

ECONOMICS WORKING PAPER

Agglomeration, Human Capital and Foreign Labour: The Case of Malaysia

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Abstract

Trade, FDI and foreign labour have been key factors in the growth and transformation of Malaysia. The deindustrialization of the Malaysian economy has been attributed by some to the excessive dependence on the relatively low-skilled foreign labour in the country. This study finds that there is some evidence that foreign labour weakens the relationship between labour productivity and agglomeration. This is likely to take place through the weakening of human capital-effects by low-skilled foreign labour. Policies aimed at managing foreign labour need to take into account geographical agglomeration effects.

Keywords: Agglomeration, Human Capital, Foreign Labour

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1. Introduction

A key feature of Malaysia's economic development in the pre and post-independence period is the country's dependence on trade, foreign direct investment (FDI) and foreign labour. This has been true throughout its transformation from a primary commodity-exporting country to an export-oriented manufacturing powerhouse. The country's specialization in primary commodities in the early stage of its development, as well as its subsequent focus on export-oriented manufacturing, were made possible by the extensive use of foreign labour. The influx of foreign labour, as well as rural-urban migration, subsequently brought about urban agglomerations that evolved with changes in the country's economic structure.

In the latest phase of structural change, the Malaysian economy has been deindustrializing since the late 1990s. While there might be a host of factors that are driving de-industrialization in Malaysia, the country's dependence on low-skilled foreign labour is one such factor. In other words, deindustrialization has been seen by some quarters as a failure on Malaysia's part to wean itself from dependence on low-skilled foreign labour. While there have been several studies examining the impact of foreign labour on the Malaysia economy, there has been a lack of research on this issue from the perspective of economic geography.

This paper examines how foreign labour shapes the relationship between productivity and agglomeration through its effects on human capital in Malaysia. The relationship between productivity, urban density and human capital is well established in the existing literature, but less is known about how this relationship is affected by the presence of foreign labour.

The outline of this study is as follows. Section 2 will provide a broad literature review on growth, agglomeration and human capital. Section 3 traces this structural change spatially at the state level in Malaysia. Section 4 discusses the links between human capital and foreign labour in Malaysia. Section 5 provides an econometric analysis of the relationship between

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agglomeration and human capital in the presence of foreign labour. Policy implications of the empirical findings are explored in Section 6. Section 7 concludes.

2. Literature Review: Growth, Agglomeration and Human Capital

Geography does not feature in traditional growth theories such as Solow-Swan (Neo-Classical, AK) Growth Theory. In such theories, economic growth is driven by factor accumulation (capital and labour) and productivity growth, all within a non-spatial setting. Similarly, spatial aspects of growth are not modelled in the newer endogenous growth theories which are driven by innovation activities and human capital.² However, even though neoclassical and endogenous growth theories do not have spatial dimensions, agglomeration – the spatial concentration of economic activity – is an important aspect of growth processes.

At the initial stage of growth, the spatial concentration of economic activities could be driven by primary advantages due to natural endowments (access to ports and natural resources). These locations (cities and regions) could attract more physical and human capital that will generate secondary advantages that arise from increasing returns. Geographical agglomerations become even more important when knowledge spillovers are localized i.e. it matters where human and physical capital are produced and accumulated. Knowledge spillovers are localized when ideas, technologies and innovations are not mobile (Baldwin and Martin, 2004). When knowledge spillovers are localized, activities that exhibit increasing returns will concentrate at these locations leading to further agglomerations (Grossman and Helpman, 1991). Human capital externalities could further attenuate the concentration of economic activities. The presence of higher-skilled (educated) workers and population could lead to social benefits (positive externalities) in the form of lower crime rates and higher productivity (Moretti, 2004).

Glaeser and his co-authors have undertaken a number of studies on the relationship between human capital and agglomeration. One of their earliest studies showed that the urban wage premium is likely to be due to wage growth driven by the higher speed of human capital accumulation in cities (Glaeser and Mare, 2001). On the demand side, entrepreneurs with high level of skills start businesses that employ more skilled workers (Berry and Glaeser, 2005). In another study, Glaeser and Resseger (2010) found that the correlation between urban density

² In Endogenous/New Growth Theory, technological innovation is endogenized in a number of ways, for example, through the (i) use of the capital and labour as inputs for innovation activities such as R&D (Romer, 1986), or (ii) use of human capital as an input (Lucas, 1988).

(agglomeration) and productivity is only statistically significant for places where there are higher levels of skills.

One gap in the agglomeration and human capital literature is the role played by relatively low-skilled foreign labour especially in developing countries. Drawing from the literature discussed above, it plausible that low-skilled foreign labour is likely to weaken the positive correlation between urban density and productivity. This issue is investigated in this study.

3. Structural Change in Malaysia

The Malaysian economy has experienced three major phases of structural change, each underpinned by the development of different sectors. The first phase, which began in the mid-nineteenth century and lasted until the early 1960s, saw the development of primary commodities such as tin, rubber and palm oil. An export-oriented manufacturing sector became the key driver of growth in the second phase from the 1960s to late 1990s. In the third and current phase, the manufacturing sector's role has diminished with the services sector becoming increasingly important.

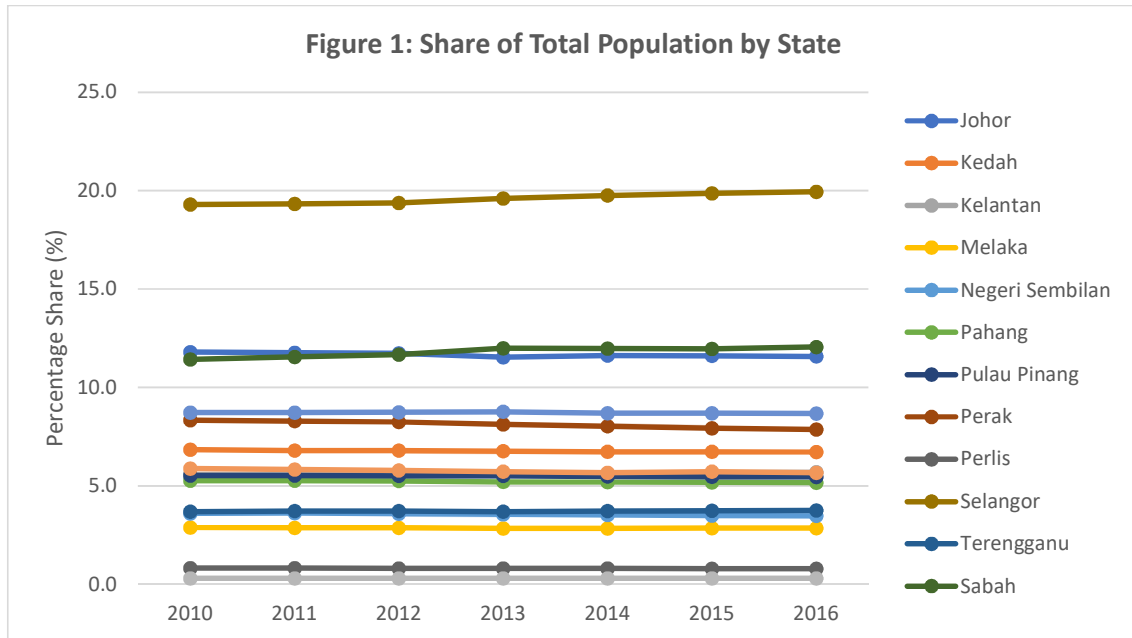
During these phases of structural transformation, Malaysia has witnessed different patterns of urban agglomerations across cities and states. In the primary commodity phase, urbanization was driven mostly by natural/primary advantages enjoyed by the cities and states such as Kuala Lumpur, Ipoh and Penang. Growth began to become more spatially dispersed in the manufacturing phase but still confined mostly to the "older cities" (e.g. Penang) and new industrial hubs such as Petaling Jaya and later Shah Alam and Senai. In the third and current phase, the predominance of larger cities is being further attenuated by the cumulative advantages (e.g. amenities) that these cities possess.

The structural change across space in Malaysia can be further examined by looking at changes in population distribution and economic activity at the state level. Malaysia comprises thirteen states and three federal territories.

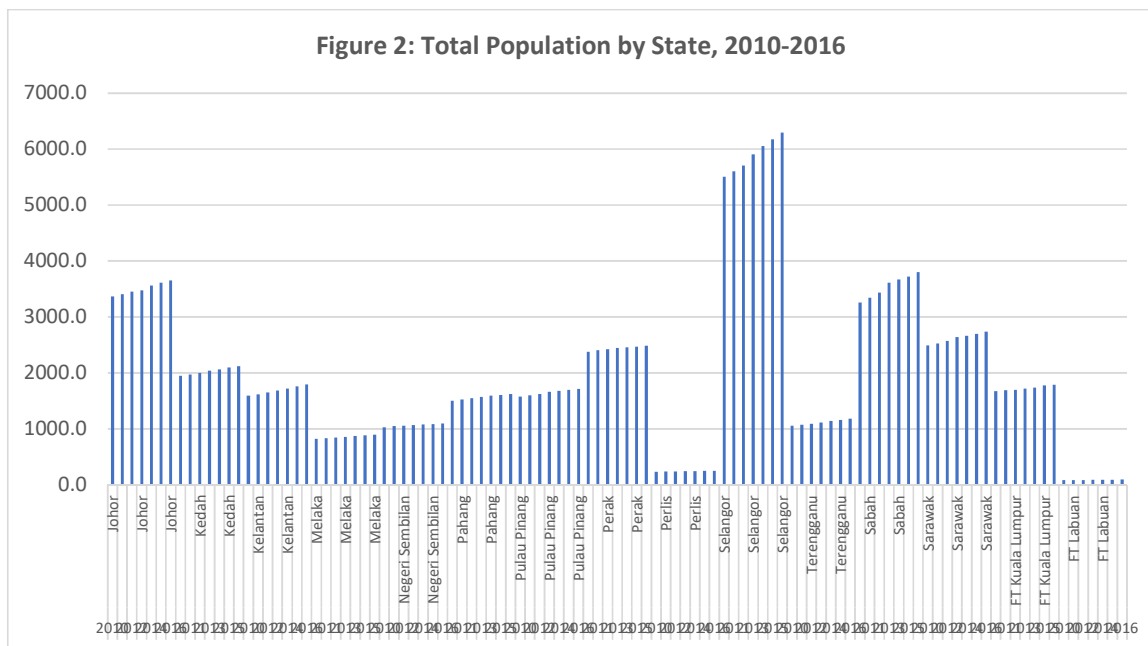
3.1 Population and Migration

The states with the largest population are Selangor, Sabah, Johor, and Sarawak (**Figure 1**). These states continue to experience a rapid increase in population (**Figure 2**). A closer look at

the distribution of net migration for the period 2010-2015 indicates that the big gainers are Selangor, Pulau Pinang, and Sarawak (**Table 1**).



Source: Department of Statistics, Malaysia



Source: Department of Statistics, Malaysia

Table 1: Net Migration in Malaysian States ('000), 2010-2015

	2010	2011	2012	2013	2014	2015	Cumm.
Johor	-6.7	-10.7	0.8	-3.0	3.7	10.7	-5.2
Kedah	-2.7	2.1	-1.4	-1.1	-2.3	-1.6	-7.0
Kelantan	3.2	8.1	4.3	3.3	-0.5	1.6	20.0
Melaka	-0.2	-1.1	0.7	5.5	3.3	3.1	11.3
Negeri Sembilan	-2.0	-6.6	-9.2	0.5	-3.4	5.2	-15.5
Pahang	-1.2	-5.2	-1.8	1.8	5.2	-3.2	-4.4
Pulau Pinang	8.8	5.2	2.6	1.0	8.4	12.0	38.0
Perak	-3.3	-7.9	-7.7	-6.1	-6.2	-9.8	-41.0
Perlis	-2.2	0.5	-0.1	-1.9	-0.6	1.0	-3.3
Selangor	17.7	22.4	31.0	30.5	22.7	19.4	143.7
Terengganu	-0.4	-3.3	1.0	-1.3	-2.3	4.4	-1.9
Sabah	-0.1	1.8	6.5	4.4	5.8	-1.0	17.4
Sarawak	5.5	7.1	4.3	2.3	4.6	-1.9	21.9
Kuala Lumpur	-14.1	-11.2	-26.8	-34.7	-32.3	-37.7	-156.8

Source: Department of Statistics, Malaysia

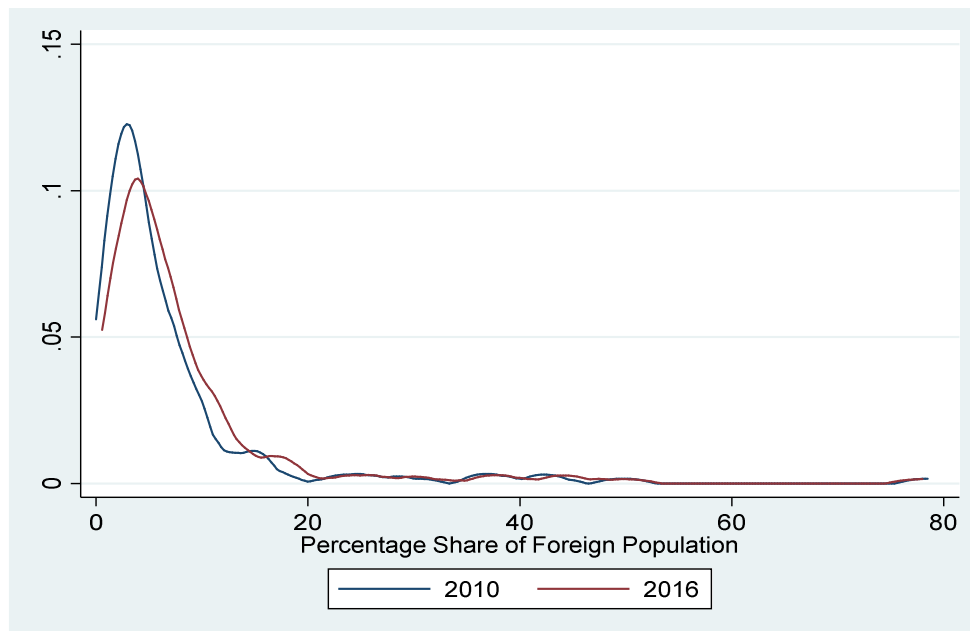
District-level data provides additional evidence at a more granular level on changes in population. Between 2010 and 2016, the total foreign population in Malaysia increased by 926,291 persons. The states of Sabah, Selangor and Johor have seen large increases in foreign (non-citizens) population in the period from 2010 to 2016 (**Table 2**). Thus, a significant proportion of the increase in the population in these states is likely to be attributed to the influx of foreign labour. Overall, across districts, there has been an increase in the share of foreigners in the total population during the 2010-2016 period (**Figure 3**). A key factor underlying these changes is likely to be the demand for workers in districts and states experiencing rapid economic growth. This is examined next.

Table 2: Increase in Total Foreign Population Across States, 2010-2016

State	Total ('000)
Johor	136.536
Kedah	27.049
Kelantan	18.243
Melaka	13.135
Negeri Sembilan	31.189
Pahang	30.101
Perak	40.938
Perlis	2.78
Pulau Pinang	53.329
Selangor	206.749
Terengganu	9.898
Sabah	227.01
Sarawak	56.082
FT Kuala Lumpur	74.908
FT Labuan	-2.88
FT Putrajaya	1.224
Total	926.291

Source: Department of Statistics, Malaysia

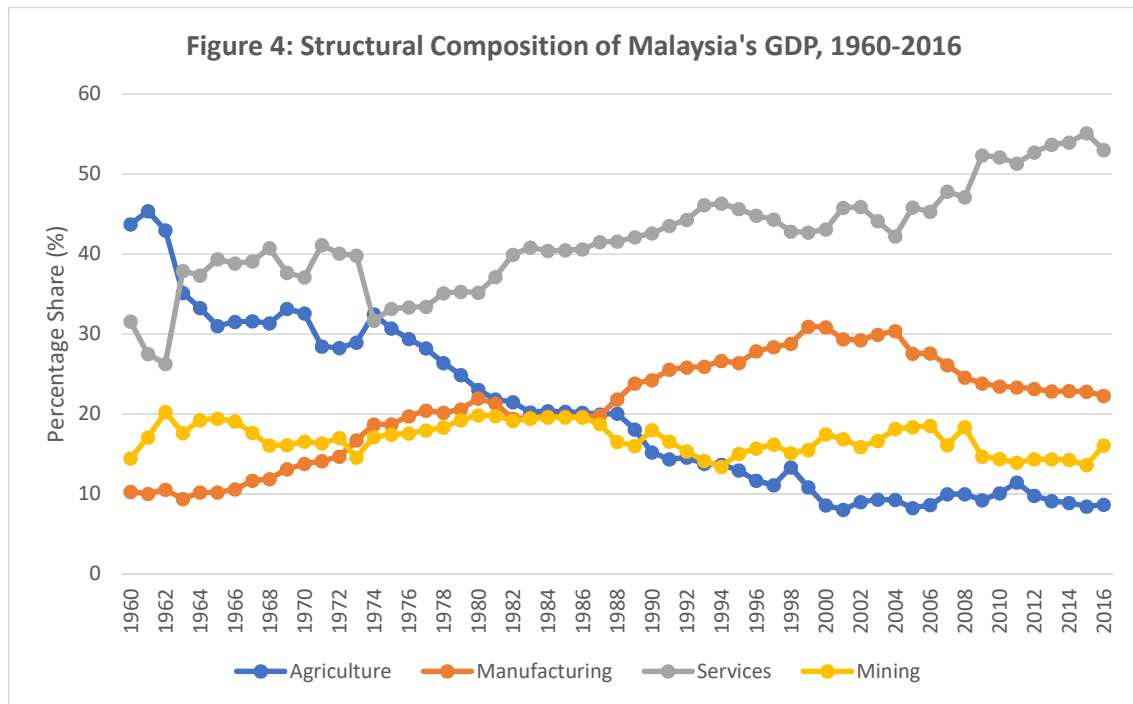
Figure 3: Probability Density Function for Foreigner's Share of Total Population at the District-Level, 2010 & 2018



Source: Department of Statistics, Malaysia

3.2 Changes in Economic Structure

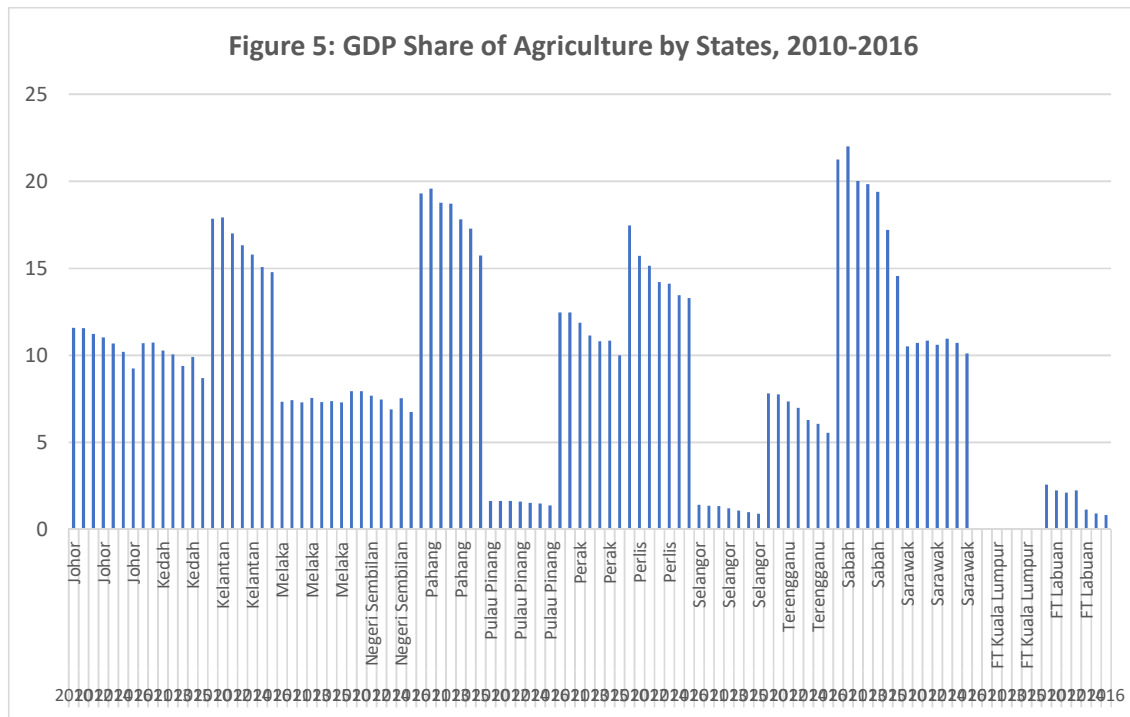
The Malaysian economy has experienced a number of structural changes in the past. The agriculture sector has been declining since the early 1960s to early 2000s (**Figure 4**). Agriculture's share of the national GDP declined from 45 percent in 1961 to 9 percent in 2016. Agriculture's decline has been due to the industrialization of the Malaysian economy. Manufacturing has been a key driver of economic growth from the early 1960s until about 1999/2000. The sector's share of GDP rose from 10 percent in 1960 to reach a peak of 31 percent in 1999. However, the sector's share of GDP has declined since 1999. The sector's share of GDP was only 22 percent in 2016. The relative decline in manufacturing has been described as deindustrialization by a number of scholars. The services sector, on the other hand, has experienced consistent increase in its share of GDP since the mid-1970s. The sector's share of GDP has increased from 32 percent in 1974 to 55 percent in 2015.



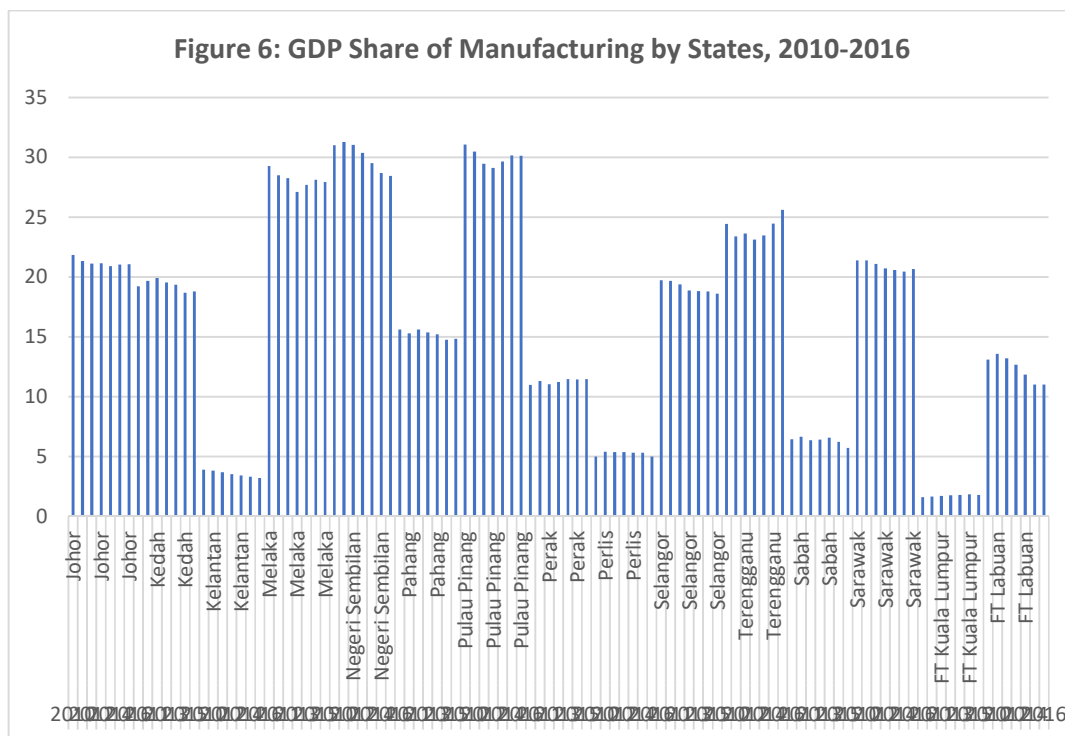
Source: World Bank

There is significant diversity across the states in terms of economic structure. Agriculture is still an important sector in states such as Kelantan, Pahang, Perlis, Sabah, and Perak (**Figure 5**). The GDP share of agriculture has stabilized around 10 percent in a number of states such as Johor, Kedah and Sarawak. The GDP share of agriculture is negligible (less than 2 percent) in very industrialized states such as Pulau Pinang, Selangor and Kuala Lumpur.

Even though the economy has experienced deindustrialization since the late 1990s, the manufacturing sector continues to be important in a number of states such as Pulau Pinang, Melaka and Negeri Sembilan (**Figure 6**). The GDP share of manufacturing in these states is around 28-30 percent. States in which the GDP share of manufacturing has declined sharply in the 2010-2016 period include Negeri Sembilan, Selangor and Labuan.



Source: Department of Statistics, Malaysia

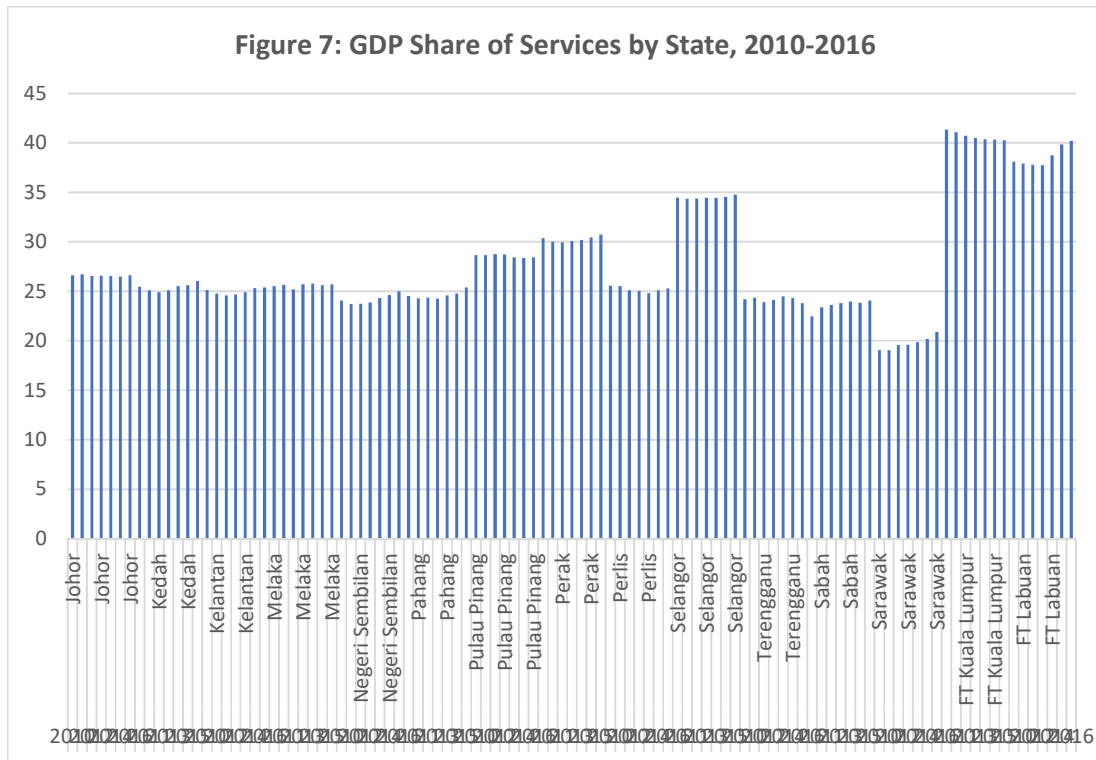


Source: Department of Statistics, Malaysia

The services sector is dominant in more developed (higher per capita income) states such as Selangor and Kuala Lumpur (**Figure 7**). In the more recent period of 2010-2016, the services sector's share of total GDP has remained relatively stable though. The key services sub-sector in states with a high GDP share of services such as Kuala Lumpur and Selangor are the retail and wholesale sector (**Figure 8**).

To summarize, the Malaysian economy has deindustrialized since the late 1990s. At the state level, there is diversity across the different states in terms of economic structure as well as how this structure has changed over time. Given that human capital is likely to be related to economic structure, it is expected that there will also be some variations in terms of the level of human capital across states.

One important factor needs to be taken into account when examining human capital across states. This factor is foreign labour. More specifically, the skills composition of foreign labour can affect the average level and distribution of human capital.



Source: Department of Statistics, Malaysia



Source: Department of Statistics, Malaysia

4. Foreign Labour and Human Capital in Malaysia

Foreign labour is an important feature of Malaysia's development. The development of primary commodities in the first phase of the country's structural change required and brought about the massive migration of workers from India and China into the country's tin mines and rubber plantations. Many of these workers subsequently became Malaysian citizens resulting in the emergence of a multi-ethnic country.

In the second phase, at least up to the 1980s, the development of FDI-driven and export-oriented manufacturing initially did not entail the extensive use of foreign workers. However, by the early 1990s, the country began to experience a labour shortage in the manufacturing sector (Ang et al., 2017). This led to the rapid growth of foreign workers for the next twenty years in the manufacturing sector as well as agriculture and services.

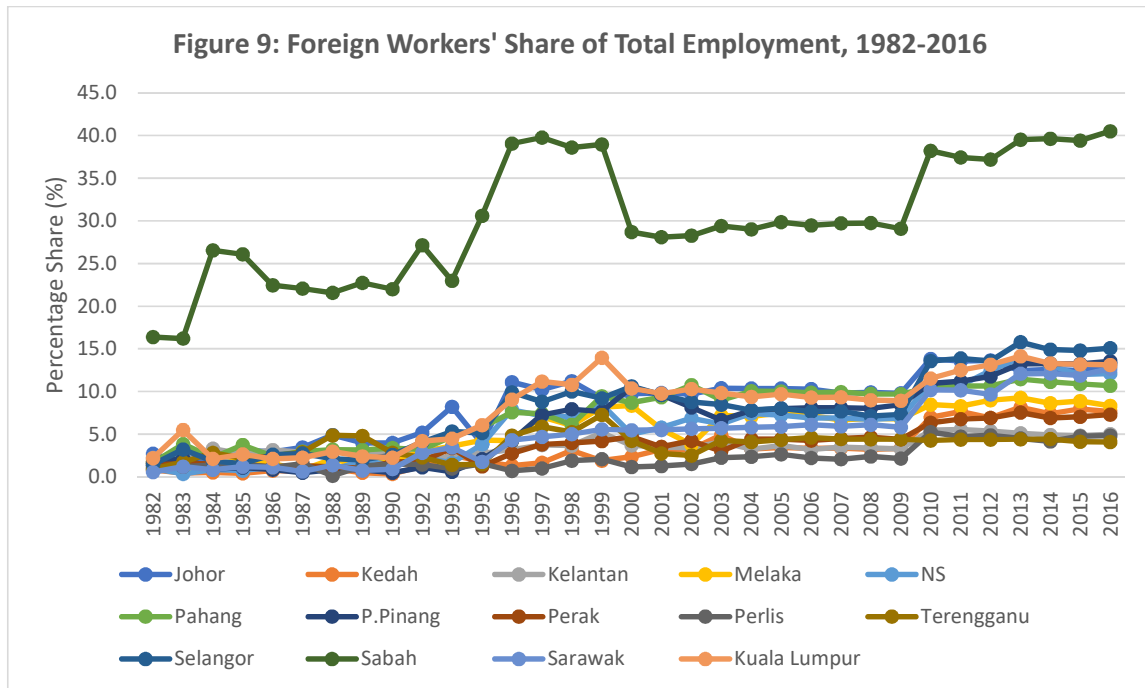
The dependence on foreign workers has increased across all states since the 1980s (**Figure 9**). Looking at the trends in foreign workers' share of total employment since the early 1980s, it can be seen that there were two periods during which the share of foreign labour increased rapidly. The first period was during the 1993-1996 period whilst the second period was between 2009 and 2013. The degree of dependence on foreign labour varied from state to state. The state of Sabah, in particular, is highly dependent on foreign labour. Foreign workers account for some 40 percent of total employment in the state. Other states with significant dependence on foreign workers include Selangor (15 percent) and Kuala Lumpur (13 percent).

There are currently no data on foreign workers by sectors in different states but given differences in economic structure, foreign workers might be concentrated in two possible sectors: (i) agriculture in Sabah and Sarawak, and (ii) manufacturing and services in Johor, Selangor, and KL. Agriculture and manufacturing are the two key sectors employing foreign labour (**Figure 10**).

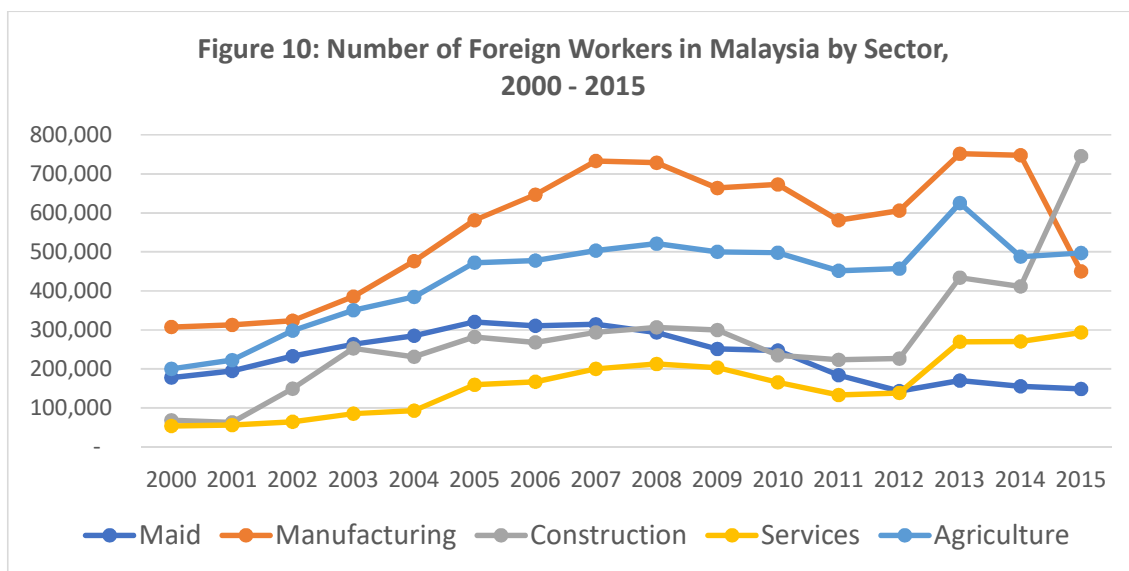
One of the key concerns in the dependence on foreign workers is the relatively low human capital and skills of foreign workers compared to local workers. In 2015, only 5.7 percent of foreign workers had tertiary degrees whereas the corresponding figure for domestic workers exceeded 20 percent (**Table 3**).

World Bank's (2015) estimated that in 2014, about 44 percent of foreign workers in Malaysia are employed in low-skilled elementary occupations. Only five percent of foreign workers in Malaysia have high-skilled jobs. Furthermore, sectors are likely to matter. Foreign workers in

agriculture and construction may have lower human capital and skills compared to manufacturing and services. The proportion of foreign workers with no formal education and primary education is particularly high in states with large agriculture sectors such as Sabah and Sarawak.



Source: Department of Statistics, Malaysia

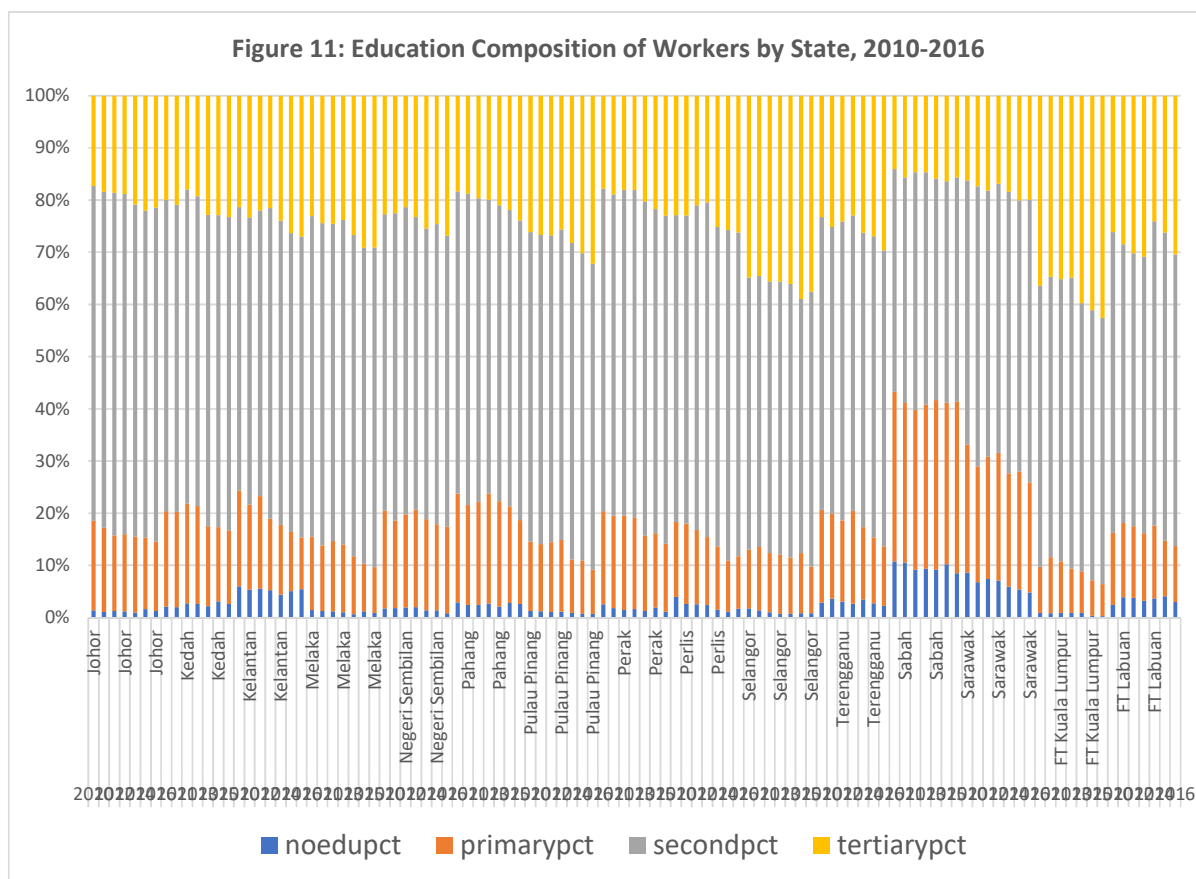


Source: Department of Statistics, Malaysia

Table 3: Labour Force by Education Attainment, 2015

	Malay	Chinese	Indians	Others	Foreigners	Total
No formal education	169.6	19.2	15.5	6.1	236	446.3
%	2.1	0.6	1.7	6.4	10.9	3.1
Primary	796.2	322	102.6	22	986.8	2,229.60
%	9.7	10.2	11.3	23.3	45.5	15.4
Secondary	4,584.20	1,856.10	526.3	46.9	823.1	7,836.60
%	56	58.9	58	49.7	37.9	54
Tertiary	2,642.40	956.7	263.3	19.4	123.5	4,005.40
%	32.3	30.3	29	20.6	5.7	27.6
Total	8,192.40	3,154.00	907.7	94.5	2,169.40	14,518.00
	100	100	100	100	100	100

Source: Department of Statistics, Malaysia



Source: Department of Statistics, Malaysia

5. Econometric Analysis

This section examines the correlations between productivity, urban density and human capital. Glaeser and Resseger (2010) found that there is a relationship between productivity and population size (agglomeration) but only for regions with skilled workers. As the use of foreign labour affects the level of skilled workers in Malaysia, this productivity-population size relationship is re-estimated using Malaysian data by incorporating foreign labour.

5.1 Econometric Specification

The relationship between productivity, urban density and human capital is investigated through a series of econometric estimations. Foreign labour is included as an explanatory variable in later estimations. Two types of estimates are carried out using state-level (2010-2016) and district-level data (2014 and 2016).

Following Glaeser and Resseger (2010), and using the logarithm of output per worker (Y) for state i at time t as a dependent variable, the following equations are estimated using a panel data:

$$Y_{it} = \beta_0 + \beta_1 POP_{it} + \delta_{it} \quad (1)$$

$$Y_{it} = \beta_0 + \beta_1 POP_{it} + \beta_2 DEG_{it} + \delta_{it} \quad (2)$$

where POP is the logarithm of population size, DEG is share of population with tertiary education. The Hausman test is used to guide whether fixed or random effects estimation is used.

To take into account the role of foreign labour, equation (2) is re-estimated by incorporating an additional variable that represents the share of foreign labour (FOR):

$$Y_{it} = \beta_0 + \beta_1 POP_{it} + \beta_2 DEG_{it} + \beta_3 FOR_{it} + \delta_{it} \quad (3)$$

Finally, an equation with interactive variables involving all independent variables is also estimated to examine the interactions between these variables.

Aside from using GDP per worker as a dependent variable, equations (1) to (3) are also re-estimated by using median wage instead. The correlation coefficient between both variables is 0.70.

For district-level panel regression, the determinant of median income at district i , I_i , is estimated using the following model:

$$I_{it} = \beta_0 + \beta_1 POP_{it} + \beta_2 DEG_{jt} + \beta_3 FOR_{it} + \delta_{it} \quad (4)$$

Note that the tertiary education variable DEG is a state-level (j) variable as district level education profile is not available.

5.2 Data

State-level data for the econometric analysis is obtained from the Department of Statistics, Malaysia. There are sixteen states in Malaysia – thirteen states plus two federal territories. The state-level data cover the period 2010-2016. District-level data covering two years 2014 and 2016 is also used in this study. There are 144 districts in the dataset. The summary statistics for the state-level variables and district-level variables are presented in **Table 4** and **Table 5**, respectively. There are significant variations in the values of the variables across the different states and districts. The patterns of these variations have been discussed in earlier sections.

Table 4: Summary Statistics of State-Level Variables

Variable	Mean	Std. Dev.	Min	Max
GDP per Worker (RM, '000)	48.90787	32.81513	15.85823	177.0068
Median Wage (RM)	1424.019	352.9375	750	2500
Population ('000)	2003.29	1436.737	88.2	6291.5
% Share of Foreign Population	11.85173	8.103871	3.897316	41.0539
% Share of Workers with Degrees	24.43206	6.367189	14.05691	42.56528

Table 5: Summary Statistics of District-Level Variables

Variable	Mean	Std. Dev.	Min	Max
Median Income	3834.646	1260.9	1677	9073
Population ('000)	216.6733	302.7223	16.7	2085.9
% Share of Workers with Degrees	22.61381	5.710113	15.6989	42.5653
% Foreign Population	8.174627	10.33059	0.568182	78.01269

5.3 Results

Results from the state-level panel estimations are reported in **Table 6**. The positive correlation between labour productivity (proxied by GDP per worker) and urban density (proxied by population size) is positive and statistically significant.³ This result is consistent with Glaeser and Resseger's (2010) findings on the positive relationship between labour productivity and agglomeration. When foreign labour (proxied by share of foreign population) is not included in the estimation, the human capital variable (proxied by share of degree holders in the population) is statistically significant and has a positive sign.⁴ This is also consistent with Glaeser and Resseger's (2010) findings. This continues to be the case when the foreign labour variable is included in the model. However, when interactive variables are included, the human capital variable is no longer significant statistically. This can be interpreted to mean that the use of foreign labour weakens agglomeration economies that are related to human capital.

Table 6: State-Level Determinants of Labour Productivity

	1	2	3	4
Variables	GDP per Worker	GDP per Worker	GDP per Worker	GDP per Worker
Ln (Population)	1.169***	0.655***	0.743***	0.743**
	0.163	0.205	0.228	0.339
% Pop with Tertiary Education		0.0126***	0.0119***	-0.024
		0.00336	0.00345	0.0164
% Share Foreign Population			-0.007	0.0283
			0.00798	0.0512
Population*Tertiary Edu				0.00367
				0.00254
Foreign*Tertiary Edu				0.00101*
				0.00053
Population*Foreign				-0.00808
				0.00685
Constant	-4.290***	-0.876	-1.41	-1.163
	-1.182	-1.433	-1.559	-2.333
Observations	105	105	105	105
R-squared	0.366	0.453	0.458	0.511
Number of States	15	15	15	15

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

³ See Appendix Figure 1 for a graphical depiction of the relationship between labour productivity and population.

⁴ See Appendix Figure 2 for a scatter plot for human capital and agglomeration.

The results for state-level estimations with the median wage as a dependent variable yield similar results (**Table 7**). This is not surprising given the strong correlation between labour productivity and median wage.

Table 7: State-Level Determinants of Median Wage

	1	2	3	4
Variables	Median Wage	Median Wage	Median Wage	Median Wage
Ln (Population)	3.311***	2.532***	2.367***	2.230***
	0.199	0.239	0.264	0.41
% Pop with Tertiary Education		0.0191***	0.0203***	0.02
		0.00392	0.00399	0.0198
% Share Foreign Population			0.0132	0.0153
			0.00922	0.0618
Population*Tertiary Edu				0.00128
				0.00306
Foreign*Tertiary Edu				-0.00078
				0.00064
Population*Foreign				0.00251
				0.00826
Constant	-16.76***	-11.59***	-10.58***	-9.829***
	1.44	1.669	1.802	2.815
Observations	105	105	105	105
R-squared	0.757	0.809	0.813	0.816
Number of States	15	15	15	15

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

At the district-level, median wage is correlated with the total population (**Table 8**). The human capital variable (proxied by percentage of state-level population with tertiary education) is also statistically significant. In the estimation with foreign labour and other interactive variables, both total population and human capital are statistically significant. The foreign labour variable (proxied by percentage share of foreign population) has a positive coefficient and is also statistically significant. This suggests that foreign labour does contribute to higher median wages. However, the smaller size of the coefficient for total population implies that foreign labour weakens the positive effects of agglomerations. Although the human capital variable is statistically significant, the interactive variable between human capital and foreign labour is not. This suggests that human capital is an important determinant of median wage but there are no positive interactions between human capital and foreign labour.

Table 8: District-Level Determinants of Median Income

	1	2	3
VARIABLES	Median Income	Median Income	Median Income
Ln (Population)	3.533***	2.327***	1.843***
	-0.202	-0.262	-0.351
% Pop with Tertiary Education		0.0275***	0.0450**
		0.00426	0.0196
% Share Foreign Population			0.230**
			0.0949
Population*Tertiary Edu			-0.00217
			0.0036
Foreign*Tertiary Edu			-0.00138
			0.000859
Population*Foreign			-0.00413
			0.0139
Constant	-8.917***	-3.708***	-2.995**
	0.977	1.2	1.448
Observations	288	286	286
R-squared	0.682	0.756	0.775
Number of Districts	144	143	143

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

6. Policy Implications

The empirical findings from this study clearly suggest a need for re-evaluating Malaysia's policies on foreign workers. The issue of foreign workers primarily comes under Federal jurisdiction. At the Federal-level, policy-making on foreign workers is complex, involving a number of agencies and ministries. The key agencies are the Cabinet Committee on Foreign Workers, Ministry of Human Resources (MoHR) and the Ministry of Home Affairs (MHA) (World Bank, 2015).

The Malaysian Government is aware of the country's excessive dependence on foreign workers. In the Eleventh Malaysia Plan, the country's medium development plan for 2016-2020, the government has set the target of capping the share of foreign workers in the workforce to 15 percent by the year 2020. In 2017, foreign workers' share of the workforce stood at 18 percent. The government aims to progressively increase the levy on low-skilled foreign

workers to reduce employers' dependence on foreign workers. In addition, the recruitment of foreign workers will be streamlined by using a one-stop agency under MoHR.

Findings from this study clearly indicate that more comprehensive and evidence-based policies for managing foreign workers are needed. There are significant variations in the use of foreign workers across industries and states (geography). Better data and more empirical studies will be needed to assess this issue in greater detail before the formulation of specific policies and regulations.⁵ Whilst the goal of reducing the country's dependence on foreign workers is the right one, policies need to be more nuanced and detailed as there are some complementarities between foreign and local workers in some industries.

This study shows that the productivity effects of agglomeration can be weakened in the presence of low-skilled foreign labour. Such findings suggest that policies should pay some attention to the links between foreign labour and geographical agglomerations. For example, policies aimed at creating a more market-driven approach to managing the demand for foreign workers need a geographical context. This is because labour markets are likely to differ across industries and location. The formulation of such policies needs to take into account how specific types of foreign workers affect agglomerations and productivity.

7. Conclusion

The growth and structural transformation of the Malaysian economy have been achieved by dependence on trade, FDI and foreign labour. Whilst trade and FDI continue to be important areas of focus and emphasis for policymakers, the country's continuing dependence on foreign labour is considered by many to be an obstacle for technological upgrading in its manufacturing sector. This is due to the relatively low-skilled of foreign workers. This study, which re-visits this issue from an economic geography perspective, finds that productivity and income are driven by agglomeration (urban density) and human capital. However, the presence of foreign labour is likely to weaken the positive agglomeration effects on productivity and income.

A key policy implication of these findings is that whilst foreign labour *per se* may continue to weakly contribute positively to income, such benefits are likely to be secondary in magnitude compared to the potential loss from the weakening of human capital-related agglomeration effects. Policies on managing foreign labour need to have geographical and sectoral

⁵ Some policy recommendations are articulated in World Bank (2015) and Ang et al. (2017).

dimensions. As such, there needs to be a policy re-thinking that puts greater emphasis on enhancing higher-levels of human capital especially in areas of high urban densities. Such areas are likely to include the manufacturing and services sector. A separate policy may be required for the agriculture sector – which is still important in some states in Malaysia. More data and research are also needed to examine the quality of human capital in different economic sectors.

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