

# Globalisation, Urbanisation and Human Development: Evidence from Lower-Middle Income Economies

Debbra Toria Nipo<sup>1</sup>, Jaratin Lily<sup>2</sup>, Sidah Idris<sup>3</sup>, Saizal Pinjaman<sup>4</sup>, Imbarine Bujang<sup>5</sup>

<sup>1,2,3,4</sup>Faculty of Business, Economics and Accountancy, Universiti Malaysia Sabah, Malaysia,

<sup>5</sup>Faculty of Business and Management, Universiti Teknologi MARA, Kota Kinabalu Campus, Sabah, Malaysia

Email: debbratoria@ums.edu.my

To Link this Article: <http://dx.doi.org/10.6007/IJAREMS/v10-i3/10366>

DOI:10.6007/IJAREMS/v10-i3/10366

*Published Online:* 25 August 2021

## Abstract

Increasingly global and urban economies play an important role in generating wealth, attracting investment, and enhancing productivity gains and competitiveness. However, the linkage between globalisation, urbanisation and human quality of life in less developed countries have rarely been investigated. To address this gap, the study examines the impact of globalisation and urbanisation on human development in 33 lower middle-income economies over the period of 2000 to 2019. In this study, globalisation and urbanisation are proxied by foreign direct investment (FDI), trade, mobile cellular subscriptions, Internet users and urban population, whereas human development is measured by Human Development Index (HDI). Using the robust fixed effect panel data models, findings from the study revealed that increase in FDI, mobile cellular subscriptions, Internet users and urban population would enhance human development in the lower middle-income economies. Meanwhile, the insignificance of trade in influencing HDI implies that the ability of lower-middle income economies to benefit from trade could be limited due to various supply-side constraints and lack of complementary and supporting trade policies. It is recommended that future research looks into the impact of the labour dimension of globalisation (inflow and outflow of workers) on human development in economies of various development levels.

**Keywords:** Globalisation, Urbanisation, Technology, Human Development, Lower-Middle Income Economies

## Introduction

Economic growth is typically understood as a measure of progress contributed by several major players such as technology and financial capital, along with other elements including education and public health, trade and globalisation, as well as stable and capable governments and institutions (Romer, 2008; Barro, 1998). However, standard measures of economic growth such as Gross Domestic Product (GDP) rates do not reflect how activities, resources, experiences, opportunities, and their distribution within and between societies,

are all of importance to people. This leads to the emergence of human development as a measure of a country's overall achievement in both its social and economic dimensions. The idea of human development was proposed by Sen (1985) which places human quality of life at the heart of economic analysis and evaluation. In this context, the central premise of human development is the viewing of progress as a process of enlarging people's choices and enhancing their capabilities. Considering that people are the real wealth of a nation, the basic objective of development should focus on creating an enabling environment for people to live long, healthy and creative lives (UNDP, 1990). The successive introduction of Human Development Index (HDI) as an alternative measure of levels and progress in wellbeing represents a critical enlargement on conventional measures limited solely to income, in which the HDI attempts to capture three key dimensions of wellbeing: a long and healthy life, access to knowledge and a decent standard of living.

Widely recognised as a key driver of economic growth and development, globalisation is a long process of global integration and interaction that has been fuelled by successive revolution in transportation, information and communication technologies. These advances have brought about unprecedented leaps in productivity, economic expansion and increased international trade among countries (ECLAC, 2002). Influential aspects of globalisation are mostly economic in nature and are usually evident in international trade and investment dimensions. Trade, being a fundamental part of the economic activity, facilitates efficiency gains that are materialised in economic growth through several means like increased competitiveness, economies of scale and learning and innovation (CORE, 2018). Additionally, cross-border investment and technological advances improves the nation's wealth and economic wellbeing by opening up greater employment opportunities and raising the standard of living (Mazlan et al., 2019). At the same time, urbanisation plays an important role in the economic and social fabric of a country by offering opportunities for employment, education and health services. Population shifts from rural to urban areas reflect transfer of labour from the agricultural to the industrial sectors. This results in economies of scale in labour, public infrastructure, manufacturing, and social relationships that create cost advantages for both producers and consumers in cities where economic activities are concentrated (Gill & Goh, 2010). Nevertheless, careful planning and management policies are necessary to moderate the impacts of urbanisation, ensuring the expansion of healthy and inclusive urban communities.

Manifested in the growth of international trade, capital flow and technological progress, globalisation is often associated with a positive impact on human development (Mazlan et al., 2019; Asongu & Le Roux, 2017; Sapkota, 2011; Tsai, 2007). However, contrasting evidence is found in a study by Sabi (2007) who revealed no significant relation between globalisation and human development, except for high income countries. The author further stated that the key consideration in determining a country's progress in human development is not associated with globalisation, especially in the case of low or low-middle income countries. Furthermore, certain dimensions of globalisation such as global flow of goods and services may potentially have adverse impacts on human development in developing economies (Figueroa, 2014). Urbanisation on the hand, presents mixed evidence in the body of literature particularly relating to its relationship with human development. While studies by Anisujjaman (2015); Huang and Jiang (2017); Tripathi (2019) confirm a positive link between urbanisation and human development, studies by Maiti (2017); Malik (2014) however

indicated otherwise, suggesting that urbanisation does not necessarily promote human development. Considering that much of the empirical studies focus on developed economies and little attention was given to poor emerging economies, the present study therefore aims to fill these gaps by investigating the impact of globalisation and urbanisation on human development that focus on lower-middle income economies.

### Literature Review

Sirgy et al (2004) conceptualise and define globalisation as “*diffusion of goods, services, capital, technology, and people (workers) across national borders*”. In the study, Sirgy et al. (2004) developed theoretical proposition and linkage between global flows and human wellbeing. Globalisation is considered as a multidimensional diffusion process that brings various significant effects on a country’s quality of life, where the effects could be both favourable (positive) and adverse (negative) effects on human wellbeing. Empirical evidence gathered by a study of Tsai (2007) show support to the hypothesised positive relationship between globalisation and human development. Additionally, results from Tsai (2007) did not find much support on the adverse effects of globalisation. This little support on the negative impact of globalisation could be attributable to the possibility of the society having acquired higher levels of globalisation, as well as accomplished institutional reforms that might have alleviated social frictions and economic setbacks associated with rapid ‘fluxes and flows’ (Rodrik et al., 2004).

Globalisation pertains to the acceleration of international trade, flows of labour, capital and technology, as well as of the transfer of ideas and patterns of living (Amin, 1999). In this context, one of the primary forces behind the rapid pace of globalisation is advancement of information and communication technology (ICT). ICT has led the usage of computing power and electronic networking to surge, along with the increased speed and efficiency in the creation and dissemination of knowledge (Chen & Dahlman, 2005). Rapid development of ICT facilitates the shift from traditional economies to ones where the production and use of knowledge are paramount, or what is known today as knowledge economy. Existing literature has established that knowledge economy is crucial to not only economic development, but also human development in the 21<sup>st</sup> century (Kuada, 2015; Tchamyu, 2015). According to World Bank, the four pillars of knowledge economy are: (i) economic and institutional regime, (ii) education and skills, (iii) information and communication infrastructure, and (iv) innovation system. Among these four pillars, ICT is most likely to produce the most significant influence on economic and human development landscapes due to its high potential for penetration. This is further supported by empirical evidence found in a study by Asongu & Le Roux (2017), who showed that policies tailored to promote ICT (telephone, mobile phone and the Internet) penetration will promote sustained and inclusive development. Other studies (De La Hoz, Camacho-Ballesta, Tamayo-Torres & Buelvas-Ferreira, 2019; Çağlayan-Akay & Van, 2017; Muchdie, 2016) also found ICT to have positive impact on human development, which further indicates the relevance of technological progress for socioeconomic benefits.

Another economic phenomenon driven by globalisation dynamics is trade openness (Dima, 2016). Exports and imports of a country serve to enhance both economic and social wellbeing of the country’s residents through various channels such as increase in job opportunities and disposable personal income (Dornbusch et al., 1998), as well as increased government spending on public services (education, health care, public safety, and so on) due to increased

tax revenues (Easton, 2001). While there are numerous studies that examined the impact of trade openness on economic growth, only a handful of studies examined the impact trade has on human development. For instance, Davies and Quinlivan (2006) analysed the relationship between per-capita trade and Human Development Index (HDI) of 154 countries from year 1975 to 2002. They argued that the relationship between trade and human development follows a lag pattern: trade directly affects income, which will subsequently affect the level of health and literacy of the people in the future. Using the Generalized Method of Moments (GMM) estimation technique, their findings indicated a significant positive relationship between trade and human development. Another study is by Asongu (2012) who also conducted similar research to analyse the impact of trade liberalisation on human development. The study specifically focuses on 52 African countries covering a 15-year data from 1996 to 2010, with human development measured using the Inequality-adjusted HDI and trade volume as the proxy for economic globalisation. Similarly, the findings of Asongu (2012) also draw the same conclusion that trade has a positive link with human development. Moreover, Gunduz et al (2009) conducted a similar study on 106 countries from year 1975 to 2005. Applying the same GMM estimation technique as in Davies and Quinlivan (2006), their findings suggested that while middle- and high-income countries would benefit from trade, this is not the case for low-income countries as trade does not play any role in improving human development. Although the positive effect of trade on human development appears to be dominating in terms of the number of findings, a study by Figueroa (2014) however indicated contrasting evidence. Figueroa (2014) found that trade has strong negative impact on human development in developing economies, presumably because trade places developing economies at a significant disadvantage compared to the more advanced and industrialised countries. This negative relationship is also evident in a study by Mazlan et al (2019) who employed the econometric modelling technique of ARDL and similarly found trade openness to be negatively related to the level of human development in Malaysia both in the short run and long run.

Donciu (2013) meanwhile, focuses on an equally important aspect of globalisation which is, foreign direct investment (FDI). The author stated that the relationship between globalisation and FDI is manifested in mutual correspondence; with FDI being one of the causes that fuels the deepening of globalisation, and also FDI being a manifestation of globalisation in economics. Particularly in the case of emerging economies, FDI is considered to be a major driver of economic, productivity and employment growth, expansion of capital stock, as well as innovation and technology transfer (Isac et al., 2011). In this regard, FDI serves as an important means for integration between national and global economies (Moghaddam & Redzuan, 2012; Almfraji et al., 2014). In the literature, the effect of FDI specifically on human development is less investigated and lack in evidence. Nevertheless, such evidence can be found in a study by Sharma and Gani (2004) who examined the impact of foreign direct investment on human development by focusing on two country groups (middle-income and low-income countries) over the time period of 1975 until 1999. Regression results produced by the fixed effect estimation model confirmed a positive link between foreign direct investment and human development for both middle- and low-income countries. Similar conclusion is also drawn from empirical results found in Figueroa (2014), where FDI shows strong positive effect in the human development of developing economies, which could result from the creation of new employment through investment.

Given that the process of urbanisation is part and parcel of globalisation, this study also looks into the role of urbanisation in influencing human development. According to Hu & Chen (2015), urbanisation is not an isolated process under globalisation and is also referred to as a phenomenon accompanied by industrialisation development. Driven by foreign direct investment and international trade, globalisation underpins the process of urbanisation in which inflows of capital and technology lead to job creation, whilst the transfer of agricultural labour from the rural sector promotes the advancement of urbanisation (Firman et al., 2007; Lin, 2007; Fujita & Hu, 2001). While most evidence in the literature focused on the urbanisation and growth nexus, only a few studies attempted to establish the relationship between urbanisation and human development. One of the studies is a district-level analysis conducted by Anisujjaman (2015) who found that there is a positive link between the level of urbanisation and HDI in West Bengal, India. More recent studies by Huang and Jiang (2017); Tripathi (2019) also arrived at similar conclusion, which confirms that urbanisation is positively correlated with HDI. However, contrasting evidence is observed in a study by Maiti (2017) where his finding suggests a statistically significant and negative relationship between urbanisation and HDI for China and India. On the other hand, Malik (2014) argued that a high level of urbanisation does not necessarily generate better human development outcomes. This is because the link between urbanisation and HDI is indirect and depends on how the urbanisation is managed. A poorly managed urbanisation can result in further deprivation, inequality and exclusion of the people.

Drawing on the well-established literature pointing at the significant link between globalisation and human development, this study seeks to provide empirical evidence by testing the hypothesised relationship in the case of lower-middle income economies. Not only is there limited research on the impact of globalisation on human development for lower-middle income economies, there is also a possibility that globalisation is important for human development only after a certain level of income growth (Sabi, 2007). Similarly, higher level of urbanisation resulting from higher income does not necessarily guarantee improvements in quality of life. Building upon these research gaps, the present study focuses on lower-middle economies and tests whether the established significant impacts of globalisation on human development hold for the less advanced and less globalised group of countries.

## **Data and Methodology**

### **Data**

This study analyses the impact of globalisation on human development by using a yearly panel dataset for 33 lower-middle income economies over a 20-year time period from 2000 to 2019. In defining lower-middle income economies, this study follows World Bank's income classification that defines lower-middle income economies as those in which 2019 Gross National Income (GNI) per capita was between \$1,036 and \$4,045. The dependent variable in this study is Human Development Index (HDI), which represents an index that measures three key dimensions of human development: long and healthy life, knowledge and a decent standard of living. As for the independent variables, five measures of globalisation and urbanisation are used which consist of trade, foreign direct investment, mobile cellular subscriptions, Internet users and urban population. It is worth noting that the measures of globalisation used in this study are selected based on the dimensions of globalisation theoretically proposed by Sirgy et al (2004) which highlights *global diffusion of goods and*

services (trade), global diffusion of capital (foreign direct investment) and global diffusion of technology (mobile cellular subscriptions and Internet users).

### Econometric Model

This study modifies the econometric model adopted from Mazlan et al. (2019) by introducing an additional indicator measuring ICT (Internet users) as well as urbanisation due to its link with globalisation and human development. Four econometric models specified for regression analysis in this study are defined as follow:

$$HDI_{it} = \alpha_{it} + \beta_1 FDI_{it} + \beta_2 TRD_{it} + \beta_3 MOB_{it} + \beta_4 URB_{it} + \varepsilon_{it} \quad \text{Eq. (1)}$$

$$HDI_{it} = \alpha_{it} + \beta_1 FDI_{it} + \beta_2 TRD_{it} + \beta_3 INTR_{it} + \beta_4 URB_{it} + \varepsilon_{it} \quad \text{Eq. (2)}$$

$$HDI_{it} = \alpha_{it} + \beta_1 FDI_{it} + \beta_2 TRD_{it} + \beta_3 MOB_{it} + \beta_4 INTR_{it} + \varepsilon_{it} \quad \text{Eq. (3)}$$

$$HDI_{it} = \alpha_{it} + \beta_1 FDI_{it} + \beta_2 TRD_{it} + \beta_3 MOB_{it} + \beta_4 INTR_{it} + \beta_5 URB_{it} + \varepsilon_{it} \quad \text{Eq. (4)}$$

where  $HDI$  is Human Development Index of country  $i$  year  $t$ ;  $FDI$  is the net FDI inflows measured as a share of Gross Domestic Product (GDP) of country  $i$  year  $t$ ;  $TRD$  is sum of exports and imports of goods and services measured as a share of GDP of country  $i$  year  $t$ ;  $MOB$  and  $INTR$  are the two ICT indicators measured respectively as mobile cellular subscriptions per 100 people and individuals using the Internet as a share of population of country  $i$  year  $t$ ;  $URB$  is urbanisation proxied by urban population measured as a share of total population of country  $i$  year  $t$ ;  $\varepsilon_{it}$  is the error term of country  $i$  year  $t$ ;  $\alpha$  is the constant and  $\beta_1, \beta_2, \beta_3, \beta_4$  and  $\beta_5$  are the parameters to be determined.

Taking the logarithm of Eq. (1) – (4), gives Eq. (5) – (8) respectively, which are stated as follow:

$$\log HDI_{it} = \alpha_{it} + \beta_1 \log FDI_{it} + \beta_2 \log TRD_{it} + \beta_3 \log MOB_{it} + \beta_4 \log URB_{it} + \varepsilon_{it} \quad \text{Eq. (5)}$$

$$\log HDI_{it} = \alpha_{it} + \beta_1 \log FDI_{it} + \beta_2 \log TRD_{it} + \beta_3 \log INTR_{it} + \beta_4 \log URB_{it} + \varepsilon_{it} \quad \text{Eq. (6)}$$

$$\log HDI_{it} = \alpha_{it} + \beta_1 \log FDI_{it} + \beta_2 \log TRD_{it} + \beta_3 \log MOB_{it} + \beta_4 \log INTR_{it} + \varepsilon_{it} \quad \text{Eq. (7)}$$

$$\log HDI_{it} = \alpha_{it} + \beta_1 \log FDI_{it} + \beta_2 \log TRD_{it} + \beta_3 \log MOB_{it} + \beta_4 \log INTR_{it} + \beta_5 \log URB_{it} + \varepsilon_{it} \quad \text{Eq. (8)}$$

A number of preliminary testing is conducted before the study moves to the primary regression analysis. The Breusch Pagan Lagrange Multiplier (BP LM) test is first performed to determine poolability of the panel data used (Breusch & Pagan, 1980). If result of the BP LM rejects the null hypothesis of no significant difference across units, this implies the existence of random effect in the panel data (Park, 2011). Subsequently, the Hausman test is performed to decide on the choice and relevance of using a random effect or fixed effect model estimation for the panel data. Several diagnostic checks are conducted to test for presence of

problems commonly associated with panel data econometric models. These tests are Variance Inflation Factor (VIF) test (to detect problem of multicollinearity), Modified Wald test (to detect problem of heteroskedasticity) and Wooldridge test (to detect problem of serial correlation). A VIF value of more than 5 or 10 signals multicollinearity (Montgomery, Peck & Vining, 2001) problem and thus, warrants the removal of any highly collinear variables. Meanwhile, if statistical results produced by the Modified Wald test and Wooldridge test reject the null hypothesis of absence of heteroskedasticity and serial correlation problems, the resulting static panel data estimation technique (either random effect or fixed effect model) is to be conducted with robust standard errors (Hoechle, 2014).

### Results and Discussion

The Table 1 below reports statistical findings obtained from panel data regression analysis of relationship between globalisation, urbanisation and human development in lower-middle income economies. As presented in Table 1,  $p$ -values generated by BP LM test and Hausman test are both statistically significant, which favoured the use of a fixed effect model estimator rather than a random effect model estimator. Additionally, this study also undertook a few diagnostic checks to ensure robustness of model estimation. First, the small VIF values ranging from 1.21 to 2.32 suggested that the explanatory variables do not suffer from any serious multicollinearity problem. Second, the statistically significant  $p$ -values produced by the Modified Wald test and Wooldridge test indicated presence of both heteroskedasticity and serial correlation problems. To overcome these problems, the study proceeds with regression analysis by employing the fixed effect model estimation technique with robust standard errors.

Table 1

*Panel Data Regression Results*

	Model 1	Model 2	Model 3	Model 4
logFDI	0.0072 (0.0083)	0.0118 (0.0074)	0.0160*** (0.0053)	0.0130* (0.0072)
logTRD	-0.0020 (0.0038)	-0.0039 (0.0027)	-0.0022 (0.0024)	-0.0023 (0.0025)
logMOB	0.0300*** (0.0043)	-	0.0158*** (0.0046)	0.0126*** (0.0038)
logINTR	-	0.0351*** (0.0051)	0.0299*** (0.0057)	0.0253*** (0.0052)
logURB	0.3326*** (0.0802)	0.2593*** (0.0917)	-	0.2129** (0.0801)
Constant	2.7369*** (0.2957)	3.0624*** (0.3532)	3.9885*** (0.0228)	3.2137*** (0.3076)
BP LM test	4931.85***	4506.17***	4116.8***	4180.19***
Hausman test	13.78***	13.95***	16.87***	16.76***
Observations	660	660	660	660
No. of countries	33	33	33	33
R-squared	0.8037	0.8390	0.8368	0.8526
VIF test	1.21	1.22	2.58	2.32
Modified Wald test	1518.46***	1306.63***	1619.83***	1454.13***
Wooldridge test	35.42***	32.06***	48.75***	29.79***

*Notes:* Values in parentheses are robust standard errors, whereby \*\*\*, \*\* and \* indicate significance at 1%, 5% and 10% level, respectively. All econometric models (Model 1, 2, 3 and 4) are regressed using the fixed effect model estimator with robust standard errors.

Based on the regression findings shown in Table 1, the study found that FDI, ICT and urbanisation have significant and positive relationships with human development in lower-middle income economies. The statistical significance of FDI agrees well with existing literature especially in a study by Sharma and Gani (2004), whose results similarly indicated a strong positive effect of FDI on human development in low- and middle-income countries. The finding is also consistent with results found in Figueroa (2014) who confirmed a positive relationship between FDI and human development in developing economies. The positive relationship between FDI and human development could be due to the fact that investment results in creation of new employment through investment (Figueroa, 2014). Additionally, Sirgy et al. (2004) also proposed that increased inflow of investment would cause increased competitiveness of domestic firms, thus resulting in increased product availability from local production, which in turn leads to greater public spending and improved quality of public services.

The two ICT variables used in this study – mobile cellular subscriptions and Internet users – are also found to be significantly and positively correlated with human development. This suggests that high number of mobile cellular subscriptions and Internet users is crucial in improving human development in the lower-middle income economies. The result confirms the positive link between technological progress and human development as established in the literature (De La Hoz et al., 2019; Asongu & Le Roux, 2017). The significance and positive effect of ICT found in this study prove that technological progress is an equally important factor in both economic and human development of lower-middle income economies. Such significance is achieved presumably through increased efficiency and productive capacity of the countries caused by greater support and investment in technological adoption. Urbanisation, meanwhile, revealed to be significantly and positively correlated to human development. This finding corresponds well with past studies (Anisujjaman, 2015; Huang & Jiang, 2017), especially with Tripathi (2019) who similarly observed a statistically positive and significant impact of urban population on human development in lower-middle-income countries. This suggests that urbanisation not only improves the income of the country, but also the quality of life of its residents through possible expansion of economic activities, provision of employment opportunities and greater access to basic public services.

In contrast, findings from this study show that trade is the only measure of globalisation that emerged insignificant in affecting human development. Although the result does not support the well-established positive effect of trade in the body of literature, this study nevertheless is comparable to Gunduz et al (2009) who found no evidence of a significant impact of trade on human development in low-income countries. A plausible explanation behind the insignificance of trade found in this study could be due to the fact that countries with low social and economic indicators are generally oriented towards exporting primary or low value-added goods. Such exports seldom promote skill levels, productivity and technological change in the long run. Therefore, poor countries that are more often subject to various supply-side constraints and lack of complementary and supporting trade policies may have limited capacity to benefit and generate significant static welfare gains from trade.

**Conclusion and Recommendation**

This study investigated the relationship between globalisation, urbanisation and human development in 33 lower-middle income economies by using a panel data analysis from year 2000 to 2019. Findings from the study contribute to the current understanding of how significant globalisation is in influencing human development in lower-middle income economies, by looking at several perspectives such as diffusion of capital (FDI inflow), diffusion of goods and services (trade) and diffusion of technology (ICT access and use). The study also adds to existing evidence that urbanisation brings about positive and significant effect on human development in lower-middle income economies.

Empirical evidence found in this study largely supports the hypothesis that there is a positive link between globalisation and human development in lower-middle income economies. The statistical significance and positive effects of FDI, mobile cellular subscriptions and Internet users suggest that greater inflow of capital and technology diffusion result in improved human development. Additionally, the significance of urbanisation found in this study also demonstrates that urbanisation plays an equally important role in influencing human development. It is also worth noting that, among all indicators tested in this study, urbanisation produces the greatest influence on human development based on its relatively large coefficient value. This finding further implies that urbanisation is a significant mechanism to enhance the quality of life in lower-middle income economies, which can be achieved through economic expansion that subsequently leads to job creation and improved public services and facilities. Although the benefits of capital inflow, technological diffusion and urbanisation to human development are confirmed in this study, this is not the case for trade. This study found no evidence of statistical significance in trade, which could be an indication of the limited ability of the lower-middle economies to take advantage and reap full benefit of trade for development.

Drawing on the conclusion made based on the findings from this study, several policy implications and recommendations can be derived. As indicated in this study, the importance of FDI in promoting human development entails the need for lower-middle income economies to pursue domestic policies geared towards attracting greater inflow of investment into the countries, as well as maximising the benefits of close involvement with foreign firms. The benefits of FDI particularly in developing economies are also well-documented; that include improved international trade integration as well as technology spillovers, thus bringing about improvements in technological capabilities in domestic economies. Furthermore, sustainable urban development strategies and policies should be in place to ensure that urban development expands job and income opportunities for the residents while simultaneously provides sufficient access to improved public services and amenities in the localities. Governments should also have initiatives designed to provide adequate ICT resources and facilities, thereby promoting the adoption and use of ICT across economic sectors, households and individuals. This corresponds to the significance of technology in knowledge creation, which is a decisive factor in growth and development of lower-middle income economies.

Few limitations of this study, however, should be noted. First, in measuring globalisation, this study did not incorporate diffusion of workers as another dimension of globalisation as proposed by Sirgy et al (2004) due to lack of data. Future investigation into this labour

dimension can deepen the understanding of how inflow and outflow of workers impact human development. Second, the primary focus of this study is only made on lower-middle economies without any comparison with economies from other income levels. Future research direction, therefore, should consider including the high income, upper-middle income as well as low-income economies to evaluate whether the different economies have reaped benefits of globalisation for human development.

### Acknowledgement

The authors would like to thank the Ministry of Education (MOE) Malaysia and Universiti Malaysia Sabah for supporting this work under the Fundamental Research Grant Scheme for Research Acculturation of Early Career Researchers (RACER/1/2019/SS08/UMS/2).

### References

- Almfraji, M. A., Almsafir, M. K., & Yao, L. (2014). Economic Growth and Foreign Direct Investment Inflows: The Case of Qatar. *Procedia-Social and Behavioral Sciences*, 109, 1040-1045.
- Amin, G. A. (1999). Globalisation, Consumption Pattern and Human Development in Egypt. *Working Paper No. 9929*.
- Anisujjaman, M. (2015). Urbanisation and Human Development: A Study of West Bengal. *International Journal of Humanities and Social Science Invention*, 4, 2319-7722.
- Asongu, S. A., & Le Roux, S. (2017). Enhancing ICT for inclusive human development in Sub-Saharan Africa. *Technological Forecasting and Social Change*, 118, 44-54.
- Asongu, S. A. (2012). Globalization and Africa: implications for human development. *MPRA Paper 36546*.
- Barro, R. J. (1998). *Determinants of Economic Growth: A Cross-Country Empirical Study*. Cambridge, MA: MIT Press.
- Breusch, T. S., & Pagan, A. R. (1980). The Lagrange Multiplier Test and its Applications to Model Specification in Econometrics. *Review of Economic Studies*, 47(1), 239-253.
- Çağlayan-Akay, E., & Van, M. H. (2017). Determinants of the Levels of Development based on the Human Development Index: Bayesian ordered probit model. *International Journal of Economics and Financial Issue*, 7(5), 425-431.
- Çalışkan, H. K. (2015). Technological change and economic growth. *Procedia – Social and Behavioural Sciences*, 195 (2015), 649-654.
- Chen, D. H. C., & Dahlman, C. J. (2005). The Knowledge Economy, the Kam Methodology and World Bank Operations. *World Bank Institute Working Paper No. 37256*.
- Chiappero-Martinetti, E., Von Jacobi, N., Signorelli, M. (2015). Human Development and Economic Growth. In Hölscher J., Tomann H. (eds), *Palgrave Dictionary of Emerging Markets and Transition Economics*. Palgrave Macmillan, London.
- CORE. (2018). *The economy: Economics for a changing world*. Oxford: Oxford University Press.
- Davies, A., & Quinlivan, G. (2006). A panel data analysis of the impact of trade on human development. *The Journal of Socio Economics*, 868-876.
- De La Hoz, B., Camacho-Ballesta, J., Tamayo-Torres, I., & Buelvas-Ferreira, K. (2019). Effects of information and communication technology usage by individuals, businesses, and government on human development: An international analysis. *IEEE Access*, 7, 129225-129243.
- Dima, S. C. (2016). Globalisation, Trade Openness and Foreign Direct Investment in Romania. *Studia Universitatis Economics Series*, 26, 41-53.

- Donciu, E. C. (2013). Globalization and foreign direct investments. *CES Working Papers*, 5(2), 177-186.
- Dornbusch, R., Fischer, S., & Startz, R. (1998). *Macroeconomics*. New York: McGraw Hill.
- Easton, B. (2001). Globalization and a welfare State. In D. Lamberton (ed.), *Managing the Global: Globalization, Employment, and Quality of Life. The Toda Institute for Global Peace and Policy Research*, 163-168.
- Economic Commission for Latin America and the Caribbean (ECLAC). (2002). *Globalization and Development*. Retrieved from the Library of Congress: <https://lccn.loc.gov/2003398940>.
- Figueroa, A. M. (2014). The impact of globalization on human development in the developing countries: the case of Central and South America. *Revista Eletrônica de Ciência Política*, 5(2).
- Firman, T., Kombaitan, B., & Pradono, P. (2007). The Dynamics of Indonesia's Urbanisation: 1980–2006. *Urban Policy and Research*, 25(4), 433-454.
- Fujita, M., & Hu, D. (2001). Regional Disparity in China 1985–1994: The Effects of Globalisation and Economic Liberalisation. *The Annals of Regional Science*, 35, 3-37.
- Gill, I. S., & Goh, C-C. (2010). Scale economies and cities. *The World Bank Research Observer*, 25(2), 235–262.
- Gunduz, U., Hisarciklilar, M., & Kaya, T. (2009). The impact of trade on social development. *World Academy of Science, Engineering and Technology*, 1417-1420.
- Hoechle, D. (2014). Robust Standard Errors for Panel Regressions with Cross-Sectional Dependence. *Stata Journal*, 4.
- Hu, B. & Chen, C. (2015). New Urbanisation in China. *Asia and the Pacific Policy Studies*, 2, 34-43.
- Huang, G., & Jiang, Y. (2017). Urbanization and Socioeconomic Development in Inner Mongolia in 2000 and 2010: A GIS Analysis. *Sustainability*, 9, 235.
- Isac, C., Dura, C., & Ciurlau, F. C. (2011). The expansion of FDI flows-a major factor of globalization. *Annals of University of Petrosani, Economics*, 11(4), 139-150.
- Kuada, J. (2015). Private Enterprise-Led Economic Development. In J. Kuada (Ed.), *Sub-Saharan Africa The Human Side of Growth*. New York: Palgrave Macmillan.
- Lin, G. (2007). Reproducing Spaces of Chinese Urbanisation: New City-Based and Land-Centred Urban Transformation. *Urban Studies*, 44(9), 1827–1855.
- Maiti, M. (2017). Urbanisation and inequalities in China and India. Overview and comparative study. *Theoretical and Applied Economics*, 24, 121-136.
- Malik, U. A. (2014). *Urbanization and Human Development: A New Look. Briefing paper*, Mahbub ul Haq Human Development Centre.
- Mazlan, N. S., Fadzilah, F. Y., & Ibrahim, S. (2019). The Role of Globalisation in Improving Human Development in Malaysia. *Jurnal Ekonomi Malaysia*, 53(2), 227-234.
- Moghaddam, A. A., & Redzuan, M. R. (2012). Globalization and Economic Growth: A Case Study in A Few Developing Countries (1980-2010). *Research in World Economy*, 3(1), 54-62.
- Montgomery, D. C., Peck, E. A., & Vining, G. G. (2001). *Introduction to linear regression analysis* (3rd ed.). New York: Wiley.
- Muchdie, M. (2016). The Impacts of Technological Progress on Human Development: Evidence from Indonesia. *International Journal of Economics and Research*, 7(5), 14-28.

- Park, H. M. (2011). Practical Guides To Panel Data Modeling: A Step-by-step Analysis Using Stata. *Tutorial Working Paper*. Graduate School of International Relations, International University of Japan.
- Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institution Rule: the primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*, 9, 131-165.
- Romer, P. M. (2008). Economic Growth. In *The concise encyclopedia of Economics (2nd ed.)*. Stanford: Library of Economics and Liberty.
- Sabi, M. (2007). Globalization and Human Development. Papers of the Annual IUE-SUNY Cortland Conference in Economics. In O. Esen & A. Ogus (ed.), *Proceedings of the Conference on Globalization and Its Discontents*, 102-119.
- Sapkota, J. B. (2011). Impacts of globalization on quality of life: evidence from developing countries. *MPRA Paper 37506*.
- Sen, A. K. (1985). *Commodities and Capabilities*. New Delhi: Oxford University Press.
- Sharma, B., & Gani, A. (2007). The Effects of Foreign Direct Investment on Human Development, *Global Economy Journal*, 4(2), 9-9.
- Sirgy, M. J., Lee, D. J., Miller, C., & Littlefield, J. E. (2004). The impact of globalization on a country's quality of life: toward an integrated model. *Social Indicators Research*, 68, 251-298.
- Tchamyou, V. S. (2015). The role of knowledge economy in African business. *Research Africa Network Working Papers 15/049*.
- Tripathi, S. (2019). Urbanization and Human Development Index: Cross-country evidence. *MPRA Paper 97474*.
- Tsai, M. C. (2007). Does globalization affect human well-being?. *Social Indicators Research*, 81(1), 103-126.
- United Nations Development Programme (UNDP). (1990). *Human Development Report*. New York: Oxford University Press.