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Explaining a 'development miracle': poverty reduction and human development in Malaysia since the 1970s

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Abstract

This paper provides a systematic assessment of the alleged exceptionality of Malaysia's development progress and its likely explanations, in a comparative perspective. Using cross-country regressions and aggregate indices of education, health, poverty and gender equality outcomes, we offer three findings. First, we provide evidence supporting the hypothesis that Malaysia's human development progress has been exceptional compared with that of countries with a similar level of economic development, primarily for the 1970s and 1980s, so showing that progress has early origins. Next, we show that such progress is explained by a combination of income-mediated and support-led mechanisms, including Malaysia's early emphasis on education and health inputs and infrastructure development. Finally, we argue that an early advantage in state capacity, *vis-à-vis* other countries of similar income level, may be at the origin of Malaysia's successful implementation of poverty-reduction and growth-enhancing policies.

Keywords

Malaysia, state capacity, institutions, poverty, human development

JEL Codes

I38, N35, O13, O53

1. Introduction

Many consider Malaysia's economic performance and development achievements since independence as a 'development miracle' (World Bank, 1993; Stiglitz, 2007; Dadzie, 2013). Malaysia was not only one of the handful of developing countries that experienced high and sustained macroeconomic growth in the postwar period, it did so by moving the economy away from being a raw commodity exporter to a manufacturing exporter, lifting the country into the upper middle-income category (Commission on Growth and Development, 2008; World Bank, 2010). Moreover, its levels of most social development indicators improved steadily. Poverty reduction, dropping from 49.3% of the population living below the poverty line in 1970 to 6% by 2002, was achieved well before the adoption of the Millennium Development Goals (MDGs) and across all ethnic groups (Henderson et al, 2002). Therefore, Malaysia is often cited as a success story of growth with redistribution.

Yet its success seems to challenge conventional explanations. First, Malaysia was historically characterised by ethnic tensions and race riots in its early years. Therefore, its achievements, *vis-à-vis* other ethnically divided countries, seem at odds with prevalent views on the challenges of economic performance, institutional development, poverty reduction and redistribution in countries characterised by ethnic, linguistic, and religious cleavages (see eg Alesina et al, 2003; Casey and Owen 2014). Second, one of Malaysia's chief traits was its natural resources dependence, which is often seen as a 'curse' on long-run development, particularly when the quality of government is weak (Frankel, 2012; Wenar, 2013; Venables, 2016). For example, the occurrence and intensity of internal conflicts, excess inequality, underinvestment in human capital and poor macroeconomic management are often attributed to economic dependence on hydrocarbons and mineral wealth (Collier, 2008; Isham et al, 2005; Gylfason, 2011). But Malaysia is cited as one of the economies that escaped the 'resource curse'.[1]

This paper provides a systematic empirical investigation of the alleged exceptionality of Malaysia's human development and offers some explanations for its progress, identifying specific channels. This is needed because, while the country is seen as challenging conventional explanations, and hence as a 'miracle', whether and to what extent Malaysia overachieves compared with countries with similar level of economic development is not well documented. Also, existing research on Malaysia has hitherto mainly looked at its economic performance.[2] Research on its human development, on the other hand, has looked at specific episodes or dimensions, without taking a long-

[1] However, Doraisami (2015) is an exception.

[2] For comparative studies on economic performance, see Naiya (2013) and Dadzie (2013). Studies looking at long-term growth are Menon (2009), focusing on macroeconomic policies, and Sen and Tyce (2017), looking at the political economy of growth phases. Ang and McKibbin (2007) provide evidence on the impact of financial liberalisation on financial sector development.

term view of the origins of its progress or providing systematic empirical testing of its likely explanations.[3]

The analysis has three steps. First, we look at the significance of Malaysia's development progress during the period 1970–2010 in comparative perspective, using a cross-country framework. This period coincides with the implementation of the *New Economic Policy* (NEP). We empirically investigate whether and to what extent Malaysia over-performs on key development indicators, testing whether and when Malaysia's progress is superior to that of economies with a similar level of economic development. The results suggest that its progress is exceptional along many dimensions: poverty, education, health, sanitation, and gender parity. In the case of income poverty reduction, the unusual achievement is that the biggest fall occurred during the 1970s, when extreme poverty was still widespread throughout the developing world and the pursuit of pro-poor policies was yet to be the norm. Second, further tests document the channels responsible for Malaysia's exceptionality, finding that the early reduction in poverty was achieved through a combination of rapid economic growth and redistribution, with an early emphasis on education and infrastructure development. Finally, we show that development progress during the 1970s coincided with an early advantage in key aspects of institutional development, *vis-à-vis* other countries of similar income level, related to state legal, fiscal and administrative capacity. Looking at the long-term roots of Malaysia's performance, we argue that historical developments during the colonial period are likely to have helped meet the necessary pre-conditions, through human capital channels, for effective state institutions and successful implementation of poverty reduction and human development in the post-independence era.

The paper is related to the wider debate on Asian development and to the literature on the origins of long-term development. In particular, the causes and mechanisms of East Asia's rapid economic growth have been subjected to much analysis, and a better understanding of the role of developmental states in East Asia's economic ascendency remains an important issue in this area. By re-examining Malaysia's human development progress, our study contributes to this specific literature on East Asia's development experience (see, for example, World Bank, 1993; Krugman, 1994; Baer et al, 1999; Booth, 1999; Perkins, 2013; Ranis and Stewart, 2012). Moreover, as the fiscal, legal and administrative capacity of the Malaysian state may be relevant in explaining its current development performance (Haggard, 2018; Booth, 1999; Noh, 2010; Shah, 2017; Tan, 2014), our study also adds to the broader literature on the long-run origins of comparative development. In particular, this paper complements this literature with a case study of the burgeoning macro-empirical literature in this area, emphasising the historical role of institutions (Acemoglu et al, 2001; Glaeser et al, 2004; Rodrik et al, 2004; Easterly and Levine, 2016) and state capacity (Besley and Persson, 2011; Bardhan, 2016; Savoia and Sen, 2015).

[3] Assessments of Malaysia's development include Henderson et al (2002), Fredericks (2011), Naguib and Smucker (2009), and Rodrigo and Mansor (2013).

The paper is organised as follows. Section 2 discusses the development trends during 1970–2013 in relation to other developing countries. Section 3 presents regression-based evidence on the alleged exceptionality of progress made in social development outcomes. Section 4 discusses the possible pathways to development in Malaysia, testing different channels. Section 5 concludes.

2. Malaysia's development trends

This section illustrates the evolution of Malaysia's economic and social development in comparative perspective. This will help us trace the origins of, and contextualise, its development performance. In the absence of consistent time-series data for the period 1950–69, we focus on the period starting from the 1970s.

The Malaysian economy has substantially grown since its independence, even during times of worsening global economic environment (Table 1). It went through a process of structural transformation that was similar to that in other postwar economies. The growth rate was fairly sustained between 1961 and 1976 and has continued to be significant over the following 20 years (Thillainathan and Kee-Cheok, 2016). The government provided incentives through import substitution, as well as export-oriented manufacturing activities. In the 1970s, high growth was driven by labour-intensive export-oriented industries like textiles and electronics assembly (Shari, 2000). During the country's graduation from being the world's largest rubber producer to becoming a diversified manufacturing export-oriented economy, agriculture's share of employment fell from 40% in 1975 to about 15% in 2000. At the same time, the state intervened to redistribute gains from economic growth, particularly during the 1970–90 period (Rasiah and Shari, 2001). Since Malays accounted for the bulk of the poor and rural residents, allocation of budgetary expenditure prioritised agricultural modernisation and rural development in the Five-year Plan (FYP) documents (Henderson et al, 2002; Yusof, 2011).

Table 1: Economic performance in Malaysia *vis-à-vis* ASEAN and developing countries, 1980–2013

Year	**1970**	**1975**	**1980**	**1985**	**1990**	**1995**	**2000**	**2005**	**2010**	**2013**
Panel (a): per capita GDP (constant 2005 US$)										
Malaysia	1383.28	1729.19	2318.24	2609.32	3147.09	4347.82	4861.86	5553.94	6318.90	6990.25
ASEAN 5 (Indonesia, Malaysia, Philippines, Thailand, and Vietnam)										
Mean	781.28	944.19	1216.10	1097.04	1372.53	1831.91	1949.22	2283.56	2671.35	2969.61
Sd	449.04	564.84	768.96	895.74	1090.47	1561.27	1738.75	1972.45	2208.15	2419.94
N	4	4	4	5	5	5	5	5	5	5
Asia (developing economies)										
Mean	613.49	705.24	822.65	826.03	1065.62	901.32	1028.35	1372.12	1803.29	2073.14
Sd	507.29	630.19	824.89	853.29	878.71	892.36	978.07	1240.44	1542.67	1713.39
N	12	12	13	17	23	24	24	26	26	26
Developing economies										
Mean	1851.76	3035.54	3283.29	2833.55	2809.16	3018.44	3629.45	4061.83	4273.18	3895.44
Sd	2635.55	8421.85	8591.55	6054.67	5078.90	5403.78	6783.64	7052.99	6571.78	5991.82
N	82	85	103	112	131	137	142	145	142	135
China	131.33	171.67	221.65	327.02	483.19	759.85	1122.26	1731.13	2870.05	3583.38
Year		**1971–75**	**1976–80**	**1981–85**	**1986–90**	**1991–95**	**1996–2000**	**2001–05**	**2006–10**	**2011–13**
Panel (b): Average per capita GDP growth										
Malaysia		4.63	6.05	2.44	3.87	6.68	2.46	2.72	2.66	3.42
ASEAN 5 (Indonesia, Malaysia, Philippines, Thailand, and Vietnam)										
Mean		3.87	5.06	1.45	4.39	5.34	1.64	3.64	3.73	3.95
Sd		1.20	1.28	3.02	2.61	3.14	2.43	1.26	1	0.81
N		4	4	5	5	5	5	5	5	5
Asia (developing economies)										
Mean		1.97	3.26	2.58	2.87	-1.34	3.29	5.43	5.62	5.07
Sd		2.61	2.43	2.50	4.11	8.90	2.72	3.42	2.83	2.40
N		13	13	17	21	25	25	27	26	26
Developing economies										
Mean		2.50	1.60	0.24	0.97	-0.09	2.60	3.10	2.84	2.63
Sd		4.12	4.42	3.61	3.82	6.13	5.91	3.62	3.01	2.94
N		86	95	114	125	137	141	146	145	143
China		5.65	5.34	8.14	8.17	9.55	8.12	9.06	10.66	7.68

Notes: GDP is calculated at PPP, 2005 constant prices. The developing countries' classification follows the IMF system (http://www.imf.org/external/pubs/ft/weo/2011/01/weodata/groups.htm, accessed: 25 August 2015).Data: World Bank (2016).

Table 2 presents data on poverty statistics for Malaysia *vis-à-vis* other developing regions. Two facts are worth highlighting. First, the country's poverty levels, expressed in terms of international lines, are historically lower than the average of ASEAN and other developing economies. Second, between 1981 and 2013, poverty headcount ratios fell dramatically. Specific accounts of income poverty in Malaysia show that this reduction slowed down in the mid-1980s, because of a recession to which the government responded by adopting stiffer taxes to raise revenue and so correct public deficits. But this adversely affected the poor (Demery and Demery, 1991). Regarding poverty decline in the MDGs era, the first decade of the new millennium saw the national incidence of poverty halved by 2009, while the national poverty gap index went down considerably between 1999 and 2007. By this measure, Malaysia has achieved target 1A of MDG Goal 1: the fall in rural poverty has surpassed the MDG target of halving the proportion of people whose income is less than US$1 a day between 1990 and 2015 (Rodrigo and Mansor, 2013).

Table 2. Eradicating extreme poverty: Malaysia *vis-à-vis* ASEAN and developing

Year	1971–75	1976–-80	1981–85	1986–90	1991–95	1996–00	2001–05	2006–10	2011–13
Panel (a): Poverty headcount ratio at $1.25 a day (PPP) (% of population)									
Malaysia			3.22	2.15	1.85	0.54	0.54	0	0
ASEAN 5									
Mean			30.72	27.05	31.15	24.09	16.74	12.60	9.89
Sd			25.05	25.56	27.74	23.08	14.96	11.33	9.51
N			4	4	5	5	5	5	4
Asia (developing economies)									
Mean			45.98	32.80	38.48	31.45	23.64	15.36	13.62
Sd			26.87	27.44	24.64	19.55	15.98	12.68	12.22
N			9	11	16	19	21	20	16
Developing economies									
Mean			31.20	18.37	28.96	24.95	24.29	20.37	19.15
Sd			27.95	22.31	28.09	25.51	22.50	24.80	23.16
N			20	53	78	81	95	84	67
China			76.72	57.10	57.83	41.95	22.31	12.43	7.72
Panel (b): Poverty headcount ratio at $2 a day (PPP) (% of population)									
Malaysia			12.31	11.50	11.09	6.84	7.81	2.60	2.27
ASEAN 5									
Mean			51.67	48.82	52.12	45.03	37.64	30.29	26.17
Sd			31.94	32.03	33.88	33.74	25.82	24.42	20.30
N			4	4	5	5	5	5	4
Asia (developing economies)									
Mean			69.18	53.79	61.48	55.08	48.08	36.68	34.95
Sd			28.67	36.45	28.64	25.49	22.68	23.47	22.47
N			9	11	16	19	21	20	16
Developing economies									
Mean			49.28	30.77	43.75	39.64	40.85	34.01	33.09
Sd			34.06	30.44	32.42	30.80	29.29	31.40	31.65
N			20	53	78	81	95	84	67
China			95.36	84.16	78.18	66.71	44.04	28.50	20.90

Notes: The developing countries' classification follows the IMF system (http://www.imf.org/external/pubs/ft/weo/2011/01/weodata/groups.htm, accessed: 25 August 2015). Data: World Bank (2016).

The observed patterns of poverty decline are less striking when compared with China, where 78% of the population was under the $1.90 a day (PPP) poverty line, during

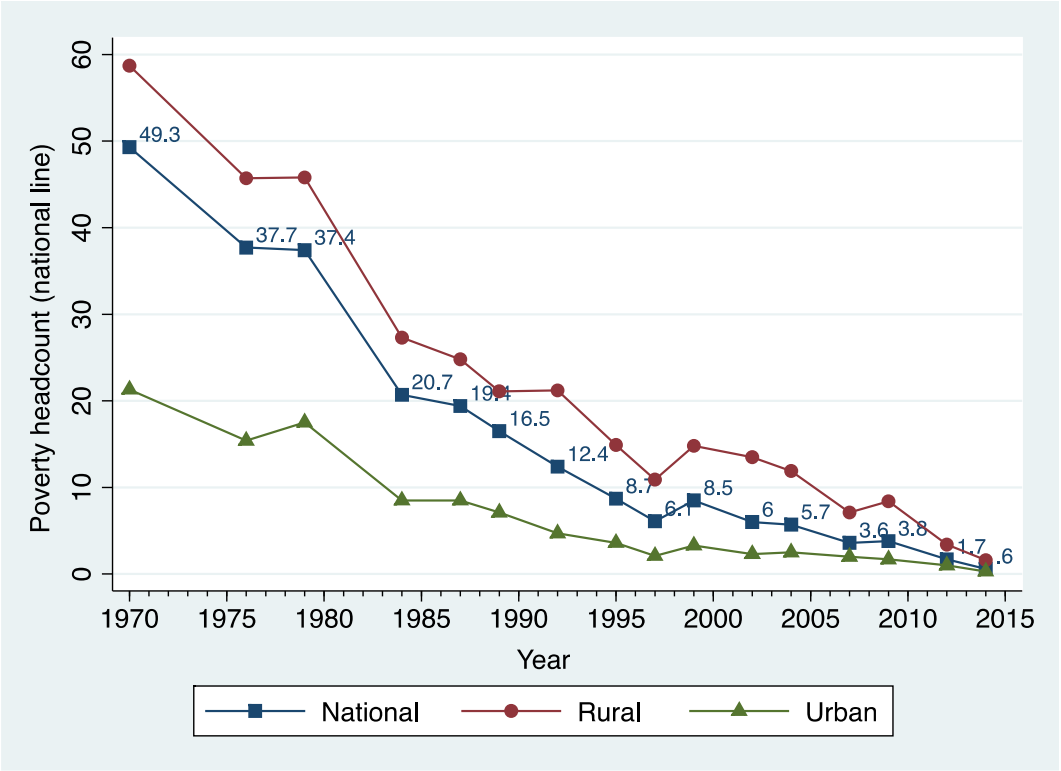
1991–95. This figure had fallen to 20.9% by 2011. Moreover, in terms of level of economic development, Malaysia faced more favourable conditions when compared with China. Its per capita income in 1980 was nearly ten times more than that of China (see Table 1).

Table 2, however, somewhat understates Malaysia's achievements in poverty reduction. International poverty line measures do not cover the 1970s and therefore overlook the fact that poverty has declined steadily since 1970, to the point of being almost eradicated by 2005. Figure 1 presents extended headcount statistics, based on national lines, showing that most poverty reduction occurred in the decade of the 1970s, when mass poverty was the norm throughout developing Asia. The biggest falls occurred during 1970–76 (12 percentage points) and 1979–84 (17 percentage points). This coincides with the NEP implementation period of 1971–90.

The NEP comprised a two-pronged strategy of poverty reduction and ethnic redistribution (ie. the elimination of the racial inequality in income, employment and wealth) in order to ensure national unity. In general, much of the poverty reduction in the 1970s has been attributed to the NEP (Edwards, 2005). While some have questioned the extent of poverty decline and the role of the NEP therein (eg Gomez and Jomo, 1997), independent assessments of poverty do confirm a substantial decline (see Shari, 2000).[4] Poverty policies during the 1990s were a continuation of the strategy developed over the previous 20 years, and were carried out through the 1991 National Development Policy (NDP), the successor to the NEP. Like the NEP, the NDP maintained the 'ethnicity-oriented' poverty policy (Roslan, 2003). A wide range of redistributive interventions were retained to help the *Bumiputera* ('sons of the soil' or indigenous Malays) to obtain parity with non-*Bumiputera* in income and wealth. However, there was also a shift in policy towards a more growth-focused strategy to reduce poverty instead of ethnicity-specific targets (Henderson et al, 2002).

[4] Malaysia's official poverty is well below that of other countries at a similar stage of economic development. However, the pattern of decline in poverty over time does not change even if a revised poverty measure is used (Ravallion, 2019).

Figure 1: Incidence of poverty in Malaysia

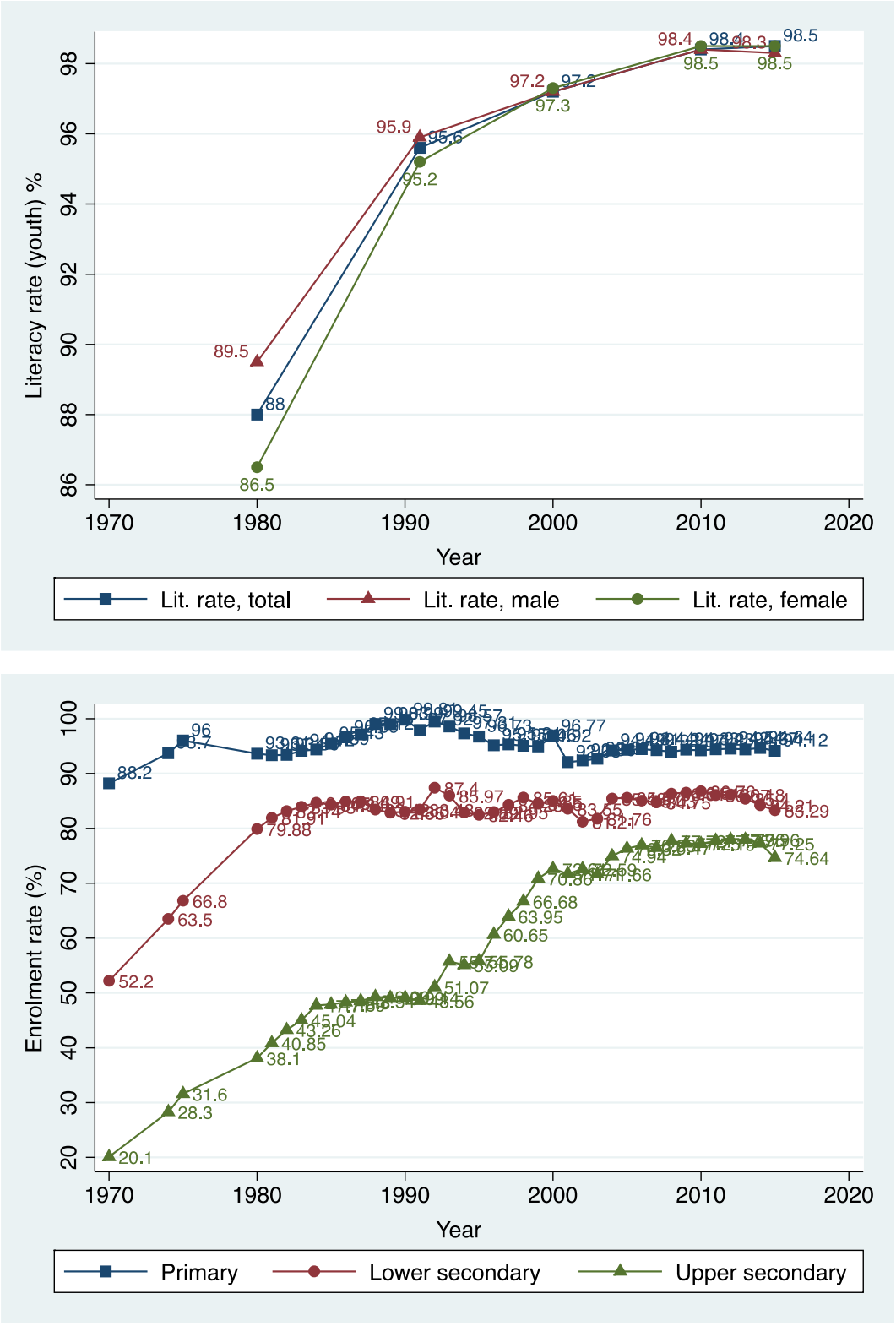


Source: Authors' calculations based on data from the Economic Planning Unit.

What about other development outcomes? Trends in other MDG indicators, a selection of which is reported in Figures 2-5, also reveal patterns of steady progress. For a start, youth literacy rates statistics suggest that Malaysia's achievement of universal primary education has been within close reach since the late 1970s. This is true for both males and females. Next, Malaysia's record on reducing child mortality and improving maternal health has been generally impressive, with the steepest decline occurring in the 1970s and 1980s. Most impressive, finally, is its improvement in immunisation rates, nearing universal coverage since the early 1990s.

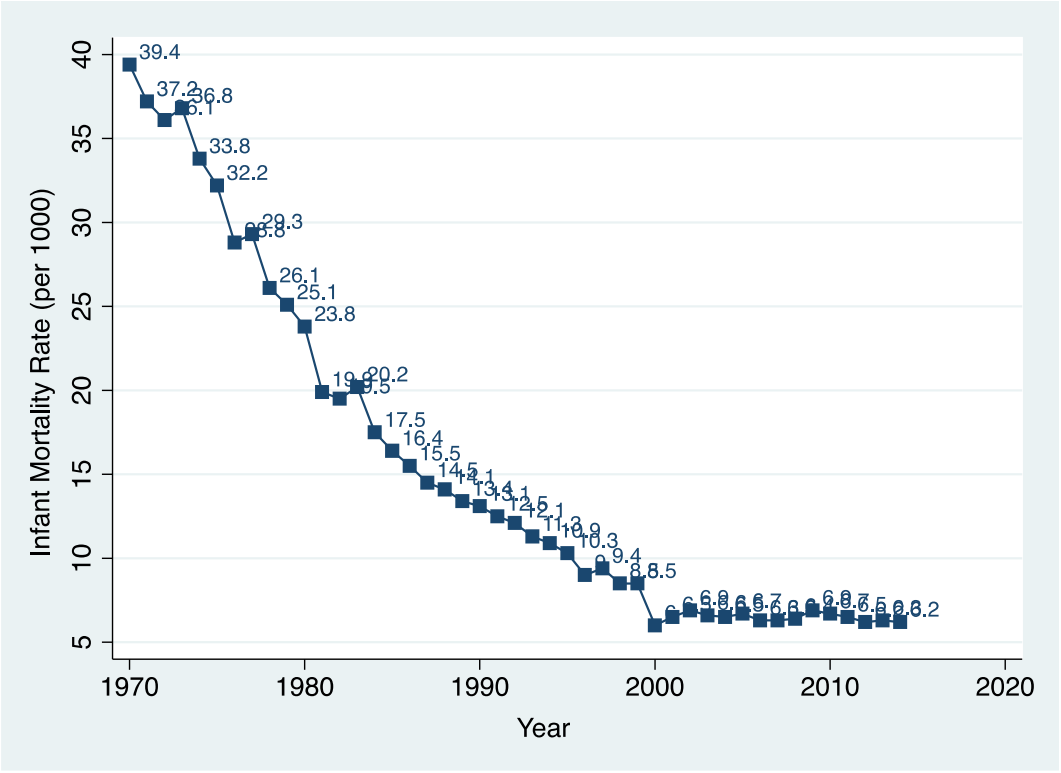
Overall, two facts seem to emerge. First, Malaysia's record on reducing income poverty and improving related social indicators, such as literacy rates, child mortality, maternal health and immunisation rates during 1970–90, has been one of steady improvement by regional and world standards. Second, Malaysia's development progress is not recent. Its steepest progress dates back to the 1970s, long before large-scale poverty reduction occurred in other areas of the developing world. When the MDG targets were announced, Malaysia was already an upper middle-income country, so many of the MDG targets represented no serious challenge. In the next sections, we ask whether such progress should be seen as exceptional, given Malaysia's level of economic development.

Figure 2: Youth literacy and enrolment rates in Malaysia



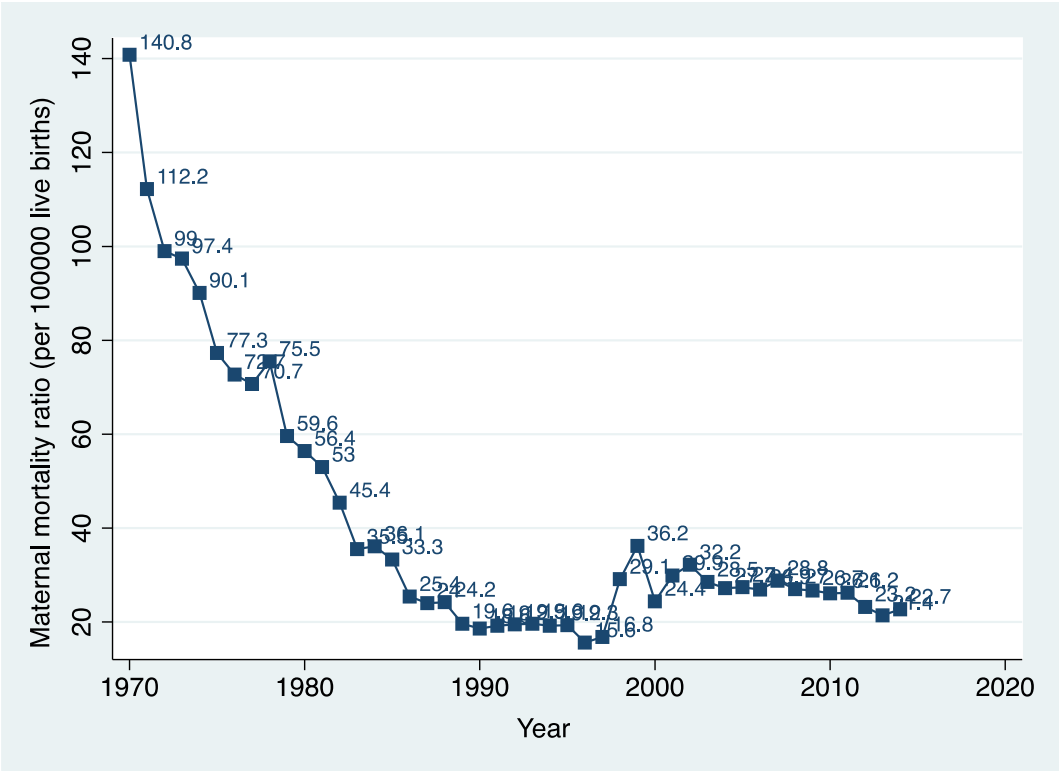
Source: Authors' calculations based on data from the Economic Planning Unit.

Figure 3: Infant mortality rate in Malaysia



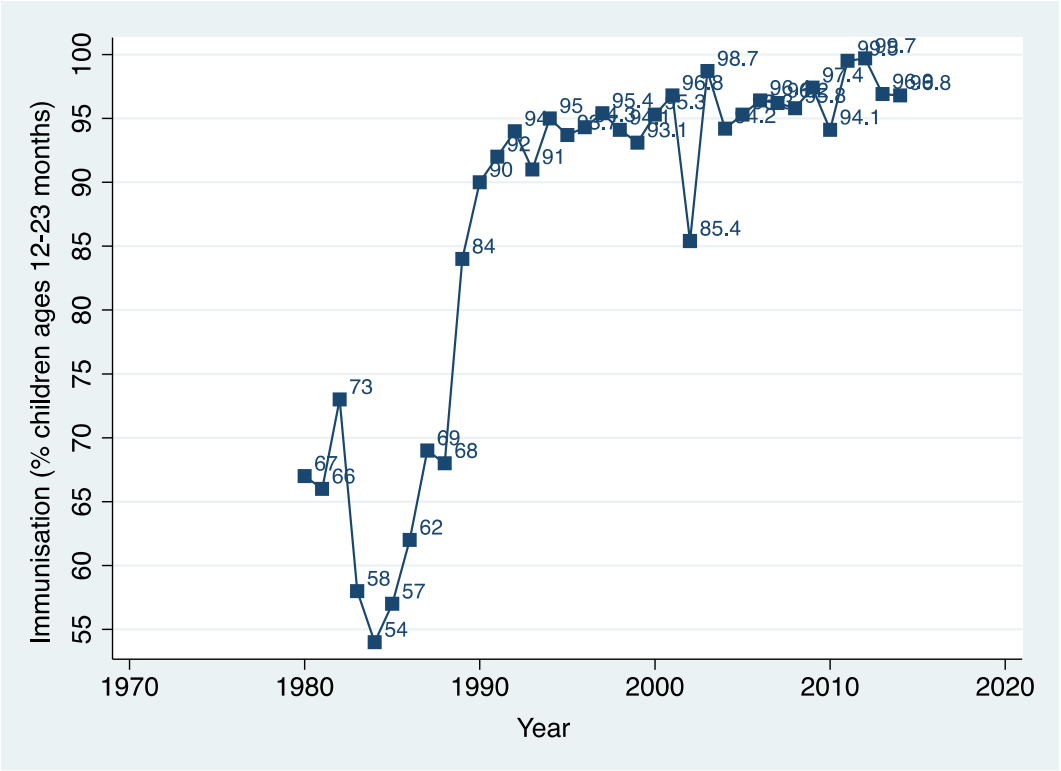
Source: Authors' calculations based on data from the Economic Planning Unit.

Figure 4: Maternal mortality rate in Malaysia



Source: Authors' calculations based on data from the Economic Planning Unit.

Figure 5: Immunisation (DPT) in Malaysia



Source: Authors' calculations based on data from the Economic Planning Unit.

3. Is Malaysia's development progress exceptional?

In this section, we provide evidence on whether Malaysia outperforms (or underperforms) other countries. Apart from income poverty, the analysis includes a number of human development indicators, to obtain evidence on whether the country's alleged exceptionality extends to relevant areas of the MDGs.

3.1 Methodology and data

To investigate the hypothesis that its progress is exceptional compared with countries with a similar level of economic development, we measure the extent of deviations of Malaysia from the expected value of various development indicators. We do so by estimating the following cross-country regressions (by Ordinary Least Squares):

$$D_i = \alpha + \beta_1 M_i + \beta_2 I_i + \varepsilon_i \qquad \text{with } i=1, \ldots, N \qquad (1)$$

where the dependent variable D_i is the value of each development indicator and I_i is the purchasing power parity (PPP)-adjusted per capita income (log). This is important, since Malaysia enjoyed favourable initial conditions in this respect compared with other

poor countries.[5] M_i is the Malaysia dummy and captures the deviations from the expected value for each development indicator. The hypothesis that Malaysia's human development is exceptional, in relation to other countries with a similar economic development, means that it would show up as a response outlier: the dependent variable of interest takes on an unusual value for economies with similar characteristics. In practice, this means detecting whether Malaysia can shift the intercept of the development outcome of interest (its interpretation is equivalent to calculating *studentised residuals*, which correspond to the t-stat one would obtain by including the Malaysia dummy). The hypothesis of Malaysia's development exceptionality suggests that the Malaysia dummy is expected to be statistically significant. To observe its evolution, we repeat such regressions for each five-year sub-period.[6] We use as dependent variables standard MDG targets: income poverty measures, literacy and enrolment rates in primary education, child mortality rates, maternal health and gender equality measures. All variables are from the World Development Indicators (World Bank, 2016).

3.2 Results

Table 3 presents estimated coefficients on the Malaysia dummy in poverty regressions. The results suggest that Malaysia's progress on poverty eradication has indeed been exceptional for the period 1981–95. For example, during 1981–85, over 15 percentage points less of Malaysia's population was living below $1.25 a day than would be normal for a country of its income level. After the mid-1990s, the coefficients on Malaysia dummies become statistically insignificant, showing no evidence of exceptionality. Note, however, that Malaysia's exceptionality in poverty reduction may have started earlier, since the steep decline in income poverty occurred in the 1970s.

[5] Malaysia's per capita income in the 1960s was higher than that of many of the current upper-middle-income countries (eg Botswana, China), as well as those that still remain lower-middle-income countries (eg Vietnam, Indonesia, Thailand). Botswana (US$210 in 1960) and China ($105 in 1961) were historically a lot poorer, against $790 of Malaysia in 1967 in constant 2000 US dollars (Commission on Growth and Development, 2008).

[6] The actual sample size might vary over time in the regressions presented. Rather than having the same sample over time, we preferred to use the largest possible sample in order to avoid any significant loss in degrees of freedom. However, once we restrict the analysis to the same set of countries for each of the development outcomes under scrutiny, the set of results (available on request) is indeed similar. Incidentally, we should also clarify that the regression framework we use is a useful tool to highlight the exceptionality of certain development outcomes (or of factors contributing to specific development outcomes). But it is not a tool for causal inference.

Table 3: Coefficient on Malaysia dummy in poverty regressions, 1981–2013

1971–75	1976–80	1981–85	1986–90	1991-95	1996–2000	2001–05	2006–10	2011–13
Poverty headcount ratio at $1.25 a day (PPP) (% of population)								
-	-	-15.36***	-11.49***	-7.69***	2.51	2.41	3.57	2.24
		(3.78)	(1.87)	(2.13)	(1.73)	(1.68)	(13.15)	(1.37)
Poverty headcount ratio at $2 a day (PPP) (% of population)								
-	-	-21.17***	-12.37***	-9.67***	0.79	3.15	1.04	0.43
		(4.84)	(2.43)	(2.52)	(2)	(2.04)	(1.76)	(1.63)
Poverty gap at $1.25 a day (PPP) (%)								
-	-	-5.24***	-5.28***	-3.35***	1.67	0.86	0.55	1.32
		(1.53)	(0.96)	(1.13)	(1.02)	(0.89)	(3.33)	(7.45)
Poverty gap at $2 a day (PPP) (%)								
-	-	-10.38***	-7.96***	-5.38***	1.69	1.54	2.04	1.18
		(2.57)	(1.37)	(1.53)	(1.25)	(1.21)	(8.92)	(0.95)
N		20	43	69	81	95	84	78

Notes: The dependent variable in each regression is measured as a five-year average. All regressions control for one-year lagged level of per capita income (log GDP) and were conducted on a sample of developing economies (following the IMF classification). Heteroskedasticity-robust standard errors are in parentheses; ***, ** and * indicate significance at the 1%, 5% and 10% level (two-tailed test). *Data: World Bank (2016).*

Where other non-income poverty MDG indicators are concerned, the results in Table 4 show that Malaysia outperforms countries with similar levels of economic development on a number of indicators for achieving universal primary education and reducing child mortality (both infant and under-5); the same goes for improving maternal health. For example, in the 1976–80 period, 9 percentage points more of Malaysia's young population was more literate than is normal for a country of its income level, reflecting an 'excess' literacy of 6 percentage points for males and 12 percentage points for females. Also remarkable is the superior ranking in cross-country data in terms of female schooling in the 1970s and 1980s. However, the country underperforms in terms of promoting gender equality, post-2000, particularly in terms of women's representation in the national parliaments.

Table 4: Coefficient on Malaysia dummy in MDG regressions, 1971–2013

1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	2001–05	2006–10	2011–13
Panel (a): achieve universal primary education								
Literacy rate, youth, total (% of people ages 15–24)								
-	9.04**	-	-	6.92***	-1.57	-	-0.92	1.56
	(3.40)			(1.98)	(2.98)		(1.98)	(1.11)
	31			43	60		76	78
Literacy rate, youth, male (% of males ages 15–24)								
-	5.95**	-	-	4.28***	-0.98	-	-0.54	1.13
	(2.59)			(1.36)	(2.44)		(1.62)	(0.90)
	31			40	60		76	78
Literacy rate, youth, female (% of females ages 15–24)								
-	12.05***	-	-	8.92***	-2.05	-	-1.25	1.76
	(4.30)			(2.44)	(3.49)		(2.32)	(1.32)
	31			40	60		76	78
School enrolment, primary (% net)								
19.03***	-	-	-	10.86***	3.78**	3.49***	-	-
(2.68)				(2.41)	(1.52)	(1.30)		
57				73	116	116		
School enrolment, primary, male (% net)								
17.06***	-	-	-	11.07***	4.33***	4.49***	-	-
(2.89)				(2.29)	(1.57)	(1.25)		
49				63	109	107		
School enrolment, primary, female (% net)								
21.79***	-	-	-	13.33***	4.75***	2.93*	-	-
(3.36)				(2.69)	(1.74)	(1.49)		
49				63	109	107		
Panel (b): promote gender equality								
Ratio of female to male, primary enrolment (%)								
16.95***	12.84***	8.08***	5.57***	4.16***	1.36**	-1.86***	-	-
(2.07)	(1.77)	(1.29)	(1.01)	(0.84)	(0.64)	(0.64)		
111	109	109	113	118	135	135		
Ratio of female to male, secondary enrolment (%)								
3.40	12.40***	12.26***	9.09***	9.60***	4.23**	2.83*	-6.43***	-6.12***
(2.60)	(3.09)	(3.30)	(2.90)	(2.19)	(1.84)	(1.59)	(1.33)	(1.25)
102	91	92	94	96	120	121	121	104
Ratio of female to male, tertiary enrolment (%)								
	4.12	7.23	-14.65**	-	-26.11***	-15.95***	-24.83***	-22.09***
	(4.13)	(4.38)	(5.80)		(6.20)	(6.05)	(5.73)	(6.51)
	83	75	75		101	111	107	95
Proportion of seats held by women in national parliaments (%)								
-	-	-	-3.51***	-	-0.77	-1.68	-4.20***	-5.85***
			(1.03)		(0.95)	(1.08)	(1.11)	(1.20)
			99		137	145	145	144
Panel (c): reduce child mortality								
Mortality rate, infant (per 1,000 live births)								
-56.64***	-47.57***	-36.13***	-29.26***	-23.19***	-11.33***	-10.36***	-8.96***	-8.01***
(3.46)	(3.00)	(2.50)	(2.33)	(2.09)	(2.10)	(1.87)	(1.58)	(1.48)
106	113	121	122	133	145	144	144	144
Mortality rate, under-5 (per 1,000 live births)								
-97.37***	-79.75***	-56.02***	-42.92***	-33.33***	-12.39***	-11.32***	-10.24***	-9.40***
(6.23)	(5.20)	(4.15)	(3.86)	(3.51)	(3.70)	(3.23)	(2.58)	(2.30)
105	112	121	122	133	145	144	144	144
Panel (d): improve maternal health								
Contraceptive prevalence (% of women aged 15–49)								
5.90*	-	12.78***	3.01	4.23	-	-17.30***	-	-
-(3.06)		(2.40)	(2.57)	(3.19)		(3.85)		
16		45	64	79		95		

*Notes: The dependent variable in each regression is measured as a five-year average. All regressions control for a one-year lagged level of per capita income (log GDP) and were conducted on a sample of developing economies (following the IMF classification). Heteroskedasticity-robust standard errors are in parentheses; ***, ** and * indicate significance at the 1%, 5% and 10% level (two-tailed test). Literacy rates for the most recent period are from Malaysia's Economic Planning Unit (EPU) and refer to 2015. Data: World Bank (2016); and, for Malaysia literacy rates during 2011-2013, EPU (2016).*

Taken together, the results suggest that Malaysia's development record is exceptional along many dimensions. Such exceptionality is primarily related to the 1970s and 1980s and so seems to have early origins. Indeed, earlier literature indicates that Malaysia was already ahead of other low-income countries in the pre-independence years on a number of health outcomes and inputs.[7] Also, as dependence on natural resources appears to undermine economic development by crowding out human capital accumulation (Gylfason, 2011), Malaysia's early achievements in education and health show why the country is an exception to such a resource curse argument.[8]

4. Pathways to development: explaining Malaysia's progress

What explains Malaysia's development progress? Sen (1999, chapter 2) distinguishes between income-mediated and support-led human development. This section assesses both types of pathway, investigating a number of potential channels the literature has proposed.[9]

4.1 Methodology and data

The methodology here is similar to that in the previous section, except that here we measure the extent of Malaysia's deviations from the expected value of indicators capturing each specific channel. We do so by estimating the following cross-country regressions:

$$C_i = \alpha + \beta_1 M_i + \beta_2 I_i + \varepsilon_i \qquad \text{with } i=1, \ldots, N \qquad (2)$$

where C_i is the variable capturing a specific channel and I_i is the purchasing power parity (PPP)-adjusted per capita income (log). The hypothesis that a specific channel

[7] Infant mortality had already been declining dramatically since the Second World War (DaVanzo and Habicht, 1986). Life expectancy was also considerably higher compared with other middle-income tropical countries (Gwatkin, 1980). At the time of independence, the life expectancy rate in Malaysia was 64 years, higher than in Brazil, Mexico and Turkey (63.2, 61.4 and 56.4 years, respectively) (Heller, 1975). Malaysia also enjoyed a lower (registered) infant mortality rate (64) compared with other middle-income countries such as Mexico and Chile (77.3 and 120, respectively) (Heller, 1975). A substantive decline in the mortality rate occurred during the interwar period, long before Malaysia's independence (Manderson, 1996). Birth rates (fertility) also declined significantly during 1957 and 1967 (Cho et al, 1968). Malaysia's stock of medical personnel placed it well above the World Health Organisation minimum of one doctor per 10,000 and one nurse per 5000 people (Meerman, 1979). In sharp contrast to other poor countries, Malaysia's system of health administration was decentralised at independence. This, along with the extensive network of public rural clinics, gave rise to the large number of paramedics (Meerman, 1979).

[8] Key reasons why resource-dependent countries grow more slowly are low public expenditure on education relative to national income, and low levels of female schooling, and secondary-school enrolment (Gylfason, 2011). A related argument (see Kurtz and Brooks, 2011) suggests that the developmental consequences of resource wealth are conditioned by domestic human capital resources, in the absence of which the management of resources is inefficient and wasteful.

[9] One view explaining Malaysia's development progress emphasises economic growth and an increase in labour productivity (Gomez and Jomo, 1997; EPU, 2016), while another highlights policy interventions under the auspices of the NEP (Snodgrass et al., 2002; Shari, 2000).

has contributed to Malaysia's development progress suggests that the Malaysia dummy should be statistically significant. We use as dependent variables data from the World Bank (2016), unless otherwise indicated in the tables.

4.2 Did economic growth matter?

The importance of the income-mediated channel for the Malaysian case has long been recognised (eg Gomez and Jomo, 1997; Naiya, 2013). However, the regressions in Table 5 provide an econometric appreciation. They show that exceptionally high levels of economic growth throughout 1971–95, compared with those in countries at the same level of economic development, have facilitated poverty reduction by raising average incomes. The poverty regressions in Table 3 reflect the significance of this channel. It remains to be seen, however, which support channels have been most important and how significant these have been. Indeed, many emphasise the role of social expenditure programmes in health care and basic education as an important part of Malaysia's strategy for reducing poverty (eg Hammer et al, 1995; Snodgrass et al, 2002, Shari, 2000).[10] In the rest of this section, therefore, we concentrate on the significance of such pathways to development.

Table 5: Coefficient on Malaysia dummy in growth regressions, 1971–2010

1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	2001–05	2006–10
Average per capita GDP growth							
2.12***	4.54***	2.11***	2.87***	5.48***	0.70	-0.59	0.21
(0.45)	(0.57)	(0.39)	(0.47)	(0.43)	(0.47)	(0.41)	(0.43)
81	89	107	112	123	140	145	145

*Notes: Dependent variables are measured as five-year averages. Regressions control for a one-year lagged level of per capita income (log GDP) and were conducted on a sample of developing economies (following the IMF classification). Heteroskedasticity-robust standard errors are in parentheses; ***, ** and * indicate significance at the 1%, 5% and 10% level (two-tailed test). GDP is calculated at PPP, 2005 constant prices. Data: World Bank (2016).*

4.3 Did public expenditure matter?

We also test whether Malaysia's development progress is likely to be expenditure-led, by estimating the coefficient on the Malaysia dummy in expenditure regressions (Table 6). The coefficient in educational expenditure regressions is positive and significant throughout, constituting evidence in favour of a support-led pathway, which falls under the conventional 'resource mobilisation' hypothesis (Krugman, 1994).[11] However, no

[10] For a review of economic and social policies in Malaysia, see Naguib and Smucker (2011).
[11] A popular view is that fast-growing Asian economies, including Malaysia, have expanded through input growth and factor accumulation, instead of innovation and productivity growth (Krugman, 1994; Easterly, 1995).

such evidence is present in the case of health expenditure, which seems to be abnormally low. Education expenditure as a share of the total development budget increased from 6% in 1970, to 21% in 2003. During the same period, health expenditure stagnated between 3% and 7% (UNDP, 2005).[12]

This exceptionally high public spending on education suggests that human-capital accumulation could have been a key channel. Indeed, the exceptional achievements in school enrolment and literacy, documented in Table 4, followed from the boom in educational expenditure. Moreover, early achievements in education could have been instrumental to creating improvements in other human development outcomes.[13] The decline in infant mortality in the 1960s and 1970s, for instance, is credited to the rise in female schooling.[14]

Table 6: Coefficient on Malaysia dummy in health and education expenditure regressions, 1971–2010

1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	2001–05	2006–10
Public spending on education, total (% of GDP)							
2.09***	1.81***	1.91***	1.65***	-	1.01***	2.27***	-0.15
(0.19)	(0.20)	(0.25)	(0.51)		(0.33)	(0.30)	(0.24)
70	78	78	22		117	114	106
Public spending on health, total (% of GDP)							
-	-	-	-	-1.72***	-1.76***	-1.40***	-1.58***
				(0.19)	(0.19)	(0.18)	(0.21)
N				129	145	145	144

*Notes: Both types of public expenditures are expressed as a share of GDP and measured as five-year averages. Regressions control for the one-year lagged level of per capita income (log GDP) and were conducted on a sample of developing economies (following the IMF classification). Heteroskedasticity-robust standard errors are in parentheses; ***, ** and * indicate significance at the 1%, 5% and 10% level (two-tailed test). The share of public spending on education for 1986–90 is from EPU.Data: World Bank (2016); and, for public spending, EPU (2016).*

[12] However, the emphasis on education was in place in the pre-1970 years. The government guaranteed six years of free basic education three years after independence and had extended that to nine by late 1960s (Ahmad et al, 2003).

[13] It has been argued that East Asian countries that invested heavily in health and education in their pre-reform period entered a virtuous cycle of high human development and high economic growth (Ranis and Stewart, 2012).

[14] For example, there is evidence based on household survey data from the 1970s that increases in maternal education level explained nearly half the reduction in the infant mortality rate over the period (DaVanzo and Habicht, 1986).

As a further test of the support-led hypothesis, we examine whether Malaysia's development progress has been driven by high accumulation of inputs in a range of social sectors. Table 6 presents estimates of the coefficient on the Malaysia dummy in health and education inputs regressions. The results suggest that redistributive channels may be partly responsible, targeting specific aspects of human capital accumulation. In particular, the evidence suggests that a strategy of human capital accumulation in the form of education may have been the chosen redistributive channel since the 1970s. Education inputs regressions suggest that public resources may have gone into inputs for primary school education, rather than for secondary school education.

However, evidence on health inputs is mixed. In the face of abnormally low health public spending (Table 6), Malaysia focused on specific health inputs (Table 7).[15] In terms of hospital beds per 1,000 people, it systematically underperformed compared with other similar income countries at all times. The immunisation (measles) rate also did not improve significantly. Although immunisation programmes started in 1960s, coverage against disease was limited. Coverage for measles increased from 70% in 1990 to 88% in 2000 (UNDP, 2005). However, the country did significantly better in terms of births attended by skilled health staff. This was partly to the result of a shift to institutional deliveries from the mid-1980s, which jumped from 50% in 1980 to 95% in 2000 (UNDP, 2005). In addition, the positive and significant coefficient in 'Births attended by skilled health staff (% of total)' regressions, at least in the 1980s, is partly driven by the fact that in 1969 Malaysia had a more favourable ratio of population per unit of nursing and midwifery personnel, even when compared with other countries with similar income levels (eg Brazil) or richer (eg Chile) (Heller, 1975).[16]

[15] However, this is primarily because we do not have data on health expenditure for the 1970s. Soon after independence in 1957, the Malaysian government increased budgetary allocations to combat endemic diseases, introduced preventive medical care and extended health services (including maternal–child health care) in rural locations (Abu Bakar, 1981).
[16] However, Brazil and Chile had more physicians per person.

Table 7: Coefficient on Malaysia dummy in health and education inputs regressions, 1971–2010

1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	2001–05	2006–10
Panel (a): Health inputs							
Births attended by skilled health staff (% of total)							
-	-	-	18.37***	13.01***	1.91	0.95	3.61**
			(3.06)	(2.06)	(1.95)	(1.96)	(1.59)
			47	88	133	125	130
Immunisation, DPT (% of children ages 12–23 months)							
-	38.73***	13.48***	0.59	10.46***	3.74**	3.48**	0.83
	(2.84)	(2.88)	(1.86)	(1.33)	(1.57)	(1.37)	(1.29)
	120	120	122	134	147	147	147
Immunisation, measles (% of children ages 12–23 months)							
-	-18.49***	-28.79***	-11.68***	1.53	-4.00***	0.22	2
	(2.69)	(2.69)	(1.87)	(1.33)	(1.44)	(1.33)	(1.23)
	120	120	122	134	147	147	147
Hospital beds (per 1,000 people)							
1.06***	-	-0.70*	-0.74***	-1.81***	-1.80***	-1.64***	-1.51***
(0.19)		(0.40)	(0.25)	(0.37)	(0.33)	(0.29)	(0.27)
58		55	104	73	96	120	131
Panel (b): Education inputs							
Pupil–teacher ratio, primary							
-2.58**	-4.95***	-7.30***	-8.04***	-7.12***	-0.51	-1.80*	-3.10***
(1.04)	(0.89)	(1.02)	(0.96)	(0.95)	(0.93)	(1.02)	(0.92)
103	94	91	90	103	125	129	130
Pupil–teacher ratio, secondary							
5.63***	1.87***	1.94***	0.49	0.87	2.26***	1.22*	0.65
(0.77)	(0.70)	(0.72)	(0.62)	(0.58)	(0.67)	(0.66)	(0.70)
101	93	87	84	100	109	121	108

*Notes: The dependent variable in each regression is measured as a five-year average. All regressions control for a one-year lagged level of per capita income (log GDP) and were conducted on a sample of developing economies (following the IMF classification). Heteroskedasticity-robust standard errors are in parentheses; ***, ** and * indicate significance at the 1%, 5% and 10% level (two-tailed test).Data: World Bank (2016).*

4.4 Did foreign aid and public infrastructure matter?

Support-led channels include the flow of external funds and increased public spending on public goods, such as communications and transport infrastructure. In the case of Malaysia, foreign aid inflows increased 10 times between the second and seventh FYP (by 1996–2000). One tenth of this took the form of technical aid (UNDP, 2005). Therefore, below we test the significance of these factors. The results show that development progress in Malaysia is unlikely to have been driven by external resources (Table 8, Panel (a)**)**. Instead, our tests again present evidence in favour of

the domestic support-led story, ie the role of public infrastructure growth (Table 8, Panel (b)). Malaysia ranks very highly in cross-country data in terms of physical infrastructure, such as road networks and harbours (World Economic Forum, 2017). Consistently, Malaysia dummies are highly significant and positive in almost all regressions on communications infrastructure (eg mobile cellular subscriptions, inter-users regression, telephone lines). Physical infrastructure regressions also show a comparative advantage, although the result is specific to 'paved roads' only.

Table 8: Coefficient on Malaysia dummy in infrastructure and external aid regressions, 1971–2010

1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	2001–05	2006–10
Panel (a): Foreign aid							
Net ODA received per capita (current US$)							
-17.12***	-37.99***	-36.15***	-50.60***	-70.72***	-102.75***	-58.55***	-83.30***
(2.93)	(6.88)	(6.41)	(8.99)	(11.91)	(26.17)	(10.34)	(14.32)
112	110	111	112	128	133	133	132
External resources for health (% of total expenditure on health)							
-	-	-	-	-4.69***	-1.80	-2.35**	-2.25**
				(1.26)	(1.38)	(1.18)	(1.13)
N				130	145	146	144
Panel (b): Public infrastructure							
Internet users (100 people)							
-	-	-	-	-0.07*	6.61***	25.38***	27.29***
				(0.04)	(0.22)	(0.84)	(1.67)
N				84	142	145	143
Mobile cellular subscriptions (per 100 people)							
-	-	-0.00	0.18***	1.80***	6.97***	15.89***	7.42**
		(0.00)	(0.01)	(0.10)	(0.58)	(2.05)	(3.40)
N		120	120	129	144	145	144
Telephone lines (per 100 people)							
-0.26*	-0.26	0.94***	1.53***	2.63***	2.14*	-1.74	-3.47***
(0.15)	(0.23)	(0.35)	(0.56)	(0.72)	(1.11)	(1.18)	(1.14)
90	105	119	120	131	144	145	144
Roads, paved (share of total mileage)							
-	-	-	31.32***	28.25***	21.73***	28.23***	24.24***
			(3.52)	(2.95)	(3.41)	(3.62)	(5.27)
N			82	104	115	125	69
Roads density (km of road per 100 sq km of land area)							
						-16.17**	-10.72
-	-	-	-	-	-	(6.47)	(8.27)
N						133	82

*Notes: The dependent variable in each regression is measured as a five-year average. All regressions control for a one-year lagged level of per capita income (log GDP) and were conducted on a sample of developing economies. Heteroskedasticity-robust standard errors are in parentheses; ***, ** and * indicate significance at 1%, 5% and 10% level (two-tailed test). Data: World Bank (2016).*

5. Origins of Malaysian progress: did income inequality and government quality matter?

The results suggest that support-led channels were important, as well as income-mediated ones. Indeed, the evidence provided above suggests that Malaysia's social spending has influenced selected education and health inputs, where the country enjoyed abnormally high levels. The results also suggest that support-led channels worked by providing an early advantage in physical and communications infrastructures. Last, they rule out the notion that foreign aid has played a major role. This section investigates which structural, long-term factors may have facilitated this.

The evidence on the importance of support-led channels implies that Malaysia's development progress has been "domestically engineered". This requires two key ingredients: a good deal of domestic political support for reforms and a state that is institutionally capable of delivering goods and services, as well as implementing policies. Since we have also seen that growth and human development in Malaysia had early origins, this calls for more analysis of the structural factors that contributed to creating such political and institutional conditions for effective development policy. In this section, we explore the role of inequality and of the quality of government.

5.1 On the role of inequality

Societies with low levels of economic inequality are less likely to see heightened social conflict, making it easier to build coalitions supporting economic and social reforms (Rodrik, 1999). This may therefore be one structural factor that facilitated early development progress. Historically, income inequality in the East Asian countries was much lower than in other developing regions in the 1960s (World Bank, 1993). Does Malaysia fall in line with this regional characteristic? The role of inequality is challenging to test. It is well known that comparable data across countries are rare and may generate imprecise comparisons (see Atkinson and Brandolini, 2001). Nonetheless, we resort to a popular database that attempts to adjust available data for methodological differences across countries (Solt, 2016). Gini index regressions, in Table 9, suggest that Malaysia was an unusually unequal country in the 1970s (given its level of economic development). Such exceptionality disappears in the late 1980s, and it seems even reversed in its more recent history.

Apart from cross-country regressions, we also look at case study historical evidence from the region, to check whether inequality is indeed historically low or high, compared with other countries. The related literature on the origins of inequality indicates that Malaysia starts as quite an unequal economy, both among the Asian economies and within the wider colonial landscape. As a colony, Malaysia is seen as an exception among the 'peasant colonies', because of its plantation economy. Although Europeans constituted only a small minority of the population (unlike 'New

Europes' and 'settler colonies'), said minority did not just represent administrators and tax collectors (as in most 'peasant colonies'); it also appropriated key assets related to the production of tin and rubber, thereby generating high levels of inequality (Angeles, 2007). Indeed, land inequality seemed to be a great deal higher than in colonies sharing similar historical and geographical characteristics, presenting the highest post-independence level in Asia (Frankema, 2010). Therefore, it seems unlikely that abnormally low inequality is the structural factor kick-starting subsequent development progress in the 1970s. [17]

Table 9: Coefficient on Malaysia dummy in inequality regressions, 1971–2010

1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	2001–05	2006–10
Inequality channel							
Gini index, SWIID (est market income)							
1.77	10.81***	11.71***	3.26**	-1.60	-1.33	-3.36***	-6.69***
(1.90)	(1.66)	(1.65)	(1.35)	(1.17)	(1.21)	(1.18)	(1.20)
48	46	50	62	83	108	113	96

Notes: The dependent variable in each regression is measured as a five-year average. All regressions control for a one-year lagged level of per capita income (log GDP) and are on a sample of developing economies. Heteroskedasticity-robust standard errors are in parentheses; ***, ** and * indicate significance at 1%, 5% and 10% level (two-tailed test). *Data: Standardised World Income Inequality Dataset - SWIID (http://fsolt.org/swiid) and World Bank (2016).*

5.2 On the quality of government

What about the role of quality of government? Some have suggested that efficient bureaucracy and transparent economic governance were central to Malaysia's development success (Naguib and Smucker, 2011; Slater, 2012; Shah, 2017).[18]

[17] However, given the wide range of market and non-market transfers specific to *Bumiputeras*, income inequality reduction (particularly across race groups) is likely to be an important, though not necessarily dominant, channel of income poverty reduction during the 1980s. National-level evidence shows that income inequality, as measured by the Gini index, peaked in 1976 and declined significantly thereafter to 1990, rising again only in the 1990s, partly because of liberalisation, deregulation and privatisation and impediments to the process of internal migration since the late 1980s (Ragayah, 2008). Recent trends show that, although between 1992 and 2009 there has been a slight decline in income inequality, income inequality remains relatively high by Asian standards (Kanbur et al, 2014). Country-specific evidence indicates that overall economic growth, instead of ethnic inequality reduction, has been the principal driver of poverty reduction in Malaysia. Growth in mean household income accounted for three-fourth of the reduction in absolute poverty in Malaysia since mid-1980s, with only a quarter owing to falling inequality (Ravallion, 2019).

[18] Others emphasise how Malaysia's institutional setting played a key role in successfully managing ethnic conflict (Horowitz, 1989). A third view is that Malaysia did not have a capable

Recent accounts in comparative economic development emphasise state capacity as a key ingredient for poverty reduction (Ravallion, 2009). One argument emphasises that states can reduce poverty when their institutions are able to raise revenues to finance policies and provide a secure contractual environment that stimulates economic growth (Besley and Persson, 2011). A second argument has noted the capacity of states to resolve coordination failures (Bardhan, 2016) and to administer their territory in order to deliver goods and services to their citizens (Evans and Rauch, 1999). Did Malaysia have an advantage in this respect?

Table 10 presents coefficients on the Malaysia dummy from regressions that use a range of quality-of-government indicators capturing key aspects of state capacity: legal, administrative and fiscal. Holding differences in per capita income constant across countries, in most cases governance quality is plausibly one of the channels behind Malaysia' poverty eradication. In particular, the country seems to fit familiar Asian development stories, as it does better than other countries along governance dimensions closely linked to state capacity. For example, on the 'Quality of legal system' measure, Malaysia has been systematically ahead of the others since the early 1970s; the same goes for 'Bureaucratic quality' since the 1980s. Importantly, its state also seems to have had an early advantage in the ability to raise revenues, as 'Total tax revenues/GDP' regressions indicate. This may contribute to explaining the success of the NEP, which rested on bureaucratic competence to manage a large pool of federal funds and direct them to poor Malays. The government was required to play a much bigger and more direct role requiring targeted public expenditure, on the one hand, and a concentration on macroeconomic growth, on the other. Both of these required strong fiscal capacity. For instance, federal expenditure and lending together were equal to 32.6% of GNP in 1972, up from 16.6% in 1960 (Meerman, 1979), while federal expenditure directly related to poverty, rural and human development together accounted for 25.6% of GNP in 1972 (Meerman, 1979).

indigenous bureaucracy compared to its East Asian competitors and therefore the state could not play a dominant role in national economic development (Park, 2000).

Table 10: Coefficient on Malaysia dummy in quality of government regressions,

1970	1975	1980	1985	1990	1995/96	2000	2005	2010
Quality of legal system and property rights protection (Gwartney et al, 2013)								
2.06***	1.26***	2.49***	1.80***	1.78***	1.11***	0.02	1.30***	1.25***
(0.35)	(0.22)	(0.21)	(0.18)	(0.20)	(0.13)	(0.15)	(0.13)	(0.12)
23	23	59	75	78	87	87	103	106
Bureaucratic quality (ICRG, 2012, Table 3b)								
-	-	-	0.33***	0.07**	-0.04	0.22***	0.24***	0.24***
			(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)
N			81	92	93	102	102	102
Total tax revenues / GDP (ICTD, 2015)								
-	-	0.06***	0.06***	0.07***	0.03***	0.01	-0.02*	-0.02*
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N		81	91	107	129	133	134	128
Constraints on the executive, PolityIV (Teorell et al, 2017)								
3.25***	1.92***	2.32***	2.08***	1.51***	0.95***	-0.55*	-0.75**	-0.25
(0.24)	(0.21)	(0.24)	(0.28)	(0.33)	(0.32)	(0.33)	(0.34)	(0.30)
90	95	102	101	102	107	124	124	124
Democracy, Vanhanen's Index (Teorell et al,								
4.88***	7.57***	4.83***	5.95***	4.40***	3.73***	-3.40**	-2.31*	-
(0.76)	(0.59)	(0.68)	(0.77)	(1.05)	(1.24)	(1.37)	(1.34)	
71	97	110	115	116	124	142	145	

*Notes: The dependent variable in each regression is an indicator of quality of government. All regressions control for a one-year lagged level of per capita income (log GDP) and were conducted on a sample of developing economies (following the IMF classification). Heteroskedasticity-robust standard errors are in parentheses; ***, ** and * indicate significance at 1%, 5% and 10% level (two-tailed test).*

Last, the remaining two sets of regressions show that Malaysia had an early advantage in terms of political institutions providing accountability mechanisms for the ruling elites, which is an enabling condition to develop effective states as incumbents face a stronger incentive to invest in state capacity if subject to a greater degree of constitutional limits on the exercise of their prerogatives (Besley and Persson, 2011). However, there is also evidence of an emerging 'political institutions deficit', in terms of both accountability and representativeness. This needs addressing to avoid impairing state capacity in the future.

5.3 Understanding the long-term origins of Malaysian progress

The results in Table 10 revealed a unique historical advantage for Malaysia. Compared with other economies of similar income level, the country has been significantly ahead since the 1970s or 1980s in a set of governance quality indicators capturing state legal, fiscal and administrative capacity. Where did this early advantage come from? In this section, we elaborate on its origins. As we merely scratch the surface here, we hope

this will serve as a stimulus to further research on the complexity of the historical experience that laid the foundations of subsequent progress.

Analysing Malaysia's economic history, Sultan Raja Nazrin Shah puts forward one answer as to why Malaysia's pre-independence history could be an important part of the explanation:

> the British had put in place institutions and systems that provided significant support for economic growth and social development post-independence. These include a national civil service with capacity for planning and programme implementation, a system of rudimentary education for the masses, and premier schools for the elite, a criminal justice system, social and physical infrastructure, as well as institutes that contributed to productivity gains such as the Rubber Research Institutes. (Shah, 2017, p 178)

The recent literature on the sources of economic development does indeed suggest two channels through which colonial history contributes to long-term differences. The first is political: colonisation led to the formation of developmental institutions where Europeans encountered sanitary conditions (environments with a low risk of disease) suitable for large-scale settlement (Acemoglu et al, 2001). In the absence of such favourable conditions, only a few settled, leaving behind institutions that facilitated rent extraction. Malaysia falls into the category of 'extractive colonies'. The second channel relates to the formation of human capital, whereby the colonial rulers brought new knowledge and human capital-creating institutions (eg. schooling and health technology and management practices). According to this view, European settlers directly and immediately added human capital skills to the colonies and also had long-run effects on human capital accumulation (Glaeser et al, 2004). Accordingly, having a sizable proportion of Europeans during colonisation would be a precursor to successful economic development (Easterly and Levine, 2016). However, Malaysia did not see any sizable European settlement, even though it had mortality rates favourable to such long-term settlement.[19] Despite the absence of mass European settlements in pre- or post-independence Malaysia, we conjecture that its colonial past still significantly conditioned poverty reduction and economic growth in the country. We discuss three channels through which it is likely to have materialised.

First, colonial elites may have contributed to state formation and state capacity. As most of the large-scale businesses remained British-owned and export-oriented, even after independence, colonial and post-colonial rulers ensured the legal and market institutions would be protective of economic rights, and supportive of foreign capital

[19] Data on mortality rates from Curtin (1989) and Acemoglu et al (2001) report low settler mortality in Malaysia, at 17.7 x 1000 people, similar to that in the USA and Australia. Furthermore, the share of population of the settlers reported in Malaysia in 1900 was nil (see Table A5 in Acemoglu et al, 2001). Similarly, the share of population of European descent in 1975 was 0.00. Given this low mortality rate, Acemoglu et al's reasoning connecting high numbers of settlers to good institutions (through a favourable disease-free environment) seems disproven in the case of Malaysia.

and business interests in the post-colonial era.[20] As well as leaving behind legal institutions, Malaysia's colonisers significantly influenced the process of state formation. Pre-colonial British Malaya was fragmented and run by feudal arrangements. The need to coordinate financial arrangements and colonial business interests motivated the formation of the Federated Malay States (FMS) – comprising the Malay States of Pahang, Selangor, Perak and Negeri Sembilan, in 1896 – and led to a centralised administration and eventual formation of the Malayan Union in 1945 (Noh, 2010). British-appointed administrators ran the civil administration to mobilise state revenue and expenditure. They replaced indigenous administrative structures with European institutions and took away the revenue collection power of the local chieftains (Ahmad et al, 2003). Before the Second World War, Malaysia did not have a fully functional system of direct taxation. Following reforms in civil administration and tax system development initiated by the British, Malaysia overtook some of its regional neighbours in terms of the ability to collect direct taxes (Slater, 2012). This could be an important explanation for the exceptional state capacity at the time of independence.

Second, bureaucratic competence may have developed as a result of the colonial administration. The administration of state institutions was under the complete control of expatriate bureaucrats; the Malays only served in junior official positions (Esman, 1994).[21] Valuable administrative human capital may have been transmitted to the native Malays who, instead of Indians and Chinese, took over positions at the local, state and federal level administrative offices after independence (Tillman, 1964).[22] Even in the post-independence years, expatriate officers led the main implementing agency of the NEP, the Economic Planning Unit (EPU). The colonial era, therefore, left behind significant administrative knowhow that proved critical for successful management of the economic transformation process during the NEP era.

Finally, even though the British rulers themselves did not settle in large number, significant innovations in health care administration occurred under colonial rule, in response to perceived political and economic consequences of ill- health (Manderson, 1996). British owners relied entirely on an immigrant workforce in order to mobilise the economy. Ethnic identity was institutionalised by associating ethnicity with economic function, such that, instead of native Malays, only migrant Chinese and Indians were employed in the extractive industries (Noh, 2010). Protection against tropical diseases was critical to the success of the British-owned firms that operated in large numbers for at least two decades in post-independence Malaysia. In pre-colonial Malaysia, natives

[20] According to Shah (2017, p 163), "both at the time of independence and up to 1970, foreigners owned up to 62 per cent of the share capital in limited companies overall, with 75 per cent in the agriculture sector and 73 per cent in the mining sector".

[21] Between 1950 and 1957, 79.6% and 61%, respectively, of the officers of the Malayan Civil Service (MCS) were British; in the case of the senior civil service, the shares were 92% and 61%, respectively (Puthucheary, 1978).

[22] Many British trained local bureaucrats also entered politics; approximately half of those contested in the 1955 elections were Malay ex-civil servants (Puthucheary 1978). In addition, all entrants into the Judicial and Legal Service (JLS) at the time of *Merdeka* (ie independence) were graduates from British universities and the Inns of Courts (Ahmad et al, 2003). The JLS continued to be dominated by British-qualified officers until the mid-1990s.

as well as migrants used to rely on traditional indigenous medicine for healthcare. However, communicable diseases continued to pose considerable threats, particularly to migrant settlers.[23] Between 1901 and 1931, there was a boom in public expenditure on health, leading to the spread and development of Western health services, sanitation facilities and medical practices (Ooi, 1991).[24] Hospitals, which had previously been concentrated in the towns, were built in the inland state capitals. This coincided with evidence of declining mortality rates by the 1930s (Fernandez et al, 1976; Saw, 1988).[25] Favourable health statistics at independence and improvements between 1900 and 1930 are likely to have followed from the spread of health practices that brought the mortality rate down among non-European settlers (migrant workers in rubber and tin plantations). For instance, the decline in the mortality rate during the inter-war period was attributed to the improvement in preventive health services (Manderson, 1996). These early developments in the health sector may have paved the way for rapid improvements in mortality and life expectancy statistics in the 1960s, the first decade of independence.[26]

For the above reasons, Malaysia potentially serves as a possible exception to the thesis propagated by Acemoglu et al (2001) and Easterly and Levine (2016). The country's unique history, however, also implies that it does not necessarily offer a replicable model for other resource-rich or ethnically fractionalised countries.

6. Conclusions

As it is frequently described as a success case of growth with redistribution, challenging conventional explanations, we have re-examined Malaysia's development progress and offered some explanations for its achievements. Using aggregate indices of education, health, poverty and gender equality outcomes, we first investigated the hypothesis that Malaysia's progress has been exceptional when compared to countries with similar level of economic development. Cross-country regressions support this hypothesis. Malaysia halved the incidence of absolute poverty 15 years before the MDGs were introduced. The sharpest reduction occurred during 1970–85, which coincided with a period of rapid economic growth and implementation of the NEP, targeting the poorer segment of the population. The early reduction in poverty is exceptional, if contrasted with the experience of other developing countries during the 1970s. In comparison, poverty declined at a significantly lower rate during 1985–2000.

[23] For a discussion of colonial era death rates among migrant workers, particularly those in rubber plantations, see Ooi (1963), Cameron (1965).
[24] According to reports in the Straits Settlements Blue Books (cited in Ooi, 1991), expenditure on health care soared by 152% in fiscal terms between 1877 and 1901.
[25] Manderson (1996) points out one source of potential bias arising because of the inflow of young migrant workers which could deflate the mortality rate. But it should be noted that the infant mortality rate, which was unaffected by migrant flows, was also on the decline. The birth rate was underestimated by 10.24% for the period 1947 to 1957 but, by 1967, birth registration was 95% complete (Saw, 1964).
[26] For a comparative analysis of mortality trends in low-income countries, see Gwatkin (1980).

Malaysia also enjoyed a significantly lower rate of infant and child mortality and higher female school enrolment during the 1970s and 1980s, compared with other developing countries at similar income levels, showing that progress in human development had early origins.

When it comes to investigating the channels for progress, further tests have shown that support-led mechanisms were important, as well as income-mediated ones. In particular, Malaysia's social spending has had an effect through selected education and health inputs, allowing the country to enjoy abnormally high levels of these. The results also suggest that support-led channels worked through an early advantage in physical and communication infrastructures. In addition, since growth and human development in Malaysia have early origins, we explored which structural factors may have contributed to creating favourable conditions for effective development policy. We found that the administrative, legal and fiscal capacity of the Malaysian state were critical to the successful implementation of large-scale poverty programmes and growth-enhancing policies, and so may explain the country's progress in human development during 1970–2010. This, in turn, may have resulted from favourable initial conditions at the time of independence, including human capital channels. Unlike other success cases in Asia, we found that favourable conditions related to low levels of inequality did not materialise.

Last, as we have highlighted the possible historical origins of Malaysia's development experience, more research is needed on the quality of state institutions during British rule and their impact on the quality of government in post-independence Malaysia. Indeed, the country's early advantage has eroded considerably in recent years and it performs poorly in terms of quality of political institutions. Equally, as emphasised by Shah (2017), a comparative analysis of Malaya's economic growth, institutional developments and social progress during the colonial era *vis-à-vis* other British colonies in Asia would be informative.

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