Kwame Sundaram
18 June 2019

---

## SUMMARY


- Malaysian economic growth and policies from the 1970s have resulted in profound economic and social transformations, including upward social mobility for most of the population. Socio-economic indicators for basic amenities, poverty, health, education, employment and real incomes suggest better living standards for most Malaysians, with spatial imbalances and inter-ethnic disparities narrowing.

- A KRI survey found almost no children, regardless of parental economic status, with lower education levels than their parents. The children attained either higher or similar levels of schooling. Higher education attainment for all Malaysians, regardless of economic background, reflects much greater access, including special programmes for disadvantaged groups, as well as initiatives to narrow geographic differences by improving education and health facilities and personnel, especially for rural populations.

- Children, especially poorer children, became better off in terms of education, occupations, employment and income. Children born to parents in the bottom income cohort (with monthly earnings of less than RM1,000) had incomes more than double those of their parents.

- Although upward mobility is often related to greater educational attainment, more education does not necessarily ensure higher incomes. While the share of children with tertiary education born to parents with monthly earnings of at least RM5,000 was almost double that of their parents' generation, most of these children did not earn higher incomes than their parents at the age of 35 years.

- A possible explanation is more sharply diminishing returns to higher education compared to before. The share of the labour force with tertiary education rose from 1.8% in 1974 to 6.1% in 1982 and close to 30% in 2016. Thus, the premium from tertiary education is probably much less than for the parents' generation, when far fewer had tertiary education.

- With more educational opportunities, the children's generation generally spent more time in education before entering the job market, resulting in less work experience and seniority – and presumably incomes – compared to their parents' generation at age 35. Although the survey sought to compare incomes at the same age, the discrepancy may be due to comparing incomes at 35 years for the parents with their children's incomes at the age of 32 years, on average.

- It is also harder for the children of better-off parents to surpass their parents' socio-economic status compared to the children of low-income parents owing to their different starting points, determined by their parents' socio-economic status, standing or wellbeing.

- There are other reasons why it has been more difficult for the children to surpass their parents' socio-economic standing. The parents' generation lived through a high growth period in Malaysia between 1987 and 1997, i.e., before the 1997-1998 Asian financial crises set back economic, industrial and income growth. On the other hand, children born between 1975 and 1990 probably began working after the 1997-1998 crisis when economic, industrial and income growth have been more lacklustre, and greater reliance on foreign labour, including undocumented workers, has served to depress wages and working conditions, especially for low-skilled, low-income labour, including Malaysians.

- Better monitoring of the determinants of personal and household wellbeing and mobility, especially of the economic, social and political determinants of wealth and income determination and distribution, are important to better understand social mobility. More detailed socio-economic data, such as income and other socio-economic characteristics, for every household, can helpfully supplement broad social mobility indicators. Longitudinal panel data tracking households over their life cycles can provide meaningful and telling insights.

- Although economic growth is generally needed to raise incomes and living standards, its benefits are rarely shared evenly or equitably among all sections of society. Changing wealth and income distribution as well as opportunities for personal and household advancement and mobility can shape social progress and upward mobility for current and future generations.

## 1. INTRODUCTION

Various distributional issues, including economic inequality, have been at the forefront of Malaysia's public policy discourse since the 1970s. During the 1970s, attention focused on reducing poverty and reducing inter-ethnic disparities. With poverty almost eliminated and overall income inequality declining, policy concerns and thrusts have evolved, with more emphasis given now to elevating people's wellbeing in terms of their standard of living and quality of life.

On the premise that the rising economic tide of growth has probably lifted most boats, this paper reviews various national economic and social indicators since the 1970s to study the relationship between Malaysian economic growth and improving the well-being of its people. This argument presumes that economic growth has trickled down, albeit unevenly, to benefit most members of society. The outcomes reflect the success or otherwise of government efforts to redistribute economic resources and opportunities as well as improve access to social provisioning. In this regard, aside from 'endowment factors' transferred from parents to children, social mobility is considered by looking at factors such as economic growth as well as the government's role in providing incentives and social provisioning[1].

The study is complemented by new analysis of KRI's social mobility survey data, collected in 2015, comprising information of two generations in each family:

1. the head of family from the generation born between 1945 and 1960, termed 'parent'; and
2. the eldest child of that family, born between 1975 and 1990.

Socio-economic mobility is determined by comparing the education and occupation skill levels as well as income of the two generations. To measure mobility in economic terms, the study compares the incomes of both generations at a comparable age, i.e., around 35 years old.

As the survey was conducted in 2015 involving some data reported retrospectively relying on respondents' recall, it is important to compare the circumstances of the different periods which the data refer to. At the age of 35 between 1980 and 1995, i.e., well before the 1997-1998 Asian financial crisis, the 'parents' were living in circumstances of generally rapid growth and industrialization despite the economic recession of the mid-1980s. On the other hand, 'the children' – born between 1975 and 1990 – started to join the labour market after the Asian financial crises, after Malaysia had begun to deindustrialize and growth of traditional services exceeded modern services.

Considering the circumstances of the periods of the study, the growth and development outcomes of relevant policies will mainly be assessed by looking at social and economic indicators from 1970 until 2015/16. This enables consideration of the outcomes of policy interventions, such as greater access to education, in enabling social mobility.

[1] Ferreira, *et al.* (2012)

The rest of this paper is organized as follows: Section 2 briefly reviews the historical context of inequality and social mobility in Malaysia. Section 3 presents relevant socio-economic indicators since the 1970s. Sections 4 and 5 discuss KRI survey findings on intergenerational mobility in Malaysia. Section 6 identifies some challenges ahead before Section 7 draws some conclusions.

## 2. INEQUALITY AND SOCIAL MOBILITY IN HISTORICAL PERSPECTIVE

Many suggest that extreme inequality and exclusion erode social cohesion, which could worsen social and political polarization, hamper economic growth and undermine stability[2]. High inequality is thought to restrict socio-economic mobility, thus reinforcing and perpetuating inequality.

A certain inequality is said to be unavoidable due to differences in talent, initiative and luck. Some argue that inequality is not necessarily harmful and may not lead to social ills. Many claim that differences in income and wealth are necessary to provide incentives for people to work hard, try their best as well as develop and utilize talents in order to be more productive. While there are those who take the view that inequality is due to unequal compensation for different efforts or contributions, others insist that unequal economic distribution may be more acceptable when there is fairness in the distribution of opportunities.

Hence, some insist that what is important is ensuring 'equality in opportunity' so that people have an equal chance to achieve success through hard work and initiative regardless of their family background. As such, ensuring social mobility generally receives broad public support, with discussion revolving on inequality, economic development and social fairness.

Inequality and its implications for social mobility in Malaysia need to be seen from a historical perspective. From a land mostly populated by Malays, the Malayan population increased rapidly during the first half of the 20th century, rising from 1.7 million in 1901 to 6.3 million in 1957. This was largely due to the influx of Chinese and Indian immigrants, mostly brought in by the British to work in the mines and plantations of the colonial economy. These inflows of foreign labour transformed Malaya into a more multi-ethnic society. Immigrants born in the then Dutch East Indies (now Indonesia) were also encouraged by the British colonial authorities to cultivate land to produce food crops, especially rice, to reduce imports, besides many indentured workers from Java. While Malays comprised about 63% of Malaya's population in 1901, this proportion fell to 49% by 1947 as the ethnic Chinese and Indian shares of the population increased to 38% and 11% respectively[3].

Historically, the indigenous Malay population was heavily concentrated on the coasts and near rivers, with four states containing more than half the population of the peninsula at the beginning of the 20th century (Perak 19%, Penang 14%, Kedah 11% and Kelantan 13%). The population and its ethnic composition changed significantly due to immigration flows. The Federated Malay State

[2] See Berg and Ostry, 2011; Rodrik, 1999
[3] Nazrin Shah (2017)

(FMS) of Selangor increased its population share to 16% in 1957 from 10% in 1900, while Perak, another FMS, continued to have the highest population share (25%), as Johor's population share rose from 8% to 15%. By contrast, the population share of the East Coast Unfederated Malay States of Kelantan and Terengganu fell sharply from 13% to 8%, and from 7% to 4% respectively during this period[4].

To maintain power and control over the people, the British colonial authorities used a 'divide and rule' strategy[5]. The three major ethnic groups in Malaya were often occupationally, residentially and linguistically segregated. Most Malays lived in rural villages, the Chinese largely lived in towns and near tin mines, while most Indians lived on plantations or in government quarters. In 1957, when only 19% of the Malayan (Peninsular Malaysian) population was urbanized, 63% of urban residents were Chinese. The rural population accounted for the remaining 81%, of whom almost 70% were Malays, 17% were Chinese, and 12% were Indian[6].

Economic activities were largely organized along ethnic lines, with Malays mostly working as family farmers, Chinese on tin mines or in various trades and commerce, and Indians as labourers on rubber estates. In terms of employment status in Peninsular Malaysia in 1957, non-wage employment, such as self-employment by 'own account workers' and unpaid family workers – comprised 43% of the total labour force, while wage employment accounted for the remaining 57%. Non-wage employment was more significant among Malays (63%) which generally meant own account work with unpaid family members. This was almost double non-wage employment among Chinese (33%) who included many more petty businessmen. As the Indians were predominantly working class, almost 90% were wage employees[7].

The education system then reflected Malaya's 'cultural pluralism'. Some Malay children generally attended government schools which only provided basic lessons in the Malay language and other living skills, while male children of the Malay elite attended urban, English medium schools. The 1946 official Cheeseman Report on education noted that the goal of Malay village schooling of the sons of farmers or fishermen was to make them more knowledgeable at the same tasks than their fathers[8]. The goal of the urban English medium school, on the other hand, was to train clerks for business and the colonial administration. While Tamil vernacular schools had similar functions as the Malay schools, Chinese schools reflected and served the more diverse needs of emerging Chinese enterprise in rapidly growing colonial Malaya, often with teachers imported from China.

This set-up served the colonial interests well, as the educational system limited social progress for most rural and plebeian children and reinforced social, cultural and economic segregation. Such segregation meant inter-ethnic interactions were limited as they typically lived and worked separately, primarily communicating in their own languages.

[4] Nazrin Shah (2017)
[5] Abraham (1997)
[6] Khong with Jomo (2010)
[7] Jomo and Wee (2014)
[8] Hirschman (1972)

British colonialism ended with the independence of Malaya in 1957. The colonial social structure, characterized by limited educational and hence, occupational mobility, mainly enabled rural children to take over the occupations of their parents. Even in urban areas, most children typically worked in occupations similar to their parents', as schooling and job opportunities were limited[9].

This schooling system meant a limited role for education in enabling social mobility during colonial times. While schooling is widely expected to facilitate upward social, education and occupational mobility, the system promoted occupational continuity. Modern wage employment often required school qualifications as prerequisites, usually in the English medium for British employers. As most English medium schools were in large urban towns, children living in rural areas were often deprived of such schooling opportunities. Children from privileged and elite families, many living in urban areas, had better access to English education, and hence better opportunities to secure white collar positions offering both greater authority and pay.

Occupational differentiation also resulted in large disparities among groups living in urban and rural areas. Given the nature of the education system, and the positive link between educational and occupational opportunities on the one hand, and incomes on the other, this perpetuated social reproduction, limiting social mobility and transmitting inequality from one generation to the next.

The limited post-colonial economic reforms after Malayan independence in 1957 ensured some modest 'rural development' efforts to secure the ruling party's 'vote bank' and some import-substituting industrialization, but also saw rising unemployment and growing socio-economic frustrations. With the political repression of the parliamentary left from the mid-1960s, politicians competed with one another using rival ethno-populist narratives. Thus, while non-Malay communities saw the Malay-dominated Alliance government as responsible for blocking their progress, the Malay community blamed ethnic Chinese business domination for blocking their economic progress.

Over time, growing ethno-populist discontent contributed to greater social fragility and political instability. This eventually led to more socio-political unrest, which culminated with the 13 May 1969 riots, just after the country's third general elections, when the ruling Alliance coalition lost popular support among all major ethnic communities in Peninsular Malaysia. Many believed that the events were due to unfairly distributed opportunities, preventing more inclusive economic progress and broader upward social mobility.

[9] Jomo (1982)

## 3. SOCIO-ECONOMIC PROGRESS

Since the independence of Peninsular Malaysia in 1957 and the formation of Malaysia in 1963 with the inclusion of the Borneo states of Sabah and Sarawak (Singapore joined in 1963, but seceded in 1965), Malaysia's economic growth has been generally impressive by international standards. In current prices, its GDP increased from RM5,866 million in 1960 to RM53,308 million in 1980, surpassing a trillion ringgit in 2013. This was initially pursued via agricultural diversification and import-substituting industrialization, with state intervention in the economy limited until 1969.

The preceding historical review implied that without government interventions, the stratified and segmented social structure inherited from the colonial era would not only perpetuate disparities, but also limit social mobility. The need to address structural weaknesses socially and economically led to vigorous efforts to formulate more inclusive policies to address these imbalances. The new dispensation following May 1969 involved growing state intervention to promote 'growth with equity'.

Although decomposition of Peninsular Malaysia's income distribution suggested that less than 5% of overall income inequality in 1970 could be attributable to ethnicity (Anand 1983), the NEP sought to create conditions for national unity by 'eradicating poverty' and 'restructuring society' to eliminate inter-ethnic disparities between the indigenous mainly Malay Bumiputera community and their predominantly Chinese, non-Bumiputera compatriots.

Some argued then that distributional concerns could be better addressed by meeting needs irrespective of race. The official argument then was that the two policy objectives were mutually complementary. An estimated 78.1% of poor households were Malay, and among Malays, 51.4% were poor[10]. Hence, lifting them out of poverty would automatically reduce disparities among ethnic groups[11].

The New Economic Policy (NEP), introduced from 1971, represented a significant shift in development policy to transform Malaysia, both economically and socially. A long-term developmental framework was outlined in the First Outline Perspective Plan (OPP1), envisaged for two decades over 1971-1990, under the rubric of the NEP. Thus, implementation of OPP1 involved four five-year Malaysia plans, from the Second Malaysia Plan (1971-1975) until the Fifth Malaysia Plan (1986-1990).

Later, the official end of Malaysia's New Economic Policy (NEP) in 1990 saw the introduction of a succession of other policies during the 'Vision 2020' era, i.e., in the following three decades, that all promised to transform Malaysia into a progressive, prosperous and inclusive developed nation. The major development policies announced during this period include the National Development Policy (1991-2000), the National Vision Policy (2001-2010) and the New Economic Model (2011-2020).

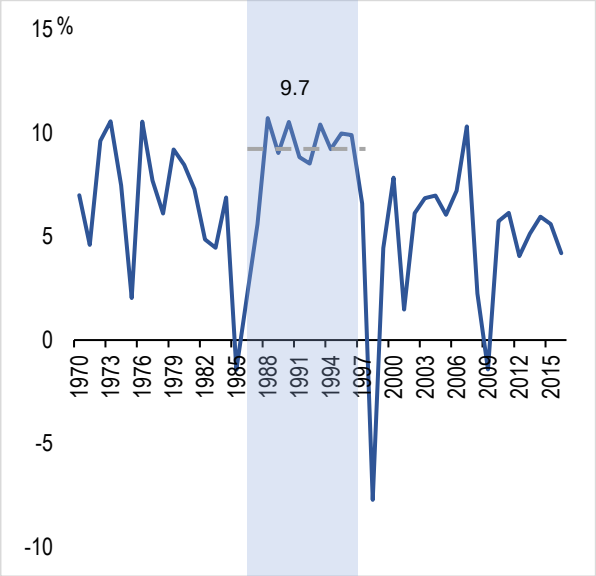
[10] Based on 1970 Post Enumeration Survey of the Population Census (Anand, 1983)
[11] Anand (1983)

## 3.1 Economic Growth and Impact on Households

As a small open economy, Malaysia was not spared from the repercussions caused by events that took place outside the country. The world recession from the early 1980s, largely caused by the US Federal Reserve's sharply increased interest rates, caused a Malaysian economic downturn as falling commodity prices negatively impacted export earnings. Measures to revive the sluggish economy were implemented with a new growth strategy involving 'looking east' to emulate Japan and South Korea, and state-led 'heavy industrialization', involving a new steel plant and a 'Malaysian car'. By mid-decade, this gave way to privatization, some economic and cultural liberalization, and renewed foreign investment promotion.

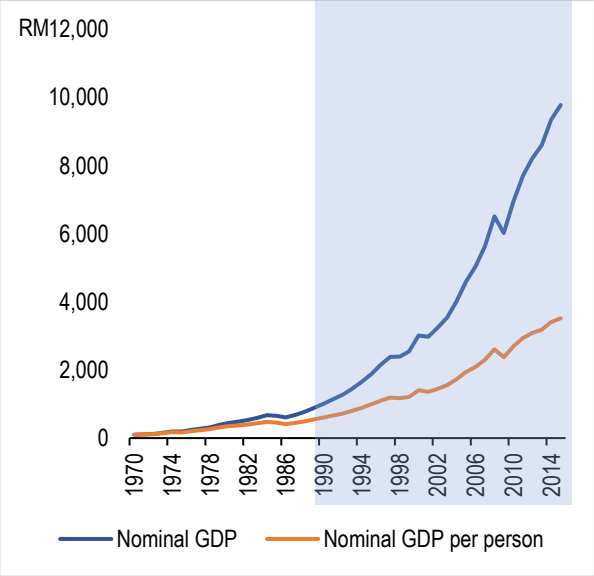
With Northeast Asian economies facing full employment and appreciating currencies, foreign direct investment grew rapidly with the relocation of industries from Japan, Taiwan and South Korea into China and Southeast Asia[12]. The economy rebounded from 1987 and continued to grow rapidly for over a decade, resulting in annual growth averaging 9.7% between 1988 and 1996 – a record high since independence (Figure 1). Nominal per capita income, which had declined during the first half of the 1980s, also increased rapidly until 1997 (Figure 2).

**Figure 1: Annual gross national income growth, 1970-2015**




Source: World Bank DataBank (n.d.)

**Figure 2: Nominal GDP and GDP per capita, 1970-2015 (1970: 100)**




Source: CEIC (n.d.)

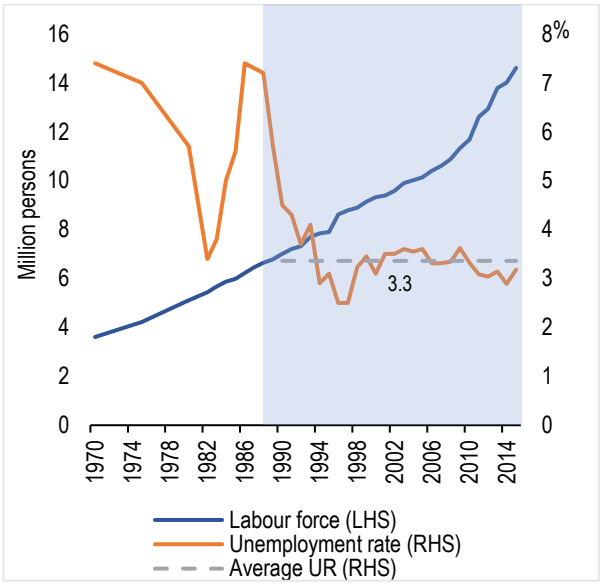
The economy went into turmoil again during the Asian financial crises in Southeast Asia and South Korea from mid-1997. The Malaysian economy contracted in 1998 for the first time since 1986, due to significant drops in private investment and consumption, with national income plunging from 6.6% in 1997 to -7.7% in 1998. Kuala Lumpur Stock Exchange (KLSE) market capitalization fell sharply by 76% between July 1997 and September 1998. Massive capital outflows – inflow reversals – caused the ringgit to depreciate to its lowest level of RM4.88 against the US dollar in

[12] Jomo and Wee (2014)

January 1998. Soon after, the crisis in the financial sector spread to the real economy, with business closures sharply raising both unemployment and inflation.

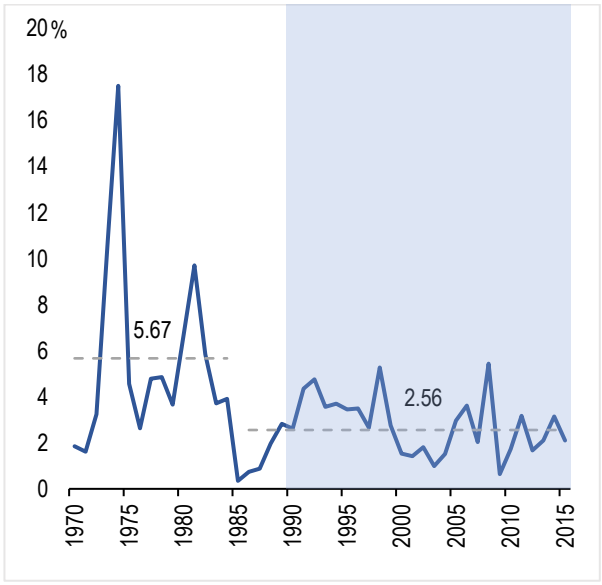
The 1997-1998 Asian financial crises caused the Malaysian authorities to rebuild the banking and financial sector to be more resilient, and to strengthen macroeconomic fundamentals. This enabled Malaysia to weather the 2008-2009 global financial crisis. However, being a small open economy, Malaysia was not completely insulated from the global economic downturn. The collapse in external demand following the global financial crisis in late 2008 caused GDP to contract by 1.7% in 2009. Government monetary and fiscal stimulus programmes contributed to stabilizing the domestic economy and resulted in 7.0% economic growth in 2010 before moderating in later years. Nevertheless, economic growth has been generally achieved with low inflation, stable prices and low unemployment (Figure 3 andFigure 4).

**Figure 3: Labour force and unemployment rate, 1970-2015**




Source: CEIC (n.d.), EPU (1976, 1986)

**Figure 4: Annual inflation rate, 1970-2015**




Source: CEIC (n.d.)

Malaysia's remarkable growth story has involved crucial, appropriate state interventions and reforms, rather than primary reliance on market forces to allocate scarce resources, as often suggested in much of the economic literature on the country[13]. Of course, the full story is complex and nuanced, and has also involved failures, missed opportunities and undeniable costs.

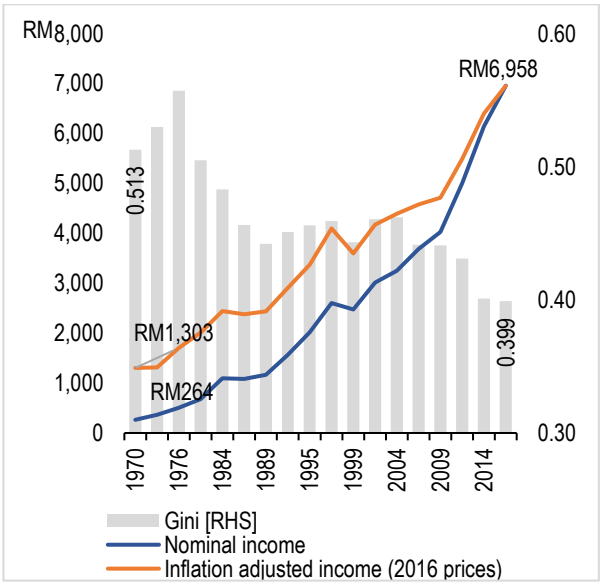
Inclusive growth has substantially reduced the incidence of poverty from almost 50% in 1970 in Peninsular Malaysia to 12.4% in 1992 and 0.4% in 2016. Household incomes have generally risen with GDP growth, largely due to expanded employment opportunities with higher productivity and earnings. Average nominal monthly household income increased from RM264 in 1970 to RM1,169 in 1989 and RM 6,958 in 2016 (Figure 5). In real terms, this implies compounded annual growth of 3.8% between 1970 and 2016.

[13] Jomo and Wee (2014)

The growth in household incomes was broadly inclusive, with income inequality, as measured by the Gini coefficient, declining from 0.513 in 1970 to 0.399 in 2016. The most sizeable continuous drop in inequality occurred between 1976 and 1989, falling from 0.513 to 0.442. The Gini coefficient remained somewhat stagnant between 1989 and 2004, before falling again thereafter. The latest Gini coefficient, based on the 2016 Household Income Survey, is 0.399, having fallen from 0.462 in 2004.

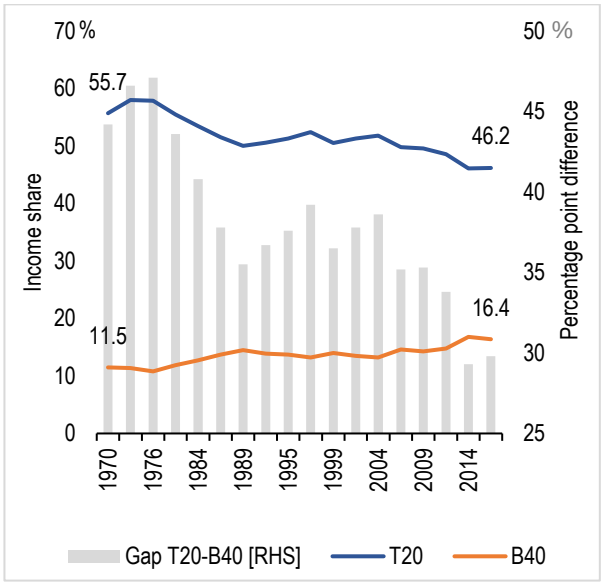
Declining income inequality is also observed for different income cohorts – the bottom 40% (B40), middle 20% (M40) and top 20% (T20) households (Figure 6). While all income groups experienced increased incomes as the Malaysian economy grew, the incomes of those in the lower income cohorts (B40 and M40) increased more than the highest T20 income cohort. The mean income of B40 households share of the T20 mean rose from 10.3% in 1970 to 17.7% in 2016. Similarly, the mean household income for the middle 40% as a share of the top 20% mean increased from 29.4% to 40.4% over the same period, 1970-2016.

**Figure 5: Mean monthly household income and Gini index of inequality, 1970-2016**




Source: DOS (2017)

**Figure 6: T20 and B40 households' income shares, 1970-2016**




Source: DOS (2017)

Notes: (1) The 1970 figures are only for Peninsular Malaysia (2) Data from 1989 only cover Malaysian citizens.

While the official Gini coefficients show decreasing inequality, absolute differences in income have been increasing. As mentioned earlier, the incomes of B40 and M40 households as shares of T20 incomes increased between 1970 and 2016, reducing overall inequality and relative inequality among the three income groups. Nonetheless, the absolute income gaps among all three groups widened, with the T20-B40 and T20-M40 gaps almost doubling compared to two decades before. Thus, while relative inequality may have declined, absolute differences in household income have become larger.

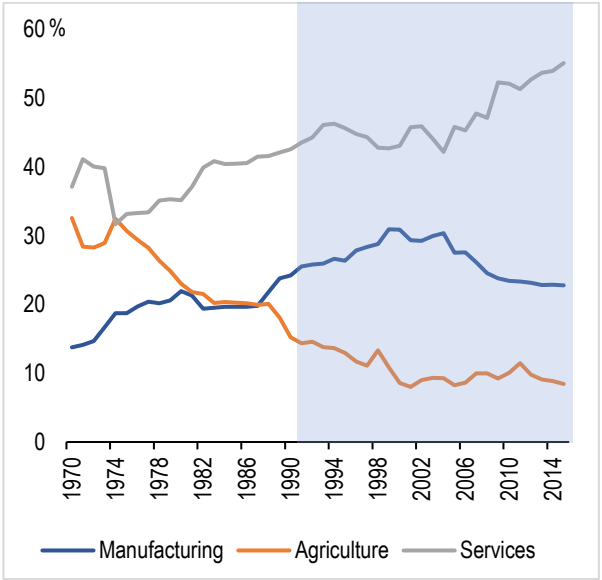
### 3.2 Structural Changes, Labour Market Transformation and Social Mobility

The end of the 20-year NEP period in 1990 saw its succession by the National Development Policy (1991-2000) and the National Vision Policy (2001-2010). The last three decades of the 20th century saw Malaysia's transformation from a colonial economy heavily dependent on primary commodity exports to a more diversified economy with significant industrialization from the 1970s. Manufacturing recorded the fastest growth, contributing more than 20% of GDP by the end of 1980s, and peaking around 30% around the turn of the century from the late 1990s until the mid-2000s (Figure 7).

This has significantly impacted occupational mobility, with major changes in sectoral employment, from agriculture to manufacturing and services. In 1970, half the labour force worked in agriculture, while 32.5% and 8.7% respectively worked in services and manufacturing. By 2016, these shares had changed, with 62.2% in services, 16.9% in manufacturing, and only 11.4% in agriculture (Figure 8).

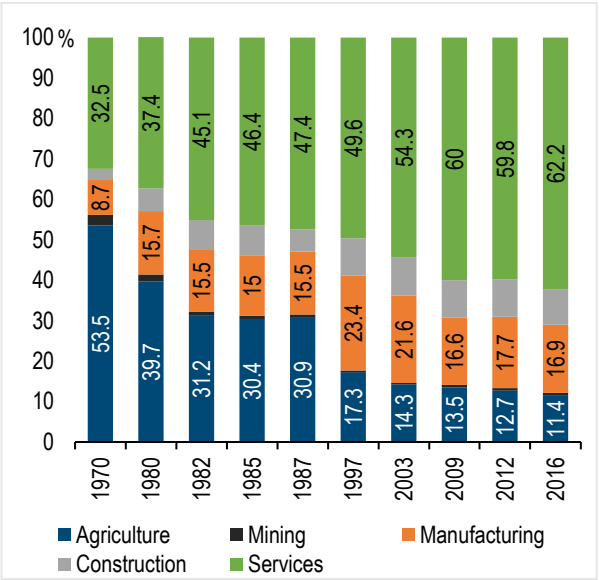
Wage rates for agriculture and related work were lower than for services and manufacturing. According to the 2016 Labour Force Survey, the monthly mean wage for employees in mining was highest at RM4,897, followed by services (RM3,126), manufacturing (RM2,129), construction (RM2,049) and agriculture (RM1,342). Evidently, diversification into manufacturing and services has not only provided new sources of growth, but also created opportunities to earn higher incomes.

**Figure 7: Share of output by sector, 1970-2016**




Source: CEIC (n.d.)

**Figure 8: Share of employment by sector, 1970-2016**




Source: DOS (2016)

In 1957, non-wage employment, including self-employed and unpaid family workers, was substantial, accounting for 43.3% of the total Malayan, or Peninsular Malaysian labour force. With the creation of more formal sector jobs due to the growth of the public sector as well as industrialization, the non-wage employment share has gradually declined with the share of wage employment rising from 56.7% in 1957 to 74.4% in 2016 (Table 1).

**Table 1: Labour force by employment status, 1957-2016**

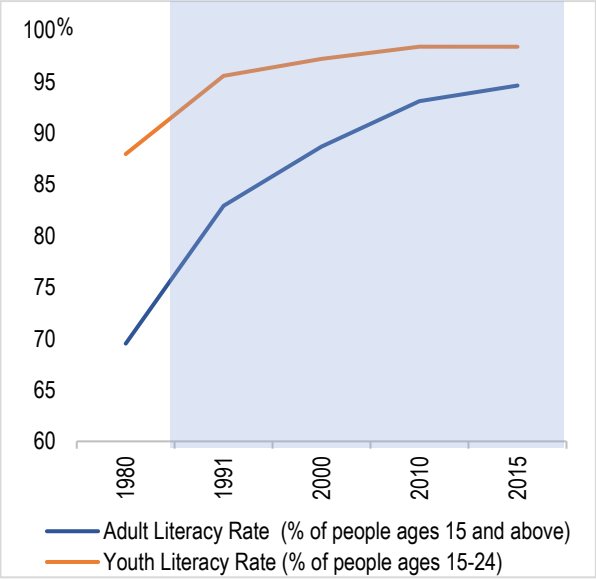
| | Employee | Employer | Own account worker | Unpaid family worker |
|---|---|---|---|---|
| 1957 | 56.7% | 35.0% | | 8.3% |
| 1980 | 61.4 | 4.0 | 27.4 | 7.3 |
| 1990 | 66.0 | 2.9 | 20.7 | 10.4 |
| 2000 | 74.3 | 3.0 | 17.1 | 5.7 |
| 2010 | 75.7 | 3.7 | 16.4 | 4.2 |
| 2016 | 74.4 | 3.4 | 17.8 | 4.4 |

Sources: Data for 1957 are from Khong with Jomo (2010); DOS Labour Force Survey, various issues

Educational initiatives have expanded to develop human resources to meet national development needs and in response to ethno-populist demands. This has significantly impacted prospects for education and occupational mobility in the population. Investments in education have achieved almost universal literacy[14] among both adults and youth (Figure 9). In 2015, less than 2% of youth (aged 15-24) were illiterate, compared to about a quarter in 1970. Meanwhile, adult literacy levels reached 94.5%, with illiteracy mostly prevailing among older persons.

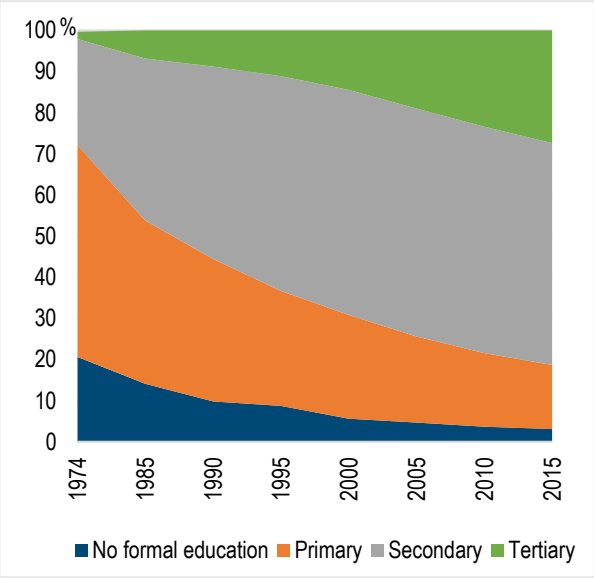
School enrolment, particularly at the secondary level, rose rapidly from 33.8% in 1970 to 77.6% in 2015, resulting in an increasingly educated labour force in Malaysia. While 20.6% of the labour force had no formal education in 1974, this was halved by 1990, declining further to 2.7% in 2015. Heavy subsidies, government scholarships and loans for eligible students, especially Bumiputeras, to pursue tertiary studies, helped to tremendously increase those with tertiary education from 1.8% of total employment in 1974 to 27.5% in 2015 (Figure 10).

**Figure 9: Adult and youth literacy rates, 1980-2015**




Source: World Bank DataBank (n.d.)

**Figure 10: Share of employed persons by education level, 1982-2015**




Source: DOS (2016)

[14] Referring to the ability to read and write

Improvements in education levels have also enabled the changing occupational composition of the labour force, facilitating overall upward mobility. Coupled with structural changes at the sectoral level, this increased demand for more highly skilled and educated workers. In 1957, professional and managerial jobs, usually requiring higher educational attainment, accounted for less than 5% of occupations. This increased significantly to around 27.3% in 2016. Agriculture related occupations, constituting 56.4% of total occupations in Peninsular Malaysia in 1957, declined to 6.2% in 2016 (Table 2).

**Table 2: Labour force by occupation, selected years, 1957-2016 (%)**

| | 1957 | 1970 | 1986 | 2000 | 2005 | 2010 | 2012 | 2014 | 2016 |
|---|---|---|---|---|---|---|---|---|---|
| Professional & technical | 3.1 | 4.8 | 8.1 | 17.8 | 19.3 | 19.7 | 19.7 | 19.8 | 22.7 |
| Administrative & managerial | 1.2 | 1.1 | 2.7 | 6.9 | 8.0 | 8.5 | 5.3 | 4.8 | 4.6 |
| Clerical & related | 2.9 | 5.0 | 10.0 | 9.6 | 9.1 | 8.5 | 9.1 | 8.9 | 8.2 |
| Service, sales & related | 17.2 | 17.0 | 24.2 | 13.0 | 14.3 | 15.8 | 20.6 | 22.9 | 22.4 |
| Agricultural & related | 56.4 | 44.8 | 26.7 | 15.0 | 12.6 | 11.2 | 9.2 | 7.2 | 6.2 |
| Production, transport & related labourers | 18.9 | 27.3 | 28.4 | - | - | - | - | - | - |
| Craft and related trades workers | - | - | - | 9.1 | 11.6 | 13.4 | 11.1 | 11.2 | 11.1 |
| Plant and machine- operators and assemblers | - | - | - | 16.1 | 14.5 | 13.6 | 12.3 | 12.0 | 11.8 |
| Elementary occupations | - | - | - | 12.5 | 10.6 | 9.3 | 13.0 | 13.0 | 13.0 |

Sources: Data for 1957, 1970 and 1986 are from Khong (2010); DOS *Labour Force Survey*, various issues

### 3.3 Geographical Disparities and Equalizing Opportunities

Substantial structural transformation since the 1970s has delivered socio-economic progress. Economic opportunities have increased for all, raising earnings and the quality of life for most, besides enabling greater upward mobility. Gradual and uneven reductions in economic inequality suggest that the benefits of growth may not have been shared equitably enough.

As regional imbalances continue to be of concern in Malaysia, geography or the spatial dimension deserves more attention. This section will review selected state level indicators to see whether and how budgetary allocations to improve socio-economic conditions may have narrowed disparities among states.

Households' well-being is determined by access to amenities and social services as well as by income, education and skills. Better access to decent health services, for instance, can improve health, enabling beneficiaries to participate more productively as healthy populations live longer, are more productive and tend to save more.

Geographical differences will be examined by categorizing Malaysian states into 'more developed' and 'less developed' states (Table 3). This classification, used in the Third Outline Perspective Plan, 2001-2010 (OPP3), adopted the Development Composite Index (DCI) to distinguish the 'more developed' from the 'less developed' states. The DCI comprises of an economic development index (EDI) and a social development index (SDI), which takes economic and social conditions in each state into account.

**Table 3: Classification of more and less developed states, 2000**

| Income status | States/Territory | DCI | EDI | SDI |
|---|---|---|---|---|
| More developed states | Selangor | 139.0 | 137.3 | 140.6 |
| | Pulau Pinang | 139.2 | 142.1 | 136.3 |
| | Johor | 132.9 | 131.6 | 134.3 |
| | Melaka | 132.1 | 131.7 | 132.5 |
| | Negeri Sembilan | 131.9 | 129.7 | 134.1 |
| | Perak | 132.0 | 131.0 | 133.0 |
| Less developed states | Perlis | 125.8 | 123.2 | 128.5 |
| | Kedah | 126.1 | 123.7 | 128.5 |
| | Kelantan | 119.4 | 117.9 | 120.8 |
| | Terengganu | 124.8 | 125.0 | 124.7 |
| | Pahang | 125.7 | 123.2 | 128.2 |
| | Sabah | 113.8 | 117.1 | 110.4 |
| | Sarawak | 124.2 | 122.1 | 126.2 |

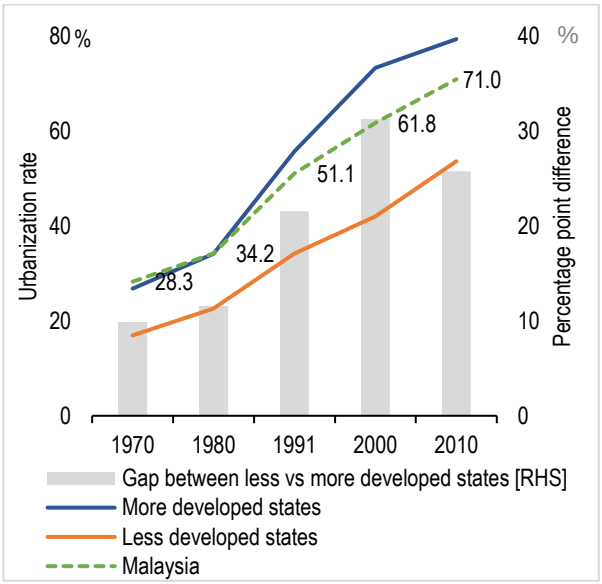
Source: EPU (2001)

Consistent with the improvements seen in national level indicators, several state-level socio-economic indicators also suggest considerable progress. One such indicator is urbanization – due to more concentrated population growth with increased economic opportunities, due to industrialization, residential and infrastructure development, services growth, agricultural modernization and technological innovations.

Urbanization in Malaysia has since risen rapidly, from 28.3% in 1970 to 51.1% in 1991 and 71.0% in 2010. The most urbanized state was Pulau Pinang, where the rate has been above 70% since the 1990s. The urban population in Selangor rose from 34.2% in 1980 to 75.2% in 1991 and 91.4% in 2010. Pahang (50.5%), Kelantan (42.4%) and Perlis (51.4%) were the least urbanized states. Meanwhile, between 1970 and 2010, urbanization rose from 16.9% to 54.0% in Sabah and from 15.5% to 53.8% in Sarawak.

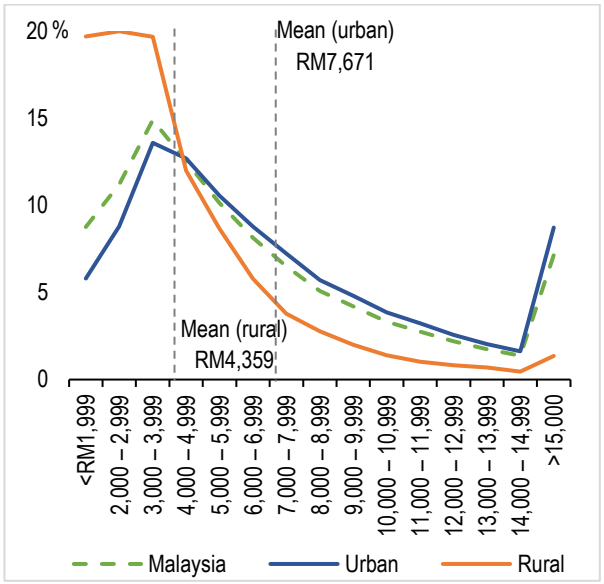
Not surprisingly, urbanization rates varied slightly between more and less developed states due to accelerated urbanization with industrialization before the end of the 20$^{th}$ century, while urbanization has been much slower with less industrialization. However, the gap has narrowed since, with deindustrialization and some efforts to address developmental imbalances among states (Figure 11). Some measures taken include locating economic activities related to the states' relative strengths, emphasizing industrial dispersal and improving infrastructure and access to basic amenities in the less developed states (EPU, 2001).

**Figure 11: Urbanization rates in more and less developed states, 1970-2010**




Source: DOS (2017)

**Figure 12: Household income distribution in urban and rural areas, 2016**



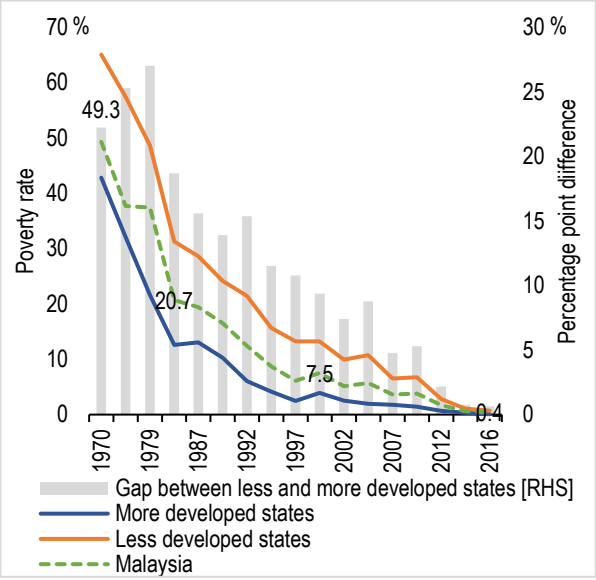

Source: DOS (2017)

### 3.3.1 Income gaps by geographical locations

Due to widespread economic growth across the country, all states have experienced increasing household incomes. Income growth was more rapid from 1989 until the 1997, with more developed states having higher household incomes than less developed states. Significant spatial disparities can also be observed between urban and rural areas. In 2016, 71% of rural households had incomes below RM5000 compared to 41% of urban households. Meanwhile, 22% of urban households and 6% of rural households had incomes greater than RM10,000 (Figure 12).

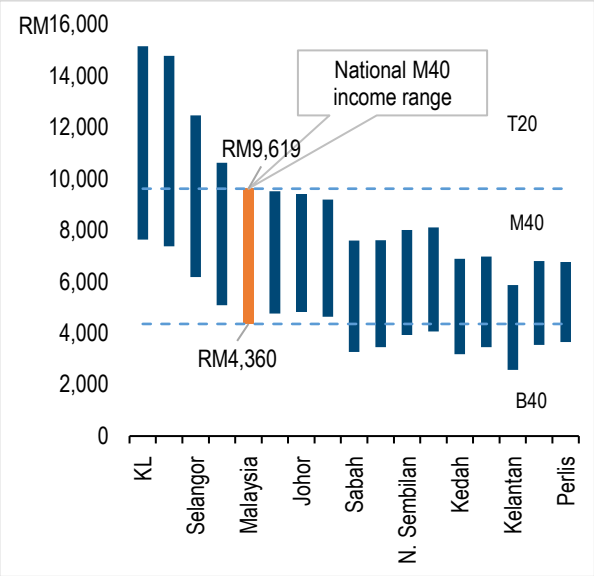
As the national absolute poverty rate declined to 0.4% in 2016, all states saw lower poverty rates, even though poverty had increased after the mid-1980s' recession and again following the 1997-1998 Asian financial crises. Poverty rates have significantly narrowed between more and less developed states, although the share of poor households remained higher in Sabah (2.9%), Sarawak (0.6%) and Kelantan (0.4%) in 2016 (Figure 13).

**Figure 13: Incidence of poverty in more and less developed states, 1970-2016**




Source: DOS (2017)

**Figure 14: M40 income range, national and by state, 2016**




Source: DOS (2017)

Success in reducing poverty has changed the government focus to the bottom 40% of the population, following World Bank practice. The *Eleventh Malaysia Plan, 2016-2020* (11MP) saw heavy emphasis on the B40 as a nationwide policy target group, with plans to elevate their well-being by, among others, increasing their incomes and assets, containing the cost of living, enhancing education and employment opportunities, and providing social safety nets.

Following this new policy emphasis, income-related statistics – for the bottom 40% (B40), middle 40% (M40) and top 20% (T20) households – have been reported more, beginning with the 2014 Household Income Survey report. Between 2014 and 2016, there have been increases in the average incomes of all three household groups, as in Table 4.

**Table 4: Average gross monthly household incomes and income thresholds, 2014-2016**

| | Mean income (RM) | | | Income threshold (RM) | | |
|---|---|---|---|---|---|---|
| | B40 | M40 | T20 | B40 | M40 | T20 |
| 2014 | 2,537 | 5,662 | 14,305 | <3,860 | 3,860 - 8,319 | >= 8,320 |
| 2016 | 2,848 | 6,502 | 16,088 | <4,360 | 4,360 - 9,619 | >= 9,620 |

Source: DOS (2015, 2017)

Although average incomes for each group has risen over the years, income distributions still vary significantly across states. This can be seen when comparing national income thresholds for each household group with the states' different thresholds.

Take the income thresholds for the M40 households For example, in 2016, M40 at the national level refers to households with incomes between RM4,360 and RM9,619. Meanwhile, the income range for M40 in Kuala Lumpur was between RM7,640 and RM15,159, and the income range for the M40 households in Kelantan was between RM2,570 and RM5,869 (Figure 14). Hence, a household with an income of at least RM5,870 would be classified as a T20 household in Kelantan

but would only be a B40 household in Kuala Lumpur[15]. Thus, inter-state variations in incomes and their distributions is an important factor to be considered in designing relevant policies and programs as income and living cost disparities by location can be quite significant.

### 3.3.2 Access to education and health services

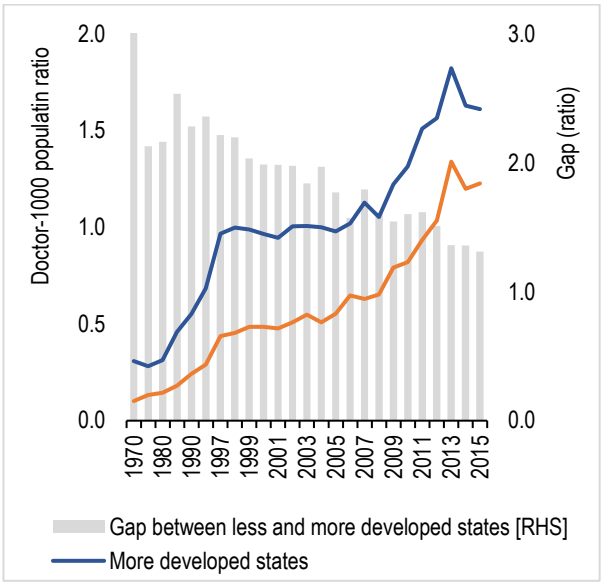
Many studies argue that investments in health and education enhance human resources and productivity, promoting equity and reducing socio-economic disparities. Achieving better education outcomes for children from disadvantaged families implies greater intergenerational earnings enhancement[16]. Diminishing education disparities also boosts efforts to reduce health disparities owing to the strong positive relationship between education and health[17].

Higher educational attainment also promotes the transmission of health from parents to children reflected in strong relationship between parental socio-economic circumstances and child health[18]. Wealthier families can afford better quality health care and generally consume safer and healthier foods promoting improved health. In contrast, poorer children tend to suffer more from poor health and to recover more slowly if afflicted by illness or disease.

Hence, the government's role in equalizing opportunities through health and education interventions is important for promoting social mobility and reducing health and income gaps across generations. There have also been improvements in health services and facilities for the Malaysian population over the last four and half decades. The number of doctors per 1000 population increased from 0.2 in 1970 to 1.49 in 2015, while the number of dentists per 1000 population rose from 0.06 to 0.21. The number of hospital beds per 1000 population also increased from 2.1 to 1.45 over the same period. Geographical disparities in health service provision have also narrowed (Figure 15 and Figure 16).

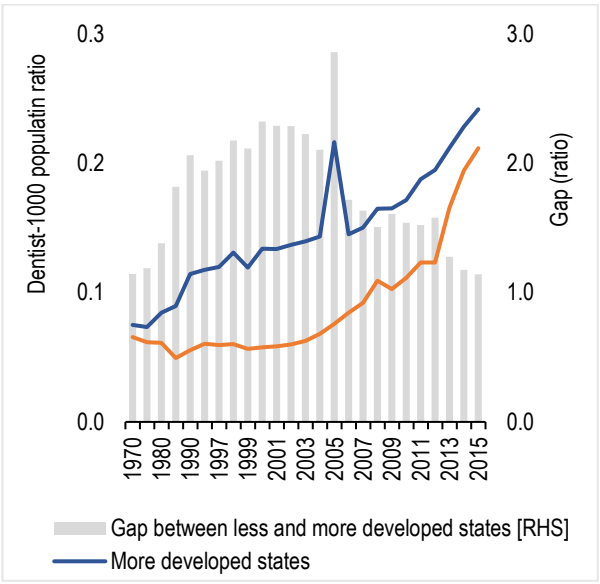
[15] KRI (2018)
[16] OECD (2016)
[17] Cutler and Lleras-Muney (2014)
[18] Currie (2009)

**Figure 15: Doctor-population ratios in more and less developed states, 1970-2015**




Source: CEIC (n.d.), DOS (1972, 1973b, 1973a, 1976, 1978, 1981a, 1981b, 1982, 1986, 1991, 1997, n.d.-a, n.d.-b, n.d.-c)

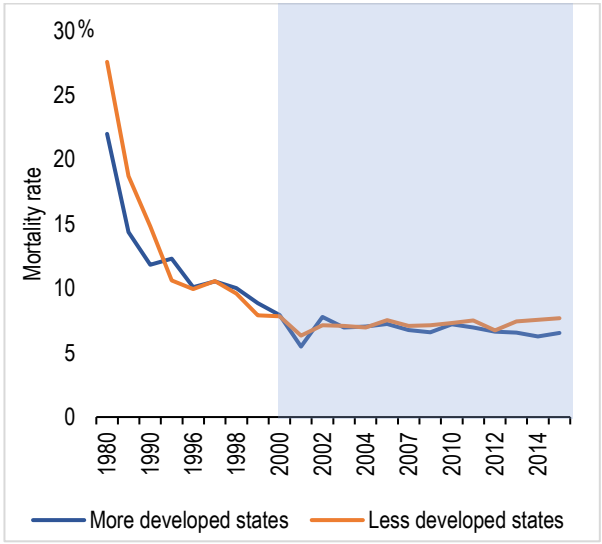
**Figure 16: Dentist-population ratios in more and less developed states, 1970-2015**




Source: CEIC (n.d.), DOS (1972, 1973b, 1973a, 1976, 1978, 1981a, 1981b, 1982, 1986, 1991, 1997, n.d.-a, n.d.-b, n.d.-c)

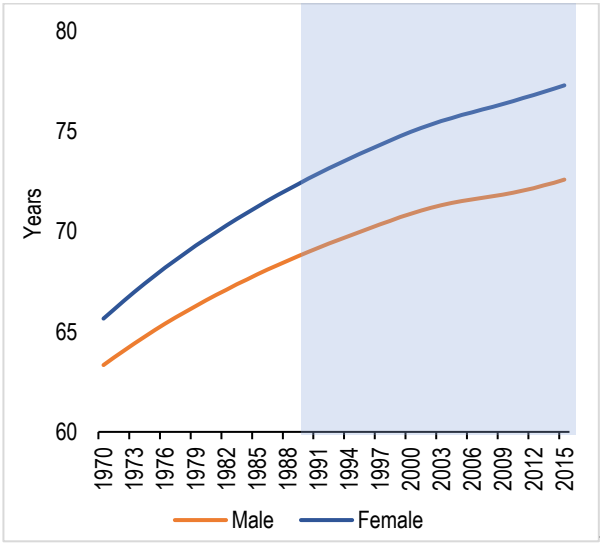
Expanded access to health services suggests improved health well-being. Mortality rates for infants and children under-five have fallen from more than 40 per 1,000 live births to around 15 in 1990 and 6 in 2015 (Figure 17). Life expectancy also increased between 1970 and 2015 from 65.7 to 77.1 years for females, and from 63.3 to 72.5 for males (Figure 18). Average life expectancy stood at 74.6, which gave Malaysia a world life expectancy ranking of 69[19]. Gains in life expectancy were due to improved health services and increased access to health care, water and sanitation, especially in remote areas.

**Figure 17: Infant mortality rates in more and less developed states, 1980-2015**




Source: CEIC (n.d.), DOS (1981b, 1986, 1991)

**Figure 18: Life expectancy at birth, 1970-2015**



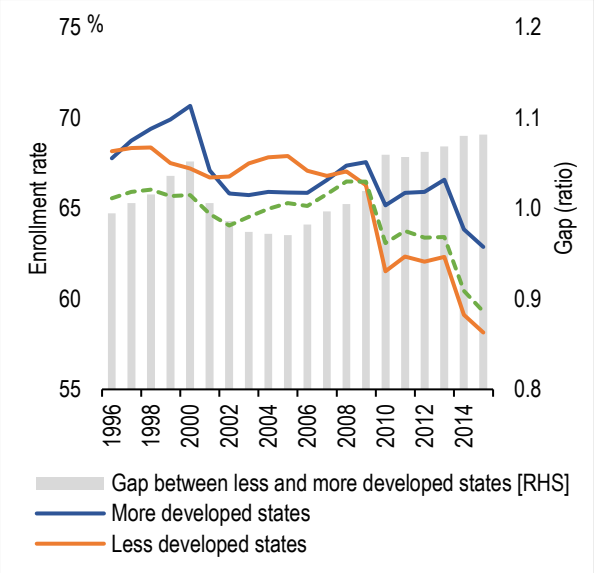

Source: World Bank DataBank (n.d.)

[19] WHO (2015)

Despite some progress, there are still disparities among states for the average time needed to reach health centres. Households in rural areas generally require longer journeys to reach government hospitals and clinics. For example, 32.8% of Sabahans and 43.6% of Sarawakians living in rural areas were still more than 9 km away from public health centres in 2016. This contrasts with 90-100% of households in other states having such health facilities less than 5 km from their homes.

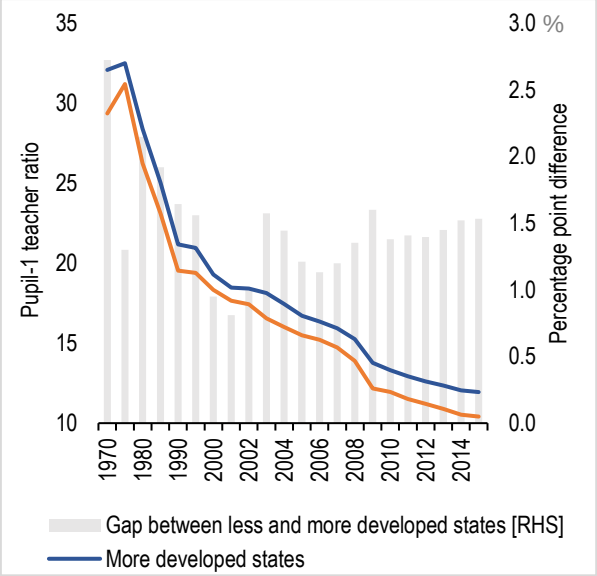
There have been mixed results in education. While the gap in enrolment of primary and secondary school students between more and less developed states fell at the start of the 21st century, it has resumed increasing after 2006. Although the pupil-teacher ratio has improved greatly since the 1970s, the pupil-teacher ratio gap between more and less developed states has risen gradually in recent years (Figure 19 and Figure 20)

**Figure 19: Primary and secondary school enrolment rates in more and less developed states, 1996-2015**




Source: CEIC (n.d.)
Note: The enrolment rate was calculated by dividing enrolment in primary and secondary schools by the population between 5 to 19 years old. These enrolment rates are understated as yearly data for specific population cohorts between 7 to 17 years old (the typical age range for primary and secondary schooling) are not available, and hence estimated.

**Figure 20: Primary school pupil-teacher ratios in more and less developed states, 1970-2015**




Source: CEIC (n.d.), DOS (1972, 1973b, 1973a, 1976, 1978, 1981a, 1981b, 1982, 1986, 1991, 1997, 2001, n.d.-a, n.d.-b, n.d.-c)

Access to primary education is no longer an issue in Malaysia. Large capital investments in primary schools saw the country achieve universal primary education in 1990[20]. More than 90% of children in all states could access primary schools within 5 km from their home. Nonetheless, secondary schools can still be quite far away, especially for children living in rural Sabah, Sarawak, Pahang and Negeri Sembilan where 50.9%, 37.4%, 18.8% and 10.9% respectively lived more than 9 km away from their local schools.

[20] United Nations (n.d.)

### 3.3.3 Basic amenities

Access to basic amenities also directly affects quality of life. Ensuring universal access to basic amenities, such as water and electricity, is important in becoming a developed nation**.** For remote rural households, for instance, the absence of utilities infrastructure (for water, electricity and telephones) reduces living standards despite having higher incomes than relatively poorer urban households.

In terms of basic amenities, almost all households now have access to electricity and water. According to the Household Basic Amenities Survey 2016, 95.5% of households -- 99.7% in more developed states and 89.6% in less developed states – had access to piped water in the house. However, access can still be improved, especially in rural Kelantan, Sabah and Sarawak. Around 1% of the populations of Sabah and Sarawak had no access to electricity. Access to piped water in Kelantan stood at only 65.4%, while 34.6% of Kelantanese access water via public water stand pipes and other such sources. Common challenges in providing clean piped water include limited production capacity, low water supply and inadequate financial resources to broaden water supply coverage[21].

Overall, all states have seen quality of life improvements due to rising household incomes, with many lifted out of poverty besides gaining better access to infrastructure, social services and basic amenities. Long term trends point to narrowing disparities between the less and more developed states. Declining geographical disparities have largely been achieved with better infrastructure and facilities, especially in rural areas. However, there is still a need to further address geographical imbalances. In addition to uplifting the rural areas, the growth of the urban population has also generated several new challenges such as housing, health, education and quality of life.

## 4. INTERGENERATIONAL SOCIAL MOBILITY

While reviewing macro-level socio-economic indicators provides useful evidence of social mobility among Malaysians, it offers little insight into actual changes at the family level between generations. After all, the rising tide due to economic growth may not necessarily be shared so as to lift all boats together evenly. Therefore, micro family level data is useful in supplementing macro data to provide a more detailed picture considering households' changing socio-economic circumstances from generation to generation.

In 2014, KRI conducted a social mobility survey by interviewing Malaysian families throughout the country. For each family, a parent, around 60 years old, and his or her child, around 35 years old, were studied. The survey tried to compare some key socio-economic characteristics of parents at age 35, with those of the child at a similar age; the average age of the children surveyed turned out to be lower, at 32 years. Relevant information was collected on educational attainment, occupation and income of both generations. This family level information enabled ascertaining changes in socio-economic circumstances from parent to child, providing greater understanding

[21] EPU (2006)

of intergenerational mobility (See Appendix 1 for more information about the survey, data treatment and methodology).

The survey data was utilized for an earlier KRI paper published in October 2016 entitled *Climbing the Ladder: Socio-economic Mobility in Malaysia*[22] (see Appendix 2 for a summary). The paper used a 'transition matrix' to analyse income changes between the generations. All individual incomes were classified into five income quintiles[23] based on their generation's income distribution; then, changed quintile location for each parent-child pair was deemed to indicate there had been mobility between generations, whether upward or downward.

The data suggested considerable 'churning', i.e., changes in relative positions, with some children moving up and others going down relative to their parents' earlier location, position or status. Whether or not the children are better or worse off in absolute terms despite rising or declining relatively is thus a distinct issue. Consequently, this approach focused on relative differences between generations without discussing whether the children were better off than their parents in absolute terms.

Also, the upper and lower bounds of each quintile implied a ceiling and a floor at the top and bottom of each quintile, in turn defining what constitutes churning. Upward mobility was thus ruled out for those born into the top quintile, while downward mobility was impossible for those born into the bottom quintile[24]. Also, mobility within any particular quintile was ignored, while even a little mobility between quintiles was given exaggerated significance by the methodology using inter-quintile movement to define mobility.

Focusing on absolute income differences between parent and child overcomes these shortcomings and complements the earlier analysis of churning. The earlier report mentioned, in passing, that half the children earned higher incomes than their parents, yet did not analyse the income changes involved. Hence, this paper looks at whether children's incomes were higher or lower than their parents' at around the same age, to assess whether their incomes were higher or lower than their parents'[25]. Thus, 'absolute' income mobility is measured by comparing the children's incomes to their fathers' incomes, after adjusting for inflation. As the children's incomes can be higher or lower than the parents' incomes, the children were grouped into three categories:

1. Upwardly mobile children: children with higher incomes than their parents'
2. Downwardly mobile children: children with lower incomes than their parents'
3. Immobile children: children with incomes almost similar to their parents'

[22] KRI (2016)
[23] Quintiles are derived by dividing the population into five equal groups with a fifth, or 20% of the population in each. Thus, the highest or top quintile consists of the highest 20% of income earners while the bottom quintile consists of the lowest 20% of income earners.
[24] Atkinson, *et al.* (1983)
[25] See Appendix 3 for an explanation of variations in the concept and dimensions of social mobility.

Thus, children whose incomes exceeded those of their parents are deemed upwardly mobile, while children whose incomes were below those of their parents are considered downwardly mobile. The extent of mobility, i.e., the degree of change in income between the two generations, was measured in terms of both percentage changes as well as absolute monetary levels, adjusted for inflation.

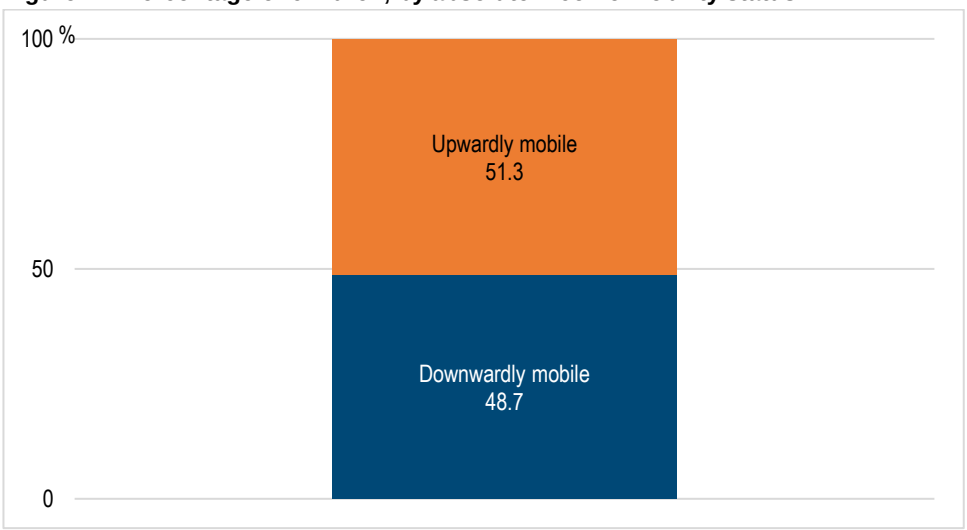
Hence, a large percentage increase of income for a child of poor parents would involve a smaller income change in absolute monetary terms due to the low base of the parent's income. Conversely, a larger change in monetary income for a child of high-income parents could involve a smaller percentage change in income due to the base effect. The characteristics of children grouped in the same category were then examined to ascertain possible factors contributing to their mobility.

# 5. FINDINGS

## 5.1 Overall Mobility

The survey data show roughly equal shares of upwardly mobile (51.3%) and downwardly mobile (48.7%) children (Figure 21). Some may infer from this that, on a net basis, Malaysian society has not experienced significant upward or downward mobility between generations during the relevant time period. Hence, this challenges the view that the population's living standards have been generally uplifted – or 'all boats have risen' – based on the macro-level mobility indicators discussed earlier. The following discussion will show that the survey's results are, in fact, consistent with the macro-trends suggested by official data.

**Figure 21: Percentage of children, by absolute income mobility status**




The survey data suggests that 33% of children raised by the few parents with no formal education attained tertiary education, while 59% had secondary education. At the other end, 92% of children of a tertiary educated parent also attained tertiary education, with 8% getting only secondary education. None of the children with at least a single tertiary educated parent had less than secondary education (Figure 22). Meanwhile, about 37% of children worked in more skilled jobs than their parents' and 48% had skill levels similar to their parent's. On the other hand, 15% of the children had less occupational skills than their parent's (Figure 23).

**Figure 22: Percentage of children at each education level, by parent's education level**

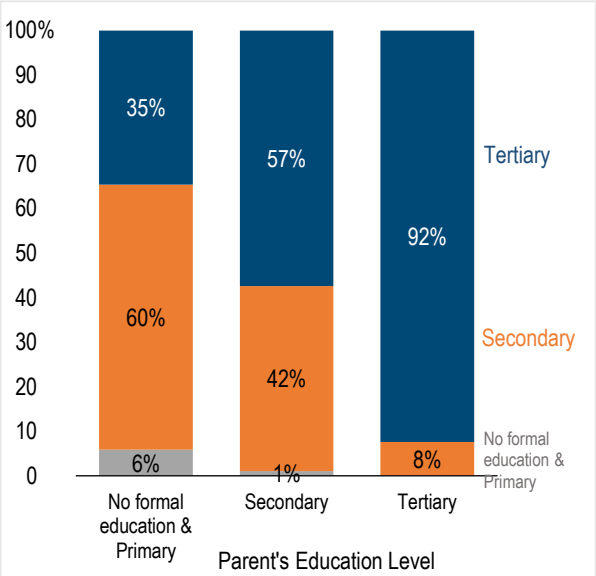



**Figure 23: Percentage of children at each occupational skill level, by parent's occupational skill level**

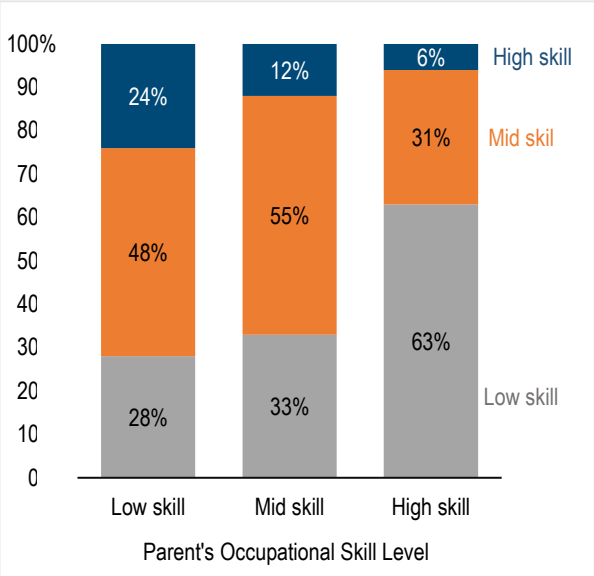
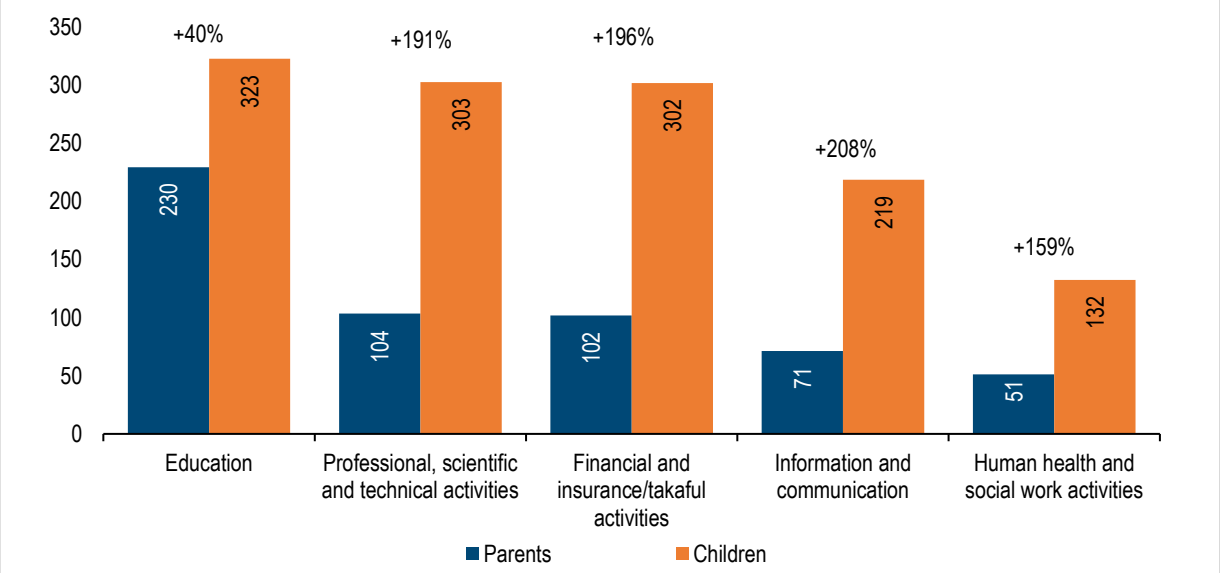



**Figure 24: Number of parents and children, by selected service subsector**




More adult children worked in services and much fewer in agriculture compared to 66.7% of the parents who worked in services and 16.2% in agriculture. Specifically, high-paying 'modern' services – such as education, information and communication, finance and insurance/*takaful* activities, professional, scientific and technical activities, and human health and social work activities[26] – had the biggest increases (Figure 24). This is consistent with the changing economic structure of the Malaysian economy and the increasing shares of services in both GDP and

[26] In 2016, the median salaries for education; information and communication; finance and insurance/*takaful* activities; professional, scientific, and technical activities; and human health and social work activities were RM4,135, RM3,500, RM3,050, RM2,800 and RM2,760 respectively. The median nationwide salary then was RM1,703. Source: DOS (2017a)

employment. These findings imply that despite (roughly) equal numbers of children experiencing upward and downward (income) mobility, a majority of the children were better educated, had more skilled jobs, and earned more than their parents.

However, analysing overall mobility by only considering the entire sample can mask considerable variation. It also obscures valuable information regarding the mobility of specific groups. As such, more detailed examination of some of these groups can provide a more nuanced understanding compared to exclusive consideration of aggregate trends. Therefore, the next section will analyse trends involving various income groups.

### 5.2 Mobility by Income Group

This section will consider the possible influence of parental economic circumstances on the adult child's economic mobility. For this purpose, income distribution has been broken down into six income cohorts of RM1,000 each. The extent of economic mobility is measured by considering the adult child's income n relation to the (base) parental income. The focus here is on the extent of mobility of children of parents in the lowest and highest income cohorts, i.e., parents with monthly incomes under RM1,000 and those earning at least RM5,000.

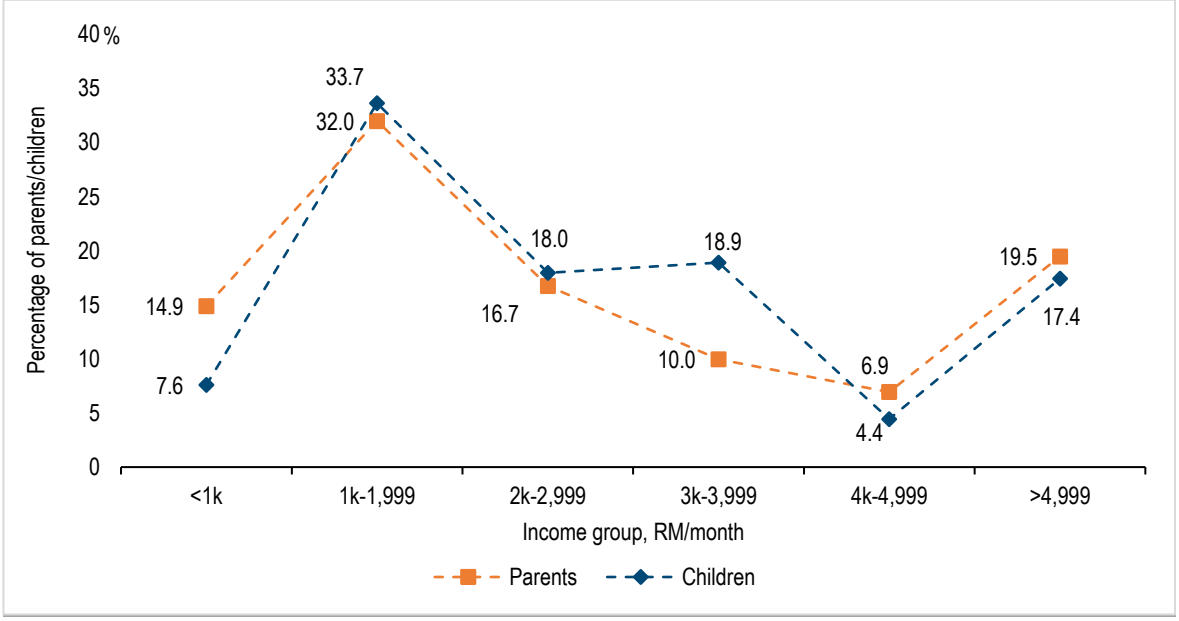
Parents earning incomes below RM1,000 monthly in 2014 prices at age 35 were deemed low-income. The RM1,000 threshold was chosen because it was close to the official poverty line for income, i.e., RM930 in Peninsular Malaysia, RM1,170 in Sabah and RM990 in Sarawak (DOS 2015). Moreover, this cut-off is also close to the minimum wage, i.e., RM1,000 in Peninsular Malaysia, and RM920 in Sabah and Sarawak (MOHR 2016). On the other hand, earnings of at least RM5,000 monthly were considered upper middle-income[27].

Analysis of both parents' and children's income distributions suggest less income inequality in the children's generation. Figure 25 shows 15% of parents in the lowest income group (earning less than RM1,000 monthly) when they were around 35 years old between 1980 and 1995. However, for the children's generation, fewer (7.6%) were earning under RM1,000, i.e., around half the earlier share. On the other hand, the share of children earning between RM1,000 and RM5,000 monthly was 75.0%, slightly more than the 65.6% of the parents' generation.

Declining inequality was reflected in the reduction of the Gini coefficient from 0.49 to 0.34 between the parents' and the children's generations. This decline in inequality parallels the official Household Income Survey trend. The Gini coefficient for Malaysia vacillated around 0.47 between 1979 and 1995[28], before declining to 0.399 in 2016.

[27] EPU (2018)
[28] Reflecting the Household Income Surveys for the period when the parents were 35 years old.

**Figure 25: Income distributions for parents' and children's generations**




Some income mobility trends are worth mentioning. Firstly, almost all (94.9%) children born to parents with earnings less than RM1,000 monthly had higher incomes than their parents. On the other hand, almost all (95.7%) children born to parents with monthly earnings of at least RM5,000 had lower incomes than their parents. The percentage of children earning more than their parents appeared to decrease as parental incomes rise. For example, 74.2% of children of parents earning RM1,000-1,999 monthly earned more than their parents, compared to only 4.3% with parents earning at least RM5,000 (Figure 26). The converse was true for children who earned less than their parents (Figure 27).

**Figure 26: Percentage of upwardly mobile children, by parental income group**

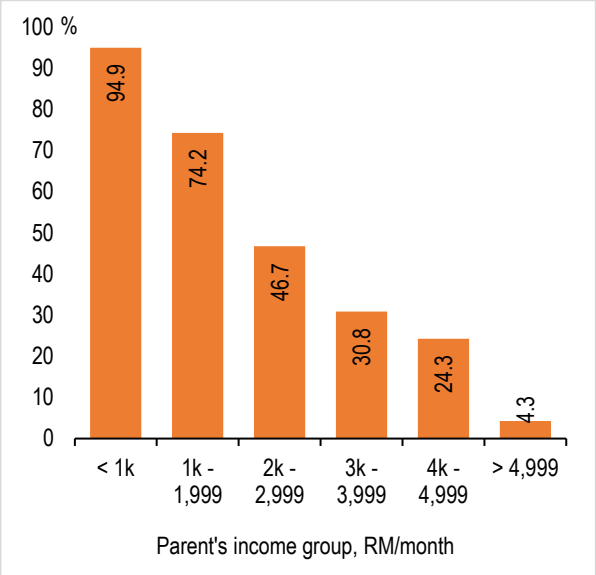
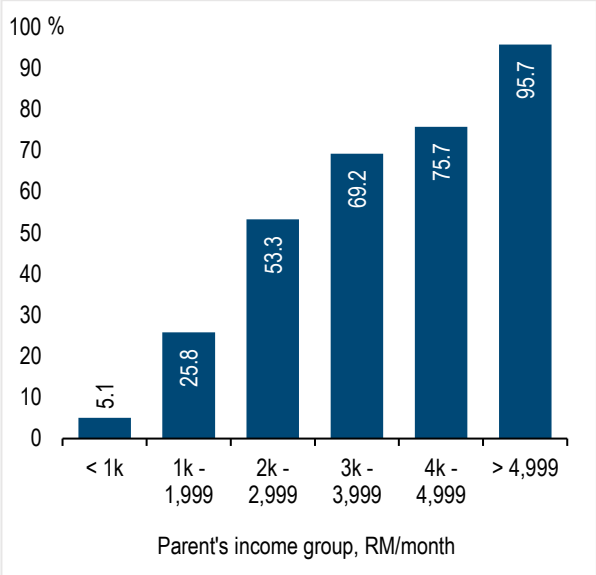



**Figure 27: Percentage of downwardly mobile children, by parental income group**

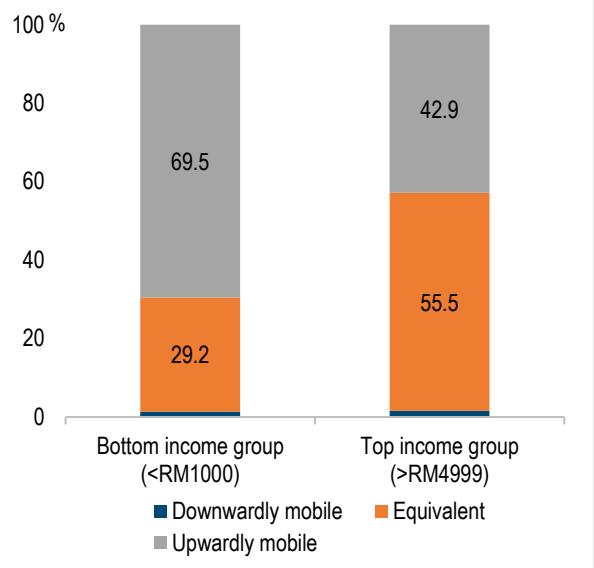


Second, this observed relationship between parental incomes and the likelihood of children earning more or less than their parents is partly reflected in education and occupational skill trends as well. 69.5% of children of parents in the bottom income cohort had higher education levels than their parents, compared to only 42.9% for the top income cohort (Figure 28). Almost no children, regardless of parental economic status, had less education than their parents.

This suggests higher educational attainment for all Malaysians regardless of economic background. With primary and secondary education now universally available, except for out-of-pocket expenses, net school enrolment rates increased between 1970 and 2015 from 84.2% to 98.1% for primary schools, and from 32.7% to 68.5% for secondary schools. This success in increasing access to education includes special programmes targeting disadvantaged groups as well as initiatives to narrow geographic differences by improving educational facilities and providing more qualified teachers to rural populations[29].

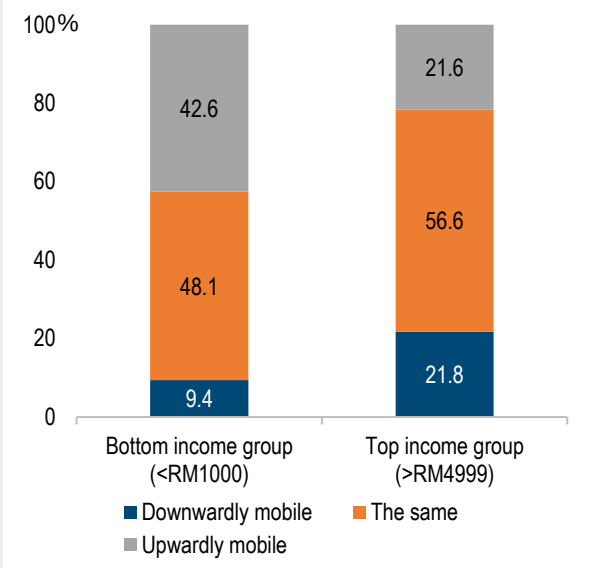
Third, 42.6% of children of parents in the bottom income cohort secured more skilled jobs compared to 21.6% from the top income group. Meanwhile, the share of children of parents in the bottom income group who were less skilled than their parents was much lower (9.4%) than children from the top income group (21.8%) (Figure 29).

**Figure 28: Percentage of children born to parents in the bottom and top income groups, by education mobility**




Note: Similar to income mobility, education mobility classifies children into three categories: upwardly mobile children who attained higher educational levels than their parents, downwardly mobile children with lower educational levels than their parents, and immobile children whose educational levels were similar to their parents'.

**Figure 29: Percentage of children born to parents in the bottom and top income groups, by occupational skill mobility**




Note: Similar to income mobility, occupational mobility classifies children into three categories: upwardly mobile children who secured more skilled jobs than their parents, downwardly mobile children who secured lower skilled jobs than their parents, and the immobile who had similar skill levels.

Changes in the level of education and job skills between parent and child do not mean that children of parents in the top income group fared less well, in absolute terms, than children of parents in

[29] UNESCO (2015)

the bottom income group. Instead, while it is easier for children of low-income parents to surpass their parent's socio-economic standing, it is much harder for children of higher income parents to do so, due to their already high incomes. These findings suggest that the children's generation, especially poorer children, rose in terms of education, employment and income with the tide of general economic progress.

## 5.3 Extent of Income Mobility

This study considers children with higher incomes than their parents as upwardly mobile, and those with lower incomes as downwardly mobile. The preceding discussion focused on the prevalence of mobility, without considering the size or magnitude of the income change for each parent-child pair. This section will consider actual income increases or decreases, both absolutely and relatively, to ascertain the corresponding degree of upward and downward mobility.

Figure 30 shows the prevalence of mobility defined in terms of changes in income. For example, when upward mobility requires 'at least double the parent's income', 22.4% of the children qualified. When an increase of 'at least 50% more than the parent's income' is required, 33.1% were deemed upwardly mobile. On the other hand, 20.0% of the children had less than half the parent's income, while 38.5% earned at least a fifth (20%) less than the parent's income (Figure 31).

**Figure 30: Percentage of upwardly mobile children, by upward mobility cut-off threshold**

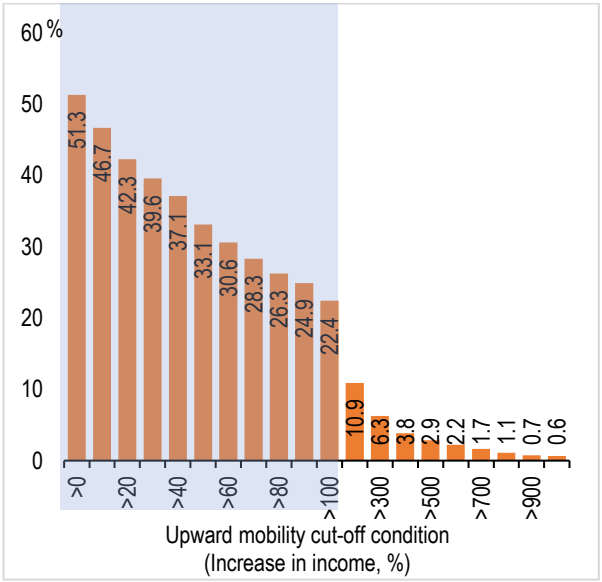
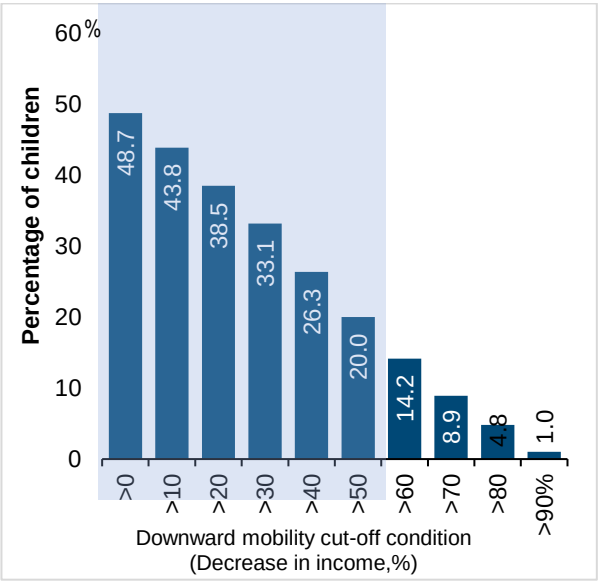



**Figure 31: Percentage of downwardly mobile children, by downward mobility cut-off threshold**




Earlier, it was observed that the shares of upwardly and downwardly mobile children were roughly equal, at around half each, without considering the extent of their income changes. This implies that the rising income tide did not raise the incomes of half the children. However, Figures 31 and 32 show far greater income increases than decreases, suggesting that higher overall incomes increased incomes more than the sum of decreases of income. In other words, while only half benefited, the pie was larger for the children's generation compared to their parents, but only half the children were better off than their parents.

There were also larger percentage income increases for the upwardly mobile, with the greatest being almost 80 times higher than the parent's income. The average income of upwardly mobile children rose about 1.5-fold, while the incomes of downwardly mobile children fell by an average of less than half. As many upwardly mobile children had low-income parents, the large income increase multiples are not surprising as most of these children's incomes are being compared to relatively low parental incomes.

## 5.4 Income Changes

However, determining the extent of mobility by only considering the percentage change in income can be misleading due to the 'base effect' of parents' income levels. For example, although incomes may have increased by the same quantum or amount, relative or comparative changes in percentage terms will be much higher for children of low-income parents. Hence, analysis of the extent of mobility has to be complemented by considering the income change for each parent-child pair in absolute terms as well.

In this regard, it is more useful to understand the circumstances of the children of low-income parents to contextualize their incomes and the opportunities available to them. Changes in monetary income were also used to ascertain the extent of mobility for the children's generation.

**Figure 32: Percentage of upwardly mobile children (born to parents in the bottom income group), by RM income change**

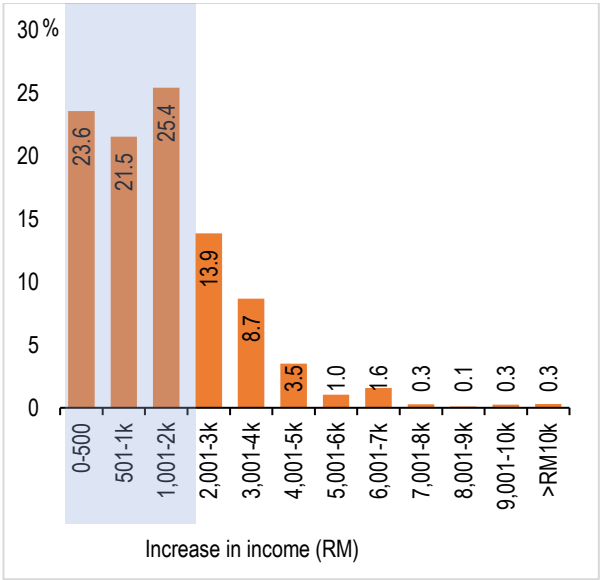



**Figure 33: Percentage of downwardly mobile children (born to parents in the top income group), by RM income change**

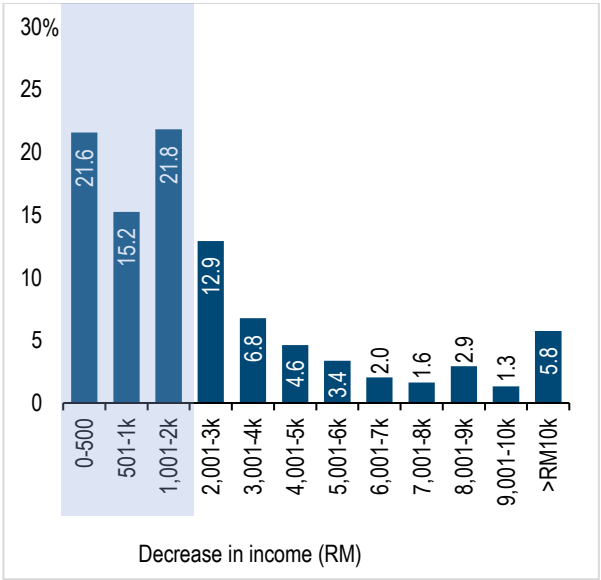



Figure 32 shows 70.5% of upwardly mobile children of parents in the bottom income group (i.e., earning less than RM1,000 per month) had monthly incomes up to RM2,000 higher than their parents. Almost 30% had income increases exceeding RM2,000, with several exceeding parental income by over RM10,000. Meanwhile, half the 'downwardly mobile' children of parents in the top income group (i.e., earning at least RM5,000 monthly) had incomes RM2,000 less than their parents (Figure 33). Clearly, the significance of income changes in both absolute and relative terms needs to be contextualized.

## 5.5 Characteristics of the Upwardly and Downwardly Mobile

Reviewing certain characteristics of the upwardly and downwardly mobile may shed light on the factors influencing mobility. For this purpose, only children of parents earning less than RM1,000 monthly and children born to parents with earnings of at least RM5,000 monthly will be analysed as almost all children in the former group experienced upward mobility while the majority of the latter are deemed downwardly mobile. Identifying some important observable traits of parents and children in relation to their mobility status may highlight factors conducive to upward mobility.

First, upward mobility is often related to higher educational attainment. Comparing parents and their children, a larger percentage share of upwardly mobile children attained tertiary education (39.6%) compared to their parents (4.6%) (Figure 34). Having tertiary education emerged as a key factor explaining upward mobility for children of low-income parents. Children of the bottom 40 percent (B40) group with tertiary education were 4.6 times more likely to be upwardly mobile than those without[30].

**Figure 34: Education level of parents and children in the bottom income group**

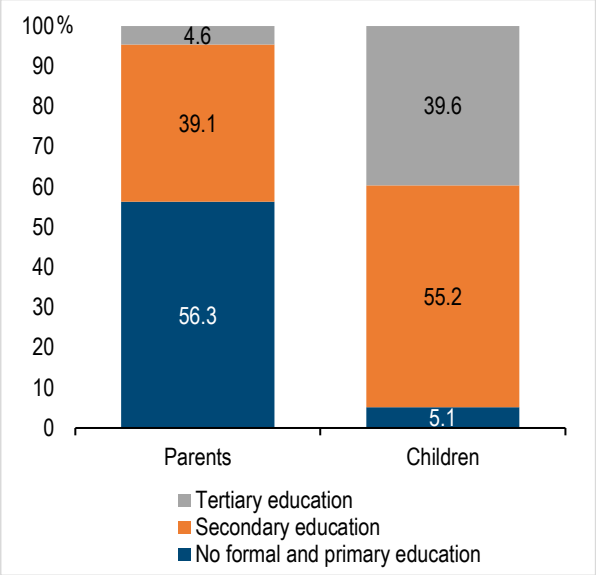
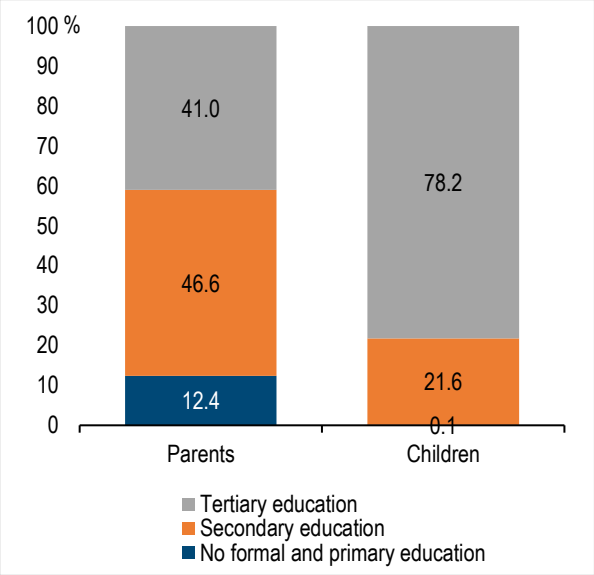



**Figure 35: Education level of parents and children in the top income group**




However, more education does not ensure upward income mobility. Although the share of children of parents with earnings of at least RM5,000 monthly with tertiary education was almost double (78.2%) that of their parents' generation (41%), most of them did not earn more than their parents (Figure 35). In other words, they experienced downward income mobility despite upward education mobility.

One possible explanation is diminishing returns to higher education compared to before. Those in the labour force with tertiary education rose from 1.8% in 1974 to 6.1% in 1982 and close to

[30] KRI (2016)

30% in 2016. Thus, tertiary education apparently no longer provides the same premium as for the parents' generation or even earlier, when far fewer had tertiary education.

Another possible reason could be due to the criteria for comparison in this study. The survey sought to capture income changes between the parents' and the children's generations at a comparable working age. The age of 35 years was chosen following Böhlmark and Lindquist (2006) as well as Bjorklund, Roine, and Waldenström (2008) who suggested that income measured around this age serves as a good proxy for permanent income.

However, the average age for the first child turned out to be 32 years. On average, comparison is being made between children's incomes at an age three years younger than the age of the parents. Given more education for more recent generations, at age 32, children had generally spent more time in education before entering the job market, resulting in less work experience and seniority – and presumably incomes – compared to their fathers at age 35.

And while the incomes of women not earning incomes have been excluded from consideration, there are many reasons why first-born daughters' incomes may be less than those of their fathers', or for that matter, if they were first-born males rather than females.

**Figure 36: Occupational skill level of parents and children in the bottom income group**

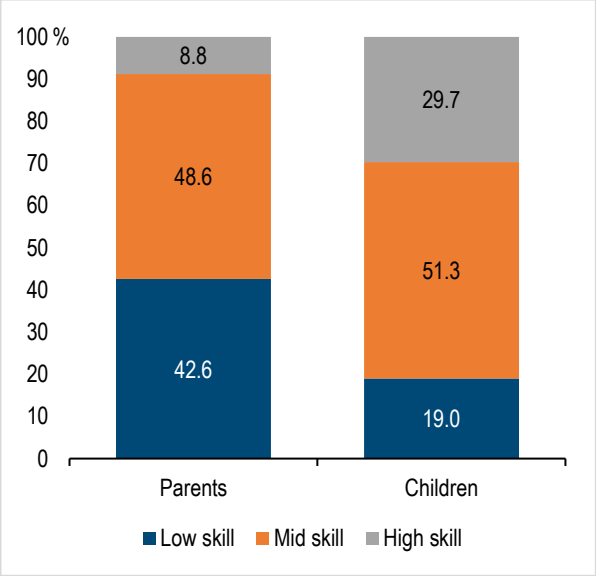
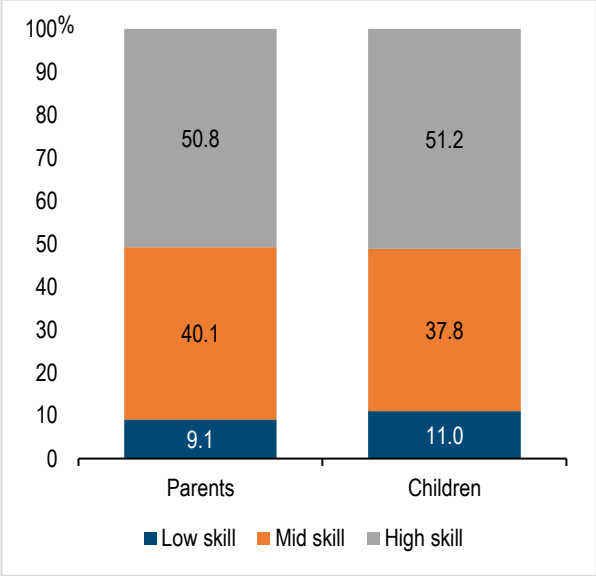



**Figure 37: Occupational skill level of parents and children in the top income group**

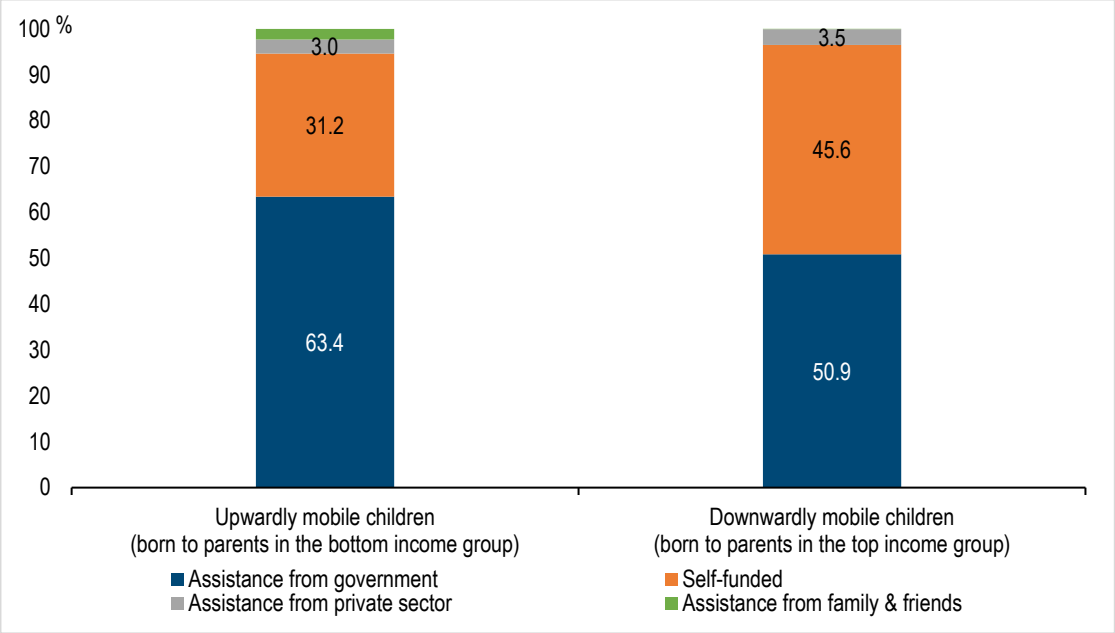



The explanation could also be due to significantly different national or international economic circumstances during the reference periods for the parents and the children. At the age of 35 between 1980 and 1995, the parents were living under the Mahathir administration (1981-2013), with high growth prevailing between 1987 and 1997. Children born between 1975 and 1990 probably began working after the 1997-1998 crisis when economic and income growth was more lacklustre, and greater labour immigration served to depress wage rates for low income workers. Upwardly mobile children generally secured jobs with higher skill levels than their parents; 29.7% of these children had highly-skilled jobs compared to only 8.8% of the parents (Figure 36). Also,

the proportion of low-skilled workers shrank from 42.6% for the parents' generation to 19.0% for the children's generation. Thus, rising income seems to be consistent with upward occupational mobility. However, the occupational skills of parents and children in the top income group were not very different, with at least half of both generations in this group having high skill jobs (Figure 37).

Another difference between the upwardly and downwardly mobile is the source of funding for tertiary education. Around two-thirds of the upwardly mobile children of parents in the bottom income group had access to tertiary education thanks to government scholarships, loans, etc. For the downwardly mobile children of parents in the top income cohort, the figure was 50.9% (Figure 38). This underscores the role of government financial assistance for the poor's educational access, in turn enabling higher incomes.

**Figure 38: Percentage of children by parents' income group and mobility status, and main source of funding for tertiary education**




Thus, scholarship provision solely based on 'merit' without consideration of needs and means would likely be regressive and reduce upward mobility for the poor. Statistics on scholarship provision suggest a disproportionate share of better off beneficiaries. Lian (1976), as cited by Jomo and Wee (2014), found a large number of children from affluent families receiving government scholarships for higher education. Furthermore, MOE (1981), as cited by Jomo and Wee (2014), found that more than half the students in higher learning institutions who benefited from state scholarships and loans in 1977/78 came from urban areas. More recently, in 2014, less than 40% of beneficiaries of national scholarship programs were from B40 households. In other words, more opportunities went to children from M40 and T20 households. Many received loans that had to be repaid if the students did not perform well enough (Ismail & Saha Dhevan, 1993).

## 6. CHALLENGES

Malaysia's inclusive development strategies have successfully promoted growth while reducing poverty and inter-ethnic disparities. Besides rapid growth in GDP per capita, the living standards of most Malaysians have risen significantly. Improvements in social services, especially education and health, have also facilitated upward socio-economic mobility.

The KRI survey found that equal shares of children had higher or lower incomes relative to their parents. Most children (94.9%) of parents in the bottom income group (earning less than RM1,000 monthly) had higher incomes than their parents. Meanwhile, most children (95.7%) of parents in the highest income group (earning at least RM5,000 monthly) had lower incomes than their parents. Nevertheless, almost all children had more education and occupational skills than their parents. Hence, more education and better occupations did not ensure higher incomes for many children compared to their parents, suggesting erosion of both education and skill premiums.

The upwardly mobile from poor families generally had more schooling and skills than their parent. Government policies, including affirmative action measures, enabled upward social mobility for many by expanding and easing access to more education. Social statistics show that disparities between the more and less developed states have narrowed although the implications of this reduced gap for social mobility are not clear.

As the survey looked at adult children born during 1975-1990, little is known about mobility for earlier age cohorts, or prospects for children currently schooling or who have not started working. In the future, there are concerns that more children are likely to experience downward mobility due to the rising costs of education and health care as well as slower economic growth and job destruction due to technological advances.

### 6.1 Human Resource Development and Labour Market Challenges

Education, particularly at the tertiary level, has contributed importantly to upward mobility, due to its positive relationship to occupational skills, and hence, income. However, as a greater share of the population becomes better educated, the higher education premium enjoyed by graduates declines as competition in the job market becomes tougher. With the rapid expansion of tertiary education, the advantage of having a university degree has eroded, as reflected by growing unemployment among university graduates and lower incomes for fresh graduates.

Malaysia today is already at the upper end of what the World Bank considers high middle-income country status. The conventional wisdom is that the push for high-income status requires further structural transformation, especially in terms of human skills. Malaysia's performance in international tests, at lower education levels, for reading, mathematics and science lags well behind the norm for its GDP level. In the OECD's 2015 Programme for International Student Assessment (PISA), Malaysia was a dismal 52$^{nd}$ of 65 countries, due to poor scores in reading and

science[31]. As for higher education, there is much concern about the skills mismatch of university graduates in terms of their capacity for advancing domestic industries and services.

Around half of all jobs in Malaysia are said to be at high risk of being destroyed by technological disruption over the next two decades, including over 70% of all semi-skilled jobs and 80% of all low-skilled jobs in all major economic sectors[32]. As most semi-skilled jobs are held by Malaysians, Malaysian citizen workers will be most impacted. Hence, upskilling and reskilling efforts must progress faster than the rate at which jobs are being displaced.

Additionally, the presence of foreign workers, most of whom are undocumented, has implications for numerous variables such as employment, productivity and income distribution. A World Bank report suggests that foreign workers have filled important labour market gaps for low-skilled jobs and benefitted semi-skilled Malaysians most[33]. Nevertheless, three quarters of all jobs in Malaysia remain low- and medium-skilled.

Except for relatively few high-end expatriate professionals, foreign labour is mostly associated with lower end occupations, often associated with disdained, dangerous, poorly remunerated and unattractive jobs. Only 2.21 million presumably 'documented' foreign workers are acknowledged in official labour force statistics, while the former human resources minister announced his estimate of 6.7 million foreign workers in late 2016 using data provided by 'telcos' from the sale of SIM cards; otherwise, the presence of undocumented foreign labour in Malaysia is not officially acknowledged. Taking them into consideration would drastically transform per capita productivity, output (GDP) and income distribution estimates.

### 6.2 Household and Labour Income Shares

In most developed countries, high household and labour incomes drive domestic consumption and aggregate demand. In 2016, 63% of household incomes were from wages and 8.5% from current transfers. This implies that the remaining 28.5% came from non-wage incomes, including capital incomes such as financial investments and properties.

A Bank Negara Malaysia report showed that a significant share of the top 20% of household debt was secured with properties and principal-guaranteed investments (77%), suggesting significant asset accumulation through debt in this cohort. In contrast, more than half (53%) of the bottom 40%'s household debt was for consumption, e.g., for the purchase of motor vehicles and other consumer durables[34]. As aggregate household debt is worth about half of total household financial assets, it is likely that non-wage incomes are mostly earned by high-income households. As lower income household incomes are mostly from wages, slow wage growth helps explain the income gap between low- and high-income households.

[31] OECD (2016)
[32] KRI (2017)
[33] World Bank (2015)
[34] BNM (2017)

From a national income accounting perspective, the labour income share in 2016 stood at 35.3% of GDP – much below other developed economies' level between 45% to 55%. The capital income share, reflected by the gross operating surplus of businesses, was 59.5%, while another 5.2% was government revenue's share. Although the labour income share has risen from 29.5% in 2005 to 35.3% percent in 2016, a higher share may not be due to higher earnings. Labour intensive industries, such as construction, agriculture, distributive trade and restaurants, tend to have higher than average labour income shares, but lower than average wage levels.

Meanwhile, wages in some capital-intensive industries tend to be higher than average, despite the lower-than-average share of labour income. Its rising trend during the recent period was probably largely due to growing traditional services and SME employment in the economy. This, in turn, is associated with less adoption of new technologies due to the availability of cheaper, low-skilled foreign workers in Malaysia[35].

### 6.3 Fiscal Redistribution

The 'functional' or 'factorial' distribution of national income, with capital income far greater than labour income, has been coupled with a tax structure incidence favourable to capital. Capital income is distributed more unequally than labour income, and often taxed at lower rates than labour income. Such issues require appropriate policy interventions for more progressive distribution. Malaysia's relatively low labour income share and rising living costs limit domestic spending and aggregate demand, while its high levels of household indebtedness obscure complex patterns of uneven financial inclusion with debt for wealth accumulation for the better off coexisting with delayed payment of effectively higher prices for consumption.

Fiscal and social policies can significantly influence redistribution efforts. Policies and interventions to reduce inequality and improve social mobility should also involve fiscal measures for progressive redistribution, both in terms of tax incidence as well as public spending. A progressive tax system would ensure that those with more would pay disproportionately more tax than those with far less.

Instead, tax incidence in Malaysia has become less progressive over the decades as various direct taxes (e.g., corporate income tax, property taxes, capital gains tax and high personal income tax for those with higher incomes) have been reduced, if not eliminated altogether. Meanwhile, the generally less progressive, or even regressive incidence of indirect taxation has imposed a higher burden of overall taxation on lower income groups relative to the highest income cohort[36]. While there is much scope to make taxation more progressive by increasing taxes on corporations, top income earners, property and land without hurting growth, the opposite trends have been dominant for decades[37].

[35] Ng, Tan and Tan (2018)
[36] Wee (2006)
[37] Efforts can also be focused on improving tax collection and reducing opportunities for tax evasion and avoidance, while educating citizens to appreciate the need for taxation and regulatory compliance. Tax payers are more likely to comply when they believe that they are not being unfairly treated relative to others, and tax revenues are being put to

Policies that may have been effective, progressive or otherwise worked well in the past may no longer be appropriate or relevant. Failing to acknowledge actual circumstances and implement forward-looking options could exacerbate inequality and hold back progressive social mobility and change more generally. For instance, inter-ethnic socio-economic disparities – the main focus of public policy discourse in the country for decades – have greatly narrowed. On the other hand, intra-ethnic inequalities have increased[38]. Continuing to look at issues from the same perspective and pursuing the same old policies in changed circumstances could have adverse unintended consequences which may further set back equalization of opportunity.

## 7. CONCLUSIONS

Malaysian development strategy since the 1970s has engendered major economic and social transformations, with greater socio-economic mobility prospects for much of its population. Socio-economic indicators for basic amenities, poverty, health, education, employment and real incomes suggest improved living standards for most Malaysians, with inter-state, urban-rural and inter-ethnic disparities narrowing.

This report has used national socio-economic indicators as well as survey data to show that while much of the population has benefited from more education and occupational skills, the shares of children who have higher incomes than their parents are almost the same as those with less. Nonetheless, incomes have generally risen, especially during the 1970s and in the decade before 1998.

The KRI survey found very few children with less formal education than their parents, regardless of parental income, with the children's generation generally getting at least a similar level of schooling. Higher education attainment for most Malaysians, regardless of parental economic standing, suggests better access, thanks to initiatives to narrow geographic (inter-state, urban-rural) differences by improving education and health facilities and personnel, as well as special programmes for disadvantaged groups. Children, especially poorer children, thus became better off in terms of schooling, jobs and incomes. On average, children of parents in the lowest income cohort, with monthly earnings of less than RM1,000, were earning more than twice as much as their parents.

Although rising incomes are often attributed to greater schooling, more education does not necessarily ensure higher incomes. While the proportion of children of parents with monthly earnings of at least RM5,000 with tertiary education was almost twice that of their parents' generation, most of them did not earn higher incomes than their parents.

With more education opportunities, the children's generation has spent more time in education before working, resulting in less work experience, seniority and incomes compared to their parents'

good use, especially by universal provision of quality social services and infrastructure for all, besides strengthening social provisioning and protection in a transparent, efficient and equitable manner.

[38] Roslan Abdul Hakim (2001)

generation. Although the survey sought to compare incomes at the same age, the shortfall may also be due to comparing incomes at 35 years for the parents' generation with those of their children at age 32 on average.

Another possible explanation is sharply diminishing returns to higher education with greatly increased access. Only 1.8% of the labour force had tertiary education in 1974, compared to almost 30% in 2016. Thus, the premium from tertiary education is probably much less for the children's generation compared to their parents' generation, when far fewer had access to tertiary education.

It is also generally more difficult for children of better-off parents to surpass their parents' incomes compared to the children of low-income parents owing to the former's generally much higher parental incomes.

There may be other reasons why children are not exceeding their parents' incomes. The parents' generation came of age when Malaysia was growing rapidly, especially between 1987 and 1997, i.e., before the Asian financial crises greatly slowed economic, industrial and income growth. Children born during 1975-1990 began working after the Asian crises when economic, industrial and income growth had become more lacklustre. Greater reliance on foreign labour, including undocumented workers, has also depressed working conditions, including wage incomes, especially for low-skilled Malaysian workers.

Better monitoring of personal and household wellbeing and mobility, especially of wealth and income determination and distribution, is important to better understand social transformation and progress. More household socio-economic data, such as on income and assets, can usefully complement the usual social mobility indicators. Longitudinal household panel data over the life cycle can provide relevant and meaningful information.

While growth is necessary to lift incomes and living standards, its benefits are unlikely to be distributed equitably, let alone equally. Economic distribution as well as personal or family advancement shape social progress and upward mobility for the present and future.

Putnam (2016) favours ascertaining the actual extent of equality of opportunity for the young, instead of the current focus on their lot as adults. Thus, more data, specifically large longitudinal panel data for individuals and households, and monitoring them over the life cycle, are desirable. Relevant national information, e.g., regarding the quality of education, working conditions and employer preferences, is useful to complement standard social mobility indicators.

It is also important to have a more nuanced view of economic development. Growth is undoubtedly necessary to raise incomes and living standards, but if the benefits of growth are not shared equitably, progress and upward mobility for current and future generations will be hindered. It is therefore imperative that the country's development agenda ensures inclusive growth.

Starting with efforts to reduce poverty and inter-ethnic disparities, policies have evolved, with more efforts to move people into more productive economic activities offering higher incomes.

Investments in basic amenities, social services and human resource development have been important for development strategy which has, in turn, contributed to greater economic growth which could benefit all sections of society.

Continuing prospects for upward social mobility are crucial for legitimizing social and political orders. When those less well-off have lost hope in the possibility of improving their lot by legitimate means, they are more likely to feel alienated and turn to what some deem to be 'anti-social' behaviour. Since independence, there has been considerable upward social mobility for much of the population, especially since the 1970s.

However, the prospects for such upward mobility may be declining. Or perhaps more importantly, this impression may be widespread, especially among those who live more marginalized, alienated or precarious lives. What may be hailed as financial inclusion by some may then be resented as onerous indebtedness by those who believe they have no choice but to go into great debt to survive or improve their conditions.

If an earlier generation had access to tertiary education by fulfilling minimal requirements, a subsequent generation required to spend and borrow a great deal to fulfil their aspirations for and expectations of tertiary education is far more likely to be resentful. And when such financial investments and burdens deliver far more uncertain and modest returns to attaining tertiary education, the very legitimacy of the changing status quo is eroded and doubted.

Given the oft-cited trade-off between growth and equity, it is essential to ensure that prosperity is shared by all, as promoted by the United Nations' Sustainable Development Goals, to which Malaysia is a signatory. While some inequality is inevitable, not addressing extreme inequality has the potential to erode social cohesion to the detriment of the economy.

Lastly, policies must also progress, changing with the times as appropriate and relevant. This needs to be done without neglecting addressing the vulnerabilities faced by those who benefit less or not at all from the rising tide of economic growth. The late Anthony Atkinson (2015) emphasized the interactive or dialectical nature of relations between past and present and between the contemporary and the future as follows: "Inequality of outcome among today's generation is the source of the unfair advantage received by the next generation. If we are concerned about equality of opportunity of tomorrow, we need to be concerned about inequality of outcome today".

## Appendix 1: Data and Methodology

### Survey data

The main data source for this study is the same as for the first KRI report on social mobility, *Climbing the Ladder: Socio-economic Mobility in Malaysia*, published in October 2016. Data collection through a survey, conducted from November 2014 to August 2015 through structured and semi-structured interviews, sought to capture intergenerational mobility in Malaysian families.

The survey was carried out in all states of Malaysia, involving families living in private living quarters based on a sample selected by the Department of Statistics Malaysia (DOS). A two-stage stratified random sampling design was adopted covering both urban as well as rural areas in all states. Application of post-stratification weights (calculated with assistance from DOS) sought to ensure that the sample was representative in terms of state, stratum and ethnicity.

Given the interest in intergenerational mobility, the sample was confined to parents born between 1945 and 1960, aged between 55 and 70 years in 2015. In short, the study compared parents when they were aged 35 years, to their children aged between 25 and 40 years (the average age of the children in the sample was 32 years). This age group was chosen following Böhlmark and Lindquist (2006) and Bjorklund, Roine, and Waldenström (2008) who argued that incomes for this age group serve as a good proxy for permanent income. There have been several intergenerational studies using 35 years old to compare incomes between two different age cohorts. These include Cardone, *et al.* (2014), who compared the socio-economic status of Swedish parent-child pairs, as well as Blanden and Machin (2007), who investigated mobility between two generations in Britain.

Two major limitations of the survey data have been identified:

1. The study utilizes retrospective data based on parental recollection. Although recollection error is likely, this method is common in research for intergenerational social mobility such as Solon and Gershuny (2002) as well as Khor and Pencavel (2008). Furthermore, the absence of appropriate longitudinal data for Malaysian families made it necessary to use such retrospective data based on recall.

2. Information on children was mostly acquired from parents as many had moved out. To cross-check the reliability of the data on the children, their income distribution was compared to data from the Employees' Provident Fund (EPF). The two datasets appeared consistent.

### Data treatment

This second paper has made two changes in data treatment compared to the first 2016 KRI social mobility paper. First, parents' nominal incomes were reflated to 2015 to make their incomes comparable to their children's incomes (as recorded for 2014-2015). In the earlier study, incomes were reflated using nationwide Consumer Price Index (CPI) data. The availability of CPI data series by region (Peninsular Malaysia, Sabah, and Sarawak) enables reflating parental incomes when they were 35 years old by the region where they were living. This improves estimates of real

incomes[39] by considering spatial living cost differences, not only between Peninsular Malaysia and Sabah as well as Sarawak, which is officially done, but also between town and country as well as among the major metropolitan areas.

Second, children or unemployed parents (mostly women), were not included in this study[40], reducing the sample size to 4,100 for this study. Weights were recalculated of weights was done to take this adjustment into account. While such exclusion of the unemployed does not alter the findings of the previous study[41], their inclusion would greatly skew the profile of the downwardly mobile. Most children with lower incomes than their parents were unemployed women. Thus, their inclusion would not meaningfully reflect social mobility. As these women have opted out of paid employment, their incomes cannot be ascertained from the survey[42]. The survey however did not investigate why the parents or children were not working.

Additionally, comparing the incomes of working first-born daughters with their fathers' raises problems of comparability as there is little information available on possible occupational discrimination by gender, including promotion prospects for women with young children.

### Methodology

To understand intergenerational income mobility, a child is first classified as either upwardly or downwardly mobile by comparing the child's income to the parent's income. Children with higher incomes than their parents were deemed upwardly mobile while those with lower incomes were classified as downwardly mobile. Those with incomes equivalent to their parents are categorized as immobile. Second, children who were either upwardly or downwardly mobile, or immobile were clustered according to their parent's income group. The groups range from under RM1,000 monthly income bracket, with the highest income group getting at least RM5,000 per month.

Third, for the state-level analysis, the 'state' variable refers to the state where the child grew up, specifically the location of the parent when 35 years old. This reference location follows other studies such as Chetty, *et al.* (2014) and Pew Charitable Trusts (2012).

Fourth, this paper discusses the extent of mobility between two generations in both percentage and monetary terms. For this analysis, the net change in income is of interest (Ferreira, *et al.* 2012).

[39] Throughout this paper, parent's income refers to parent's real income, adjusted for inflation using the CPI.
[40] 91.9% of 'unemployed' parents at age 35 and 82.4% of unemployed children were women.
[41] The intergenerational earnings elasticity (IGE) figure before and after excluding the unemployed, were 0.19 and 0.20 respectively.
[42] While this study could not confirm that women if the children's generation enjoyed higher living standards (due to data limitations), the data indicate that a large proportion experienced upward education mobility by attaining secondary and tertiary education, including many born to relatively high earning parents. Most children with lower incomes than their parent were unemployed women. Thus, their inclusion does not meaningfully reflect their social mobility. While these women have opted out of paid employment, their incomes cannot be compared to their parents' incomes using survey data.

## Appendix 2: Summary of 'Climbing the Ladder: Socioeconomic Mobility in Malaysia'

KRI's October 2016 social mobility study entitled 'Climbing the Ladder: Socio-economic Mobility in Malaysia' discussed the extent of intergenerational mobility in Malaysia by analysing parent-child changes in educational attainment, occupational skill and income between usually male adult parents born between 1945 and 1960 and their eldest child born between 1975 and 1990.

On educational attainment, 62% of children attained a higher level than their parent, 36% had the same level, and only 2% had a lower level. 35% of children raised by parents with only primary schooling or without formal education had achieved tertiary education, while 59% attained secondary education.

As for occupational mobility, 37% of children worked in higher skilled jobs than their parents, while 48% worked in jobs of a skill level similar to their parents. On the other hand, 15% of children had lower occupational skills than their parents.

In terms of economic mobility, the study compared the incomes of each parent-child pair at a comparable working age, i.e., when both were around 35 years old. This follows Bhattacharya and Mazumder (2011), Jantti, *et al.* (2006) and the Pew Research Center (2014). The report adopted transition matrices as the analytical framework and applied quintile analysis by dividing the population into five quintiles according to each generation's income distribution. The main findings were as follows:

1. Children of the least well-off had generally done better than their parents in terms of incomes: 74% of children born to parents in the bottom quintile moved up by at least one income quintile, with 11% moving into the top income quintile.
2. Among those born into the top quintile, 32% stayed in the same quintile while 68% moved down at least one quintile, with 10% moving all the way down to the bottom quintile.
3. Children born into the top quintile had the best prospects of remaining at the top (32% stayed put), while the proportion of children making it into the top quintile diminished steadily with the parent's position in their income distribution quintiles.

## Appendix 3: Variations in the Concept and Dimensions of Social Mobility

Social mobility refers to personal movements in social and/or economic standing over time. A society is said to be 'mobile' or 'fluid' when individuals more easily move up (or down) the social hierarchy regardless of their social position during childhood (Heath and Payne, 1999). Greater mobility, by this definition, would be reflected in greater 'churning', with relatively more people moving up or down over time. Such a study would compare individuals' socio-economic background or origins and their current locations, also affecting perceptions of social justice or fairness, equality of opportunity as well as equality of outcomes.

Analysis of social mobility has changed in various ways over the years. This can be differentiated into two traditions in sociology and economics respectively. The sociological tradition has tended to analyse social mobility by comparing occupations, educational attainment and employment

status (Erikson and Goldthorpe, 2002). Meanwhile, the economic tradition prefers to measure changes in personal income and wealth over time (Bowles and Gintis, 2002). However, more recently, the distinction between the two approaches has become less pronounced due to the close relationship between education, occupation and income.

In terms of economic mobility – the focus of this study – the movement of individuals or groups of individuals over time can be measured in both absolute and relative terms. Absolute income mobility looks at individuals' or groups' income change in real terms, while relative income mobility looks at whether an individual's income has moved up or down in relation to all others in the income or wealth distribution.

Different measurements of mobility also distinguish between intergenerational and intra-generational mobility. Intergenerational mobility – another focus of this study – involves comparing the (earlier) relative income ranking of the parent with the later rank of the child as an adult. To ascertain changes between generations. Intra-generational mobility thus refers to changes in the income of a child compared to the parent over an extended time period, between generations.

| Concepts and dimensions in social mobility studies | |
|---|---|
| **Sociology tradition**<br>Occupation-based social hierarchies, with a focus on educational achievement and occupational employment | **Economics tradition**<br>Income (or wealth)-based hierarchies with a focus on income (or wealth) |
| **Vertical**<br>Individual ability to move 'vertically' from one social class to another, e.g., individuals moving from a lower income class to a higher income class | **Horizontal**<br>Individual movement from one position to another within the same social or occupational group, e.g., individuals with the same skillset changing jobs |
| **Intra-generational**<br>Individual movements into different social and economic status categories within their own lifetime | **Inter-generational**<br>Changes in a family's social or economic position between generations, i.e., an individual's position compared to that of a relevant parent (or ancestor), presumably at a comparable point in the life cycle |
| **Absolute (inter-generational)**<br>Refers to whether an individual has a higher status (e.g., income) than the parent, after adjusting for changes in costs of living (i.e., ignoring ranking) | **Relative (inter-generational)**<br>Refers to an individual's ranking against peers and compares to the parent's ranking |

## REFERENCES


Abraham, Collin ER. 1997. *Divide and Rule: The Roots of Race Relations in Malaysia*. Kuala Lumpur: INSAN.

Anand, Sudhir. 1983. *Inequality and Poverty in Malaysia: Measurement and Decomposition*. A World Bank Research Publication. New York: Oxford University Press.

Atkinson, Anthony B. 2015. *Inequality – What can be done?* Cambridge, MA: Harvard University Press.

Atkinson, A. B., A. K. Maynard, C. G. Trinder, J. Corlyon, S. P. Jenkins & H. Sutherland (1983). *Parents and children: incomes in two generations*. London: Heinemann.

Berg, Andrew, and Jonathan Ostry. 2011. Inequality and Unsustainable Growth: Two Sides of the Same Coin? IMF Staff Discussion Note 11/08, International Monetary Fund, Washington, DC.

Bjorklund, Anders, Jesper Roine and Daniel Waldenström. 2008. *Intergenerational Top Income Mobility in Sweden: A Combination of Equal Opportunity and Capitalistic Dynasties*. Stockholm: Swedish Institute for Social Research.

Blanden, Jo, and Stephen Machin. 2007. *Recent Changes in Intergenerational Mobility in Britain*. London: Sutton Trust.

Böhlmark, Anders, and Matthew J Lindquist. 2006. Life-Cycle Variations in the Association Between Current and Lifetime Income: Replication and Extension for Sweden. *Journal of Labor Economics* 24 (4): 879-896.

Bowles, Samuel, and Herbert Gintis. 2002. The Inheritance of Inequality. *The Journal of Economic Perspectives*, 16 (3): 3-30.

BNM. 2017. *The Financial Stability and Payments System Report 2016*. Kuala Lumpur: Bank Negara Malaysia.

Cardone, Paolo Emilio, Jordà Joan Pau and Sanna Chiara. 2014. Social Mobility and Mortality in Southern Sweden (1813-1910). *Explorations in Economic History*. 48 (3): 342-356.

Census and Economic Information Center (CEIC) Data. https://www.ceicdata.com/en

Cutler, M. David, and Adriana Lleras-Muney. 2014. Education and Health: Insights from International Comparisons. In *Encyclopedia of Health Economics*, Vol. 1. Edited by A. J. Culyer. San Diego, CA: Elsevier: 232-245.

Chetty, Raj, Nathaniel Hendren, Patrick Kline and Emmanuel Saez. 2014. Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States. *The Quarterly Journal of Economics*, 129 (4): 1553-1623.

Currie, Janet. 2009. Healthy, Wealthy, and Wise: Socioeconomic Status, Poor Health in Childhood, and Human Capital Development. *Journal of Economic Literature*, 47 (1), March, pp. 87-122.

Davis, Kingsley, and Wilbert E. Moore. *1945*. Some Principles of Stratification. *American Sociological Review*, 10 (2): 242-249.

DOS. 1972. *Social Statistics Bulletin, Peninsular Malaysia 1969-1971*. Putrajaya: Department of Statistics Malaysia.

DOS. 1973a. *Annual Bulletin of Statistics, Sabah, 1972*. Putrajaya: Department of Statistics Malaysia.

DOS. 1973b. *Annual Statistical Bulletin, Sarawak, 1972*. Putrajaya: Department of Statistics Malaysia.

DOS. 1976. *Social Statistics Bulletin, Peninsular Malaysia, 1975*. Putrajaya: Department of Statistics Malaysia.

DOS. 1978. *Annual Statistical Bulletin, Sarawak, 1977*. Putrajaya: Department of Statistics Malaysia.

DOS. 1981a. *Annual Bulletin of Statistics, Sabah, 1980*. Putrajaya: Department of Statistics Malaysia.

DOS. 1981b. *Social Statistics Bulletin, Malaysia, 1980*. Putrajaya: Department of Statistics Malaysia.

DOS. 1982. *Annual Statistical Bulletin, Sarawak, 1981*. Putrajaya: Department of Statistics Malaysia.

DOS. 1986. *Social Statistics Bulletin, Malaysia, 1985*. Putrajaya: Department of Statistics Malaysia.

DOS. 1991. *Social Statistics Bulletin, Malaysia, 1990*. Putrajaya: Department of Statistics Malaysia.

DOS. 1997. *Social Statistics Bulletin, Malaysia, 1996*. Putrajaya: Department of Statistics Malaysia.

DOS. 2001. *Social Statistics Bulletin, Malaysia, 2000*. Putrajaya: Department of Statistics Malaysia.

DOS. 2015. *Household Income and Basic Amenities Survey Report, 2014*. Putrajaya: Department of Statistics Malaysia.

DOS. 2017c. *Household Income and Basic Amenities Survey Report, 2016*. Putrajaya: Department of Statistics Malaysia.

DOS. 2017a. *Salaries and Wages Survey Report, 2016*. Putrajaya: Department of Statistics Malaysia.

DOS. 2017b. Data requested from Department of Statistics Malaysia on Consumer Price Index. Department of Statistics Malaysia, Putrajaya.

DOS. n.d.-a. *Population Projections for the States of Peninsular Malaysia. Malaysia, 1970-1980*. Putrajaya: Department of Statistics Malaysia.

DOS. n.d.-b. *Population Projections, Malaysia, 1970-1990*. Putrajaya: Department of Statistics Malaysia.

DOS. n.d.-c. *Revised Inter-censal Population Estimates, Malaysia.* Putrajaya: Department of Statistics Malaysia.

DOS. *Labour Force Survey.* Various issues. Putrajaya: Department of Statistics Malaysia.

EPF. 2016. Data requested from the Employees Provident Fund (EPF). Kuala Lumpur: Employees Provident Fund Malaysia.

EPU. 1976. *Third Malaysia Plan, 1976-1980*. Putrajaya: Economic Planning Unit Malaysia.

EPU. 1986. *Fifth Malaysia Plan, 1986-1990*. Putrajaya: Economic Planning Unit Malaysia.

EPU. 2001. *Third Outline Perspective Plan, 2001-2010*. Putrajaya: Economic Planning Unit Malaysia.

EPU. 2006. *Ninth Malaysia Plan, 2006-2010*. Putrajaya: Economic Planning Unit Malaysia.

EPU. 2018. *Mid-term Review of the Eleventh Malaysia Plan, 2016-2020*. Putrajaya: Economic Planning Unit Malaysia.

Erikson, Robert, and John H Goldthorpe. 2002. Intergenerational Inequality: A Sociological Perspective. *The Journal of Economic Perspectives* 16 (3): 31-44.

Ferreira, Francisco H.G., Julian Messina, Jamele Rigolini, Luis-Felipe López-Calva, Maria Ana Lugo and Renos Vakis. 2012. *Economic Mobility and the Rise of the Latin American Middle Class*. Washington, DC: The World Bank.

Roslan Abdul Hakim. 2001. Income Inequality, Poverty and Development Policy in Malaysia. Paper presented at the International Seminar on Poverty and Sustainable Development organized by Université Montesquieu-Bordeaux IV and UNESCO, Paris, 22-23 November.

Heath, Anthony, and Clive Payne. 1999. Twentieth Century Trend in Social Mobility in Britain. Working Paper Number 70, Centre for Research into Election and Social Trends, Oxford.

Hirschman, Charles. 1972. Educational Patterns in Colonial Malaya. *Comparative Education Review*, 16 (3): 486-502. https://faculty.washington.edu/charles/new%20PUBS/A4.pdf

Ismail Muhd Salleh, and Saha Dhevan Meyanathan. 1993. *Malaysia: Growth, Equity, and Structural Transformation*. Washington, DC: The World Bank.

Jantti, Markus, Bernt Bratsberg, Knut Roed, Oddbjorn Raaum, Robin Naylor, Eva Osterbacka, Anders Bjorklund and Tor Eriksson. 2006. *American Exceptionalism in a New Light: A Comparison of Intergenerational Earnings Mobility in the Nordic Countries, the United Kingdom and the United States*. The Institute for the Study of Labor (IZA) No. 1938: 1-43.

Jomo, K. S. 1982. *Development and Population: Critiques of Existing Theories*. Kuala Lumpur: Population Studies Unit, Faculty of Economics and Administration, University of Malaya.

Jomo, K. S., and Wee Chong Hui. 2014. *Malaysia @ 50: Economic Development, Distribution, Disparities*. Singapore: World Scientific Publishers.

Kamaliah Mohamad Noh. 2011. Primary Health Care Reform in 1CARE for 1Malaysia. *International Journal of Public Health Research*, Special Issue: 50-56.

KRI. 2016. *Climbing the Ladder: Socio-economic Mobility in Malaysia*. Kuala Lumpur: Khazanah Research Institute.

KRI. 2017. *The Times They Are A-Changin': Technology, Employment, and the Malaysian Economy*. Kuala Lumpur: Khazanah Research Institute.

KRI. 2018. *The State of Households, 2018*. Kuala Lumpur: Khazanah Research Institute.

Khong How Ling, with Jomo K.S. 2010. *Labour Market Segmentation in Malaysian Services*. Singapore: National University of Singapore Press.

Khor, Niny, and John Pencavel. 2008. Measuring income mobility, income inequality, and social welfare for households of the People's Republic of China. Manila: Asian Development Bank. http://hdl.handle.net/11540/1517.

Mazumder, Bhashkar. 2008. Upward Intergenerational Economic Mobility in the United States. Economic Mobility Project, Pew Charitable Trusts.

Milanović, Branko. 2016. *Global Inequality: A New Approach for the Age of Globalization*. Cambridge, MA: Belknap Press.

MOHR. 2016. Minimum Wages Order 2016. Accessed 13 July 2017. http://minimumwages.mohr.gov.my/pdf/perintah_GM_PUA116.pdf

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

OECD. 2016. *Programme for International Student Assessment (PISA) 2015 Results, Vol. 1, Excellence and Equity in Education*. Paris: Organisation for Economic Co-operation and Development. http://dx.doi.org/10.1787/9789264266490-en

Pew Research Center. 2014. *Emerging and Developing Economies Much More Optimistic than Rich Countries about the Future*. Washington, DC: Pew Research Center.

Putnam, Robert D. 2016. *Our Kids: The American Dream in Crisis*. New York: Simon and Schuster.

Rodrik, Dani. 1999. Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses. *Journal of Economic Growth* 4 (4): 385-412.

UNESCO. 2015. *Malaysia: Education for All 2015 National Review*. Paris: United Nations Educational, Scientific and Cultural Organization.

United Nations. n.d. MDG2 Achieve Universal Primary Education. http://www.un.org.my/upload/mdg2.pdf

World Bank. 2015. *Malaysia Economic Monitor: Immigrant Labour*. Kuala Lumpur: World Bank.