

**THE EFFECT OF ENTREPRENEURSHIP,
REMITTANCES AND URBANIZATION ON
INCOME INEQUALITY IN DEVELOPING
COUNTRIES: LEVERAGING ON RURAL
DEVELOPMENT AND INFRASTRUCTURE**

NURUL MUNA BINTI MOHAMAD

UNIVERSITI SAINS MALAYSIA

2022

**THE EFFECT OF ENTREPRENEURSHIP,
REMITTANCES AND URBANIZATION ON
INCOME INEQUALITY IN DEVELOPING
COUNTRIES: LEVERAGING ON RURAL
DEVELOPMENT AND INFRASTRUCTURE**

by

NURUL MUNA BINTI MOHAMAD

**Thesis submitted in fulfilment of the requirements
for the degree of
Doctor of Philosophy**

January 2022

ACKNOWLEDGEMENT

Foremost, praises and thanks to the Allah S.W.T, for His mercy in giving me the strength, patience, health and courage to accomplish this research within the stipulated period of time.

First, I would like to express my special thanks of gratitude to my main supervisor, Associate Professor Dr. Tajul Ariffin bin Masron and my co-supervisor, Dr. Haslindar binti Ibrahim, who gave me the golden opportunity to do this wonderful research. I am are overwhelmed in all humbleness and gratefulness to acknowledge my gratitude towards all their concern, guidance, advice, knowledge, motivation, encouragement and sharing a generous amount of time throughout the process of completing this research.

Special appreciation also goes to my beloved husband and family, as well as the continued support of my in-laws. Special thanks for their sacrifice, patience, love, motivation and understanding which aspires me to complete my PhD studies. They have never given up on me and always support me along this postgraduate journey.

Not forgetting my special dedication to my entire comrade, who always helped me in providing assistance and shared the knowledge. Finally, sincere thanks to every individual who have directly or indirectly involved throughout the birth of this research. May Allah S.W.T bless and reward all of us who had made this work a success.

TABLE OF CONTENTS

ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	x
ABSTRAK	xi
ABSTRACT	xiii
CHAPTER 1 INTRODUCTION	
1.1 Overview	1
1.2 Background of Study	4
1.2.1 Income and Income Inequality in Developing Countries	4
1.2.2 Entrepreneurship in Developing Countries	8
1.2.3 Remittances in Developing Countries	11
1.2.4 Urbanization in Developing Countries	14
1.3 Problem Statement	18
1.4 Research Questions	23
1.5 Research Objectives	24
1.6 Scope of Study	25
1.7 Significance of Study	25
1.8 Definition of Key Terms	28
1.9 Organization of Study	29

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction	31
2.2 Theoretical Review	32
2.2.1 Kuznets Curve Hypothesis	32
2.2.2 Greenwood and Jovanovic Hypothesis	35
2.2.3 Schumpeter’s Creative Destruction Theory	38
2.2.4 Theoretical Perspective of Urbanization – Income Inequality Nexus	41
2.3 Empirical Review	47
2.3.1 Income and Income Inequality	47
2.3.2 Trade and Income Inequality	50
2.3.3 Foreign Direct Investment (FDI) and Income Inequality	53
2.3.4 Education and Income Inequality	58
2.3.5 Corruption and Income Inequality	61
2.3.6 Inflation and Income Inequality	66
2.3.7 Entrepreneurship and Income Inequality	70
2.3.8 Remittances and Income Inequality	75
2.3.9 Urbanization and Income Inequality	79
2.3.10 Rural Development and Income Inequality	84
2.4 Theoretical Framework of Study	87
2.5 Gaps of the Study	89
2.5.1 Entrepreneurship and Income Inequality	89
2.5.2 Remittances and Income Inequality	91
2.5.3 Urbanization and Income Inequality	92

CHAPTER 3 RESEARCH METHODOLOGY

3.1 Introduction	94
3.2 Empirical Model Specification	94
3.2.1 Model Specification	94
3.2.2 Marginal and Threshold Effect	107
3.3 Hypothesis Formulation	107
3.3.1 Income	107
3.3.2 Trade	108
3.3.3 Foreign Direct Investment (FDI)	108
3.3.4 Education	109
3.3.5 Corruption	110
3.3.6 Inflation	110
3.3.7 Entrepreneurship	111
3.3.8 Interaction Term (ENT*ENT)	111
3.3.9 Interaction Term (ENT*RUDEV).....	112
3.3.10 Interaction Term (ENT*RUINF).....	113
3.3.11 Remittances	113
3.3.12 Interaction Term (REM*ENT).....	114
3.3.13 Interaction Term (REM*RUDEV)	114
3.3.14 Interaction Term (REM*RUINF)	115
3.3.15 Urbanization	116
3.3.16 Interaction Term (URB*RUDEV).....	116
3.3.17 Interaction Term (URB*RUINF).....	117
3.3.18 Rural Development	118

3.4 Estimation Methodology	118
3.4.1 Panel Data	118
3.4.2 Dynamic Panel Models	121
3.4.3 Computation of t-statistic for Marginal Effect	127
3.5 Measurement and Data Sources	128
3.6 Summary of Hypotheses	131
CHAPTER 4 RESULTS AND DISCUSSIONS	
4.1 Introduction	133
4.2 Descriptive Analysis	133
4.3 Correlation Analysis	136
4.4 Results of GMM Regression Analysis	139
4.4.1 Regression Results of Model 1	140
4.4.2 Regression Results of Model 2	150
4.4.2(a)Regression Results of Model 2 with ENT*ENT	151
4.4.2(b)Regression Results of Model 2 with ENT*RUDEV	157
4.4.2(c)Regression Results of Model 2 with ENT*RUINF	167
4.4.3 Regression Results of Model 3	177
4.4.4 Regression Results of Model 4	183
4.4.4(a)Regression Results of Model 4 with REM*ENT	184
4.4.4(b)Regression Results of Model 4 with REM*RUDEV	190
4.4.4(c)Regression Results of Model 4 with REM*RUINF	199
4.4.5 Regression Results of Model 5	208
4.4.6 Regression Results of Model 6	215
4.4.6(a)Regression Results of Model 6 with URB*RUDEV	216

4.4.6(b)Regression Results of Model 6 with URB*RUINF	226
4.4.6(c)Regression Results of Model 6 with URB*RUINF ²	235
CHAPTER 5 CONCLUSION	
5.1 Introduction	246
5.2 Recapitulation	246
5.3 Summary of Findings	251
5.4 Policy Implications	257
5.5 Limitations of the Study	261
5.6 Future Research Suggestions	262
REFERENCES	264

LIST OF TABLES

		Page
Table 1.1	Gini Index in Developing Countries	6
Table 1.2	The Definition of Key Terms	28
Table 3.1	Variables, Proxies and Data Sources	130
Table 3.2	Hypothesis in the study	131
Table 4.1	Descriptive Analysis	134
Table 4.2	Correlation Analysis	137
Table 4.3	Regression Results of Model 1 [DV=IE]	141
Table 4.4	Regression Results of Alternative Measure for Entrepreneurship [DV = IE]	147
Table 4.5	Regression Results of Model 2 with ENT*ENT [DV=IE]	152
Table 4.6	Regression Results of Model 2 with ENT*RUDEV [DV=IE] ...	158
Table 4.7	Regression Results of Model 2 with ENT*RUINF [DV=IE]	168
Table 4.8	Regression Results of Model 3 [DV=IE]	177
Table 4.9	Regression Results of Model 4 with REM*ENT [DV=IE]	185
Table 4.10	Regression Results of Model 4 with REM*RUDEV [DV=IE]	192
Table 4.11	Regression Results of Model 4 with REM*RUINF [DV=IE]	200
Table 4.12	Regression Results of Model 5 [DV=IE]	208
Table 4.13	Regression Results of Model 6 with URB*RUDEV [DV=IE]	218
Table 4.14	Regression Results of Model 6 with URB*RUINF [DV=IE]	227
Table 4.15	Regression Results of Model 6 with URB*RUINF ² [DV=IE]	236
Table 5.1	Summary of Key Findings	256

LIST OF FIGURES

	Page
Figure 1.1 GDP Per Capita of Developing Countries in 2018	5
Figure 1.2 Entrepreneurship in Developing Countries for 2015 and 2017	10
Figure 1.3 Remittances in Developing Countries for 2017 and 2018	13
Figure 1.4 Urbanization in Developing Countries for 2017 and 2018	16
Figure 1.5 Urbanization and Income Inequality Scatter Plots in Developing Countries for 2017	17
Figure 2.1 The Kuznets Curve	33
Figure 2.2 Concentric Zone Model	43
Figure 2.3 Theoretical Framework of Study	88

LIST OF ABBREVIATIONS

CBD	Central Business District
CEE	Central and Eastern Europe
COMCEC	Standing Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GEDI	Global Entrepreneurship and Development Index
IDA	International Development Association
IMF	International Monetary Fund
MNCs	Multinational Corporations
MSMEs	Micro, Small and Medium Enterprises
ODA	Official Development Assistances
OECD	Organization for Economic Cooperation and Development
R&D	Research and Development
SESRIC	Statistical, Economic and Social Research and Training Centre for Islamic Countries
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
WIID	World Income Inequality Database

**KESAN KEUSAHAWANAN, PENGIRIMAN WANG DAN URBANISASI
TERHADAP KETIDAKSAMAAN PENDAPATAN DI NEGARA-NEGARA
MEMBANGUN: PENGARUH PEMBANGUNAN DAN INFRASTRUKTUR DI
LUAR BANDAR**

ABSTRAK

Isu ketidaksamaan pendapatan menjadi agenda penting untuk ditangani terutama oleh negara membangun. Dengan kewujudan ketidaksamaan pendapatan yang besar, penyelesaian sangat dialukan. Beberapa faktor telah diberikan penekanan sebagai potensi penyelesaian untuk menangani masalah ketidakseimbangan pendapatan di dalam kajian ini, iaitu keusahawanan, kiriman wang dan urbanisasi. Kajian ini menggunakan kaedah momen teritlak (GMM) untuk mencapai objektif bagi tempoh 2009-2017 yang merangkumi 47 negara membangun. Hasil kajian memberikan bukti bahawa tahap keusahawanan yang cukup tinggi mampu mengurangkan ketidakseimbangan pendapatan di negara-negara membangun, manakala pembangunan dan infrastruktur luar bandar yang lebih baik mampu menyokong aktiviti keusahawanan. Sementara itu, dapatan kiriman wang tidak menunjukkan bahawa mereka membantu mengurangkan ketidakseimbangan pendapatan. Walaupun begitu, keberkesanan kiriman wang boleh dizahirkan sekiranya lebih banyak agihan untuk aktiviti keusahawanan yang disokong oleh pembangunan dan kemudahan luar bandar yang lebih baik. Akhirnya, keputusan urbanisasi menunjukkan urbanisasi yang cepat memburukkan ketidakseimbangan pendapatan. Oleh itu, pembangunan dan infrastruktur luar bandar yang lebih sesuai boleh meminimumkan kadar urbanisasi dan memberikan prospek lebih baik untuk bakat muda mengeksploitasi peluang yang besar di luar bandar. Sebagai kunci

kepada cadangan polisi, kajian ini melihat bahawa keseimbangan yang lebih baik dalam pembangunan dan insentif di antara bandar dan luar bandar perlu dibentuk oleh kerajaan. Kejayaan ini akan diterjemahkan dalam keusahawanan yang tinggi terutamanya dalam bentuk berasaskan pertanian di kalangan orang miskin di luar bandar dipengaruhi oleh sumber-sumber luar bandar yang kaya. Akhirnya, ketidakseimbangan pendapatan boleh diminimumkan.

**THE EFFECT OF ENTREPRENEURSHIP, REMITTANCES AND
URBANIZATION ON INCOME INEQUALITY IN DEVELOPING
COUNTRIES: LEVERAGING ON RURAL DEVELOPMENT AND
INFRASTRUCTURE**

ABSTRACT

Income inequality problem is a vital agenda to deal with, especially for developing countries. In the presence of high income inequality in many developing countries, solutions are certainly welcome. Several factors are deemed important to address the problem of income inequality in this study, which include entrepreneurship, remittances and urbanization. This study applies the method of Generalized Method of Moment (GMM) to achieve its objectives for the period of 2009-2017 covering 47 developing countries. The results provide evidence that sufficiently high level of entrepreneurship is able to decrease income inequality in developing countries, while better rural development and infrastructure will further support entrepreneurship activities. Meanwhile, the findings of remittances reveal that they are unlikely helpful to reduce income inequality. Nonetheless, its desired role can be achieved if the recipients among the poor can allocate more for entrepreneurship activities as well as supported by better rural development and facilities. Finally, the results of urbanization also suggest rapid urbanization worsens income inequality. Hence, appropriate rural development and infrastructure can minimize the pace of urbanization and give more prospects of young talents to exploit huge rural economic opportunities. As part of the key policy suggestions, this study suggests that a more balance infrastructure development and incentives between rural and urban areas should be designed by government. The success of

this measure will be translated into higher entrepreneurship especially in the form of agricultural-based activities among the poor in rural areas by leveraging on rich rural resources. Finally, minimizing income inequality.

CHAPTER ONE

INTRODUCTION

1.1 Overview

Fair distribution of income is considered to be an important component of a country's development agenda (Rose & Viju, 2014). Meanwhile, reducing inequality has been a main concern among the governments of many countries and has received immense attention (Novignon, 2017). The report on the World Social Situation by the United Nations (2013), which study about inequality matters states that tackling inequality problem is crucial in order to bring the development towards a socially sustainable path.

The annual report aimed towards 'End Extreme Poverty and Promote Shared Prosperity' has established poverty eradication as World Bank's key global objective in order to bring down the percentage of extreme poverty or people living with less than \$1.25 a day. The target is to bring down the percentage to be less than 3 percent globally by 2030 by boosting the incomes of the bottom 40 (B40) percent of the population in every country (World Bank, 2013a). In fact, the International Monetary Fund (IMF) also highlighted the vital role of income distribution as among the primary drivers for economic growth (Ostry et al., 2014).

Thorbecke and Charumilind (2002) point out that income equality will create and promote economic growth as income equality can avoid dissatisfaction and conflict

among the society. Meanwhile, dissatisfaction and conflict among the society can occur when a huge income gap exists. In general, high income gap between the poor and rich can create high social conflict among the societies. For instance, those who are poor will always feel uneasy seeing those who are rich can easily fulfill their needs, even the luxurious one. These needs range from goods and services as well as job opportunities, which all might be seized by the rich people as they can influence the person in-charge to agree with them. Meanwhile, individual with different background of economies need to face with challenging life because of unequal distribution of income. Low income households expenditures are also limited compared to high income households and they more focused on basic needs.

In the meantime, income equality has huge potential to avoid crimes and unlawful activities as well (Thorbecke & Charumilind, 2002; Maddah, 2013). Crimes and unlawful activities can happen when poor people had to deal with life constraints such as they need to struggle even in getting food. Poor people need to continue their life and at the same time, they need to compete with those people who have high income level because inequality has encourage rich people to grab a bigger slice of economic pie (Keeley, 2015). With that, poor individuals have more courage to commit crimes as an alternative to get their basic needs unlawfully.

Crimes and unlawful activities will spread among less fortunate people in the societies when income is distributed unequally among the people across economy. The occurrences of theft, house breaking, robbery, adultery will be more widespread as a result of insistence of life. It will threaten country's economic growth prospects in the long-run. Huge budget for prevention cost and correctional cost will be mandatory to rectify the situation (Baharom & Habibullah, 2009). Cost of installing

prevention gadgets such as anti-theft gadgets and anti-burglary equipment, and correctional cost such as campaigns and education on safe society is inevitably incurred to control crimes and unlawful activities. Government also needs to improve the security facility such as enhancing patrols in neighborhoods, surveillance and more frequent inspections by authorities to avoid undesirable things from happen. Unfortunately, all these preventive measures require the government and individuals to allocate huge sum of money which suppose to be used for national development agendas such as promoting entrepreneurship among the poor in the country.

Notwithstanding, income equality also can avoid harmful investment activities, it may also support the progress in human development and sustainable economic growth (Ostry et al., 2014). Even though they are poor, these people could be more talented in terms of channeling the available funds towards a much needed production for the country. But, the rich has the tendency to demand and direct the production toward luxury products, which may not always have long-run desirable outcome on economic growth. On the other hand, lack of access to credit may force the poor to destroy the environment for survival. They may intentionally (i.e. deforestation) or unintentionally (i.e. no rehabilitation) cause destruction to environment (Masron & Subramaniam, 2019). All these will effect economic instability and consequently affect progress in human development.

In summary, the crucial role of income equality in economic development is something that cannot be denied. Hence, alongside high economic growth, governments should also pay attention on income redistribution policies so that everyone in the economy will put economic efforts in the positive way and

eventually will promote sustainable high economic growth. This is because low income inequality is crucial to sustainable economic development.

1.2 Background of Study

1.2.1 Income and Income Inequality in Developing Countries

Developing countries are those known as less developed countries than developed countries. In most cases, developing countries are generally categorized as countries that have not achieved a significant degree of industrialization with less industrialization relative to their populations. Commonly, there are primary factors in order to distinguish and categorize countries as either developing countries or developed countries. International investors often classify countries around the world based on their level of economic development (Kuepper, 2019). Economic development is an increase in national and per capita income which acts as the sources and seed of consumption and also human welfare (Kindelberger, 1977). Meanwhile, according to Banik (2006), economic development is defined as an increase in gross domestic product (GDP) either in total GDP or in GDP per capita. GDP per capita is a measure of a country's economic output that accounts for its number of people. It divides the country's gross domestic product by its total population. That makes it a good measurement of a country's standard of living (Amadeo, 2019).

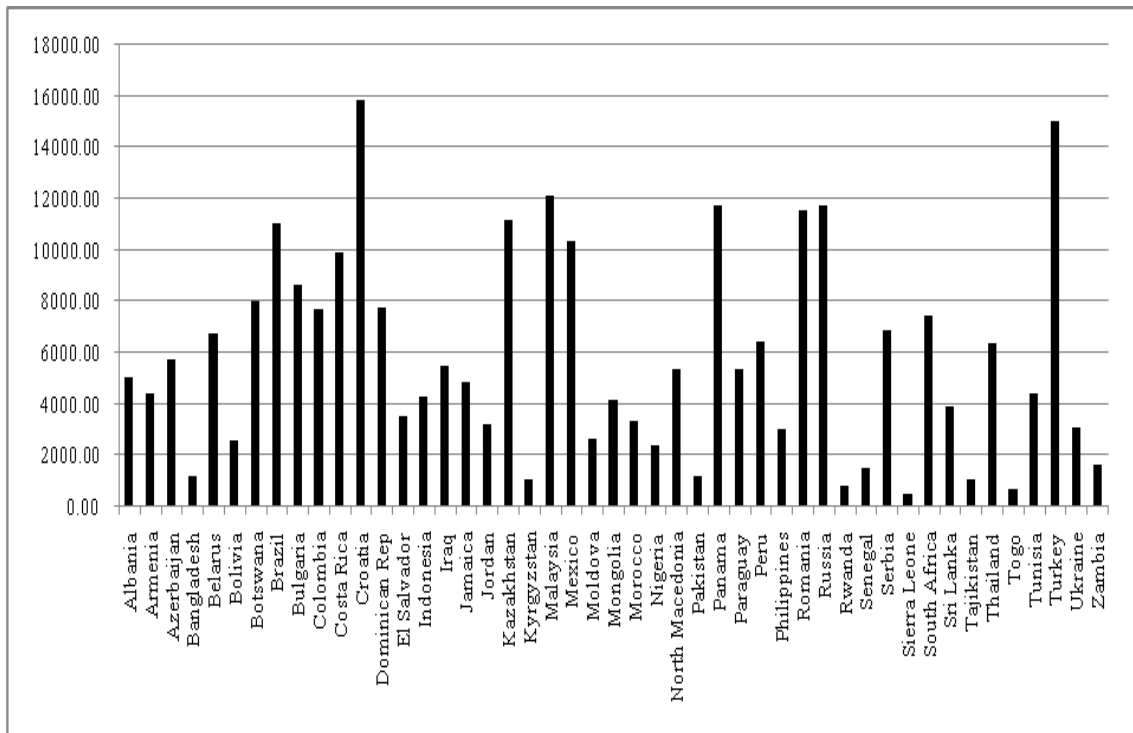


Figure 1.1: GDP Per Capita of Developing Countries in 2018.
Source: World Bank (2019a).

Figure 1.1 shows the real GDP per capita in 2018 for the developing countries under this study. As can be seen from Figure 1.1, Croatia recorded the highest GDP per capita with US\$15,870.28. Turkey stood at US\$15,026.71, to be the country with the second highest GDP per capita, and followed by Malaysia as the third highest country with US\$12,109.49. Thus, this figure shows that these three countries are the top three countries with the highest per capita GDP group among developing countries.

Income inequality had been measured based on Gini index. It is widely used and the most common inequality measure as well. The Gini index ranges from 0 (or 0 percent) to 1 (or 100 percent), with 0 representing perfect equality and 1 representing perfect inequality. The lower the Gini index score, it indicates a better equality is taking place (Lippmann et al., 2005; Thalassinou et al., 2012).

Table 1.1: Gini Index in Developing Countries

No.	Country	1995	2006	2017	No.	Country	1995	2006	2017
1	Albania	29.1	30.6	34.5	25	Morocco	35.6	40.7	39.6
2	Armenia	38.1	29.7	33.6	26	North Macedonia	29.5	42.6	35.5
3	Azerbaijan	34.7	26.6	33.7	27	Nigeria	46.5	42.9	48.8
4	Bangladesh	32.9	33.2	32.4	28	Pakistan	29.5	32.7	33.5
5	Belarus	37.3	28.3	25.4	29	Panama	57.8	54.6	49.9
6	Bolivia	52.7	56.7	44.0	30	Paraguay	58.2	53.0	48.8
7	Bostwana	41.4	49.5	56.3	31	Peru	51.4	50.3	43.3
8	Brazil	59.6	55.6	53.3	32	Philippines	42.9	47.2	44.4
9	Bulgaria	38.4	31.2	40.2	33	Romania	30.6	39.6	35.1
10	Colombia	57.0	60.1	49.7	34	Russia	38.2	41.0	39.0
11	Costa Rica	45.7	49.4	48.3	35	Rwanda	23.3	52.0	45.0
12	Croatia	27.1	29.0	29.8	36	Senegal	41.4	39.2	40.3
13	Dom. Republic	50.4	52.0	44.9	37	Serbia	n.a.	29.7	39.1
14	El Salvador	49.9	45.7	38.0	38	Sierra Leone	52.7	42.5	35.1
15	Indonesia	38.0	34.2	38.1	39	South Africa	59.0	n.a.	64.7
16	Iraq	n.a.	28.6	38.3	40	Sri Lanka	35.4	40.3	39.8
17	Jamaica	36.9	37.9	38.0	41	Tajikistan	n.a.	33.6	34.0
18	Jordan	36.4	33.9	35.4	42	Thailand	43.5	41.8	36.5
19	Kazakhstan	35.3	30.2	27.5	43	Togo	n.a.	42.2	43.1
20	Kyrgyzstan	39.5	37.4	27.3	44	Tunisia	41.7	37.7	36.1
21	Malaysia	48.5	37.9	41.0	45	Turkey	41.5	39.6	41.9
22	Mexico	54.3	48.9	48.1	46	Ukraine	39.3	29.8	25.5
23	Moldova	39.0	35.4	25.9	47	Zambia	49.8	54.6	55.9
24	Mongolia	33.2	35.3	32.3					

Note: WIID refer to World Income Inequality Database.

Sources: Bastagli et al. (2012), WIID (2019), and World Bank (2019a).

Table 1.1 shows the Gini index in developing countries for 1995, 2006 and 2017.

Generally, income inequality in the developing countries for 1995 lies between 23.3 to 59.6, for 2006 it lies between 26.6 to 60.1 and for 2017 it lies between 25.4 to 64.7, respectively. In sum, income inequality indices in the developing countries lies between 23.3 to 64.7 for the periods of 1995, 2006 and 2017, as shown in Table 1.1.

In 1995, Albania, Croatia, Northern Macedonia, Pakistan and Rwanda have recorded the lowest Gini index. In 2006, Armenia, Azerbaijan, Belarus, Croatia, Iraq, Ukraine and Serbia have recorded the lowest Gini index. Finally, in 2017, Belarus, Croatia, Kazakhstan, Kyrgyzstan, Moldova and Ukraine have recorded the lowest Gini index. For all these three years, all these countries are in a good group of Gini with the scores ranging between 23.3 and 29.8, which is certainly below 30.0 and generally considered equally distributed among the population. This is as supported by Dobrea and Podgoreanu (2014) who have classified the standard assessment indicators of the Gini index, where the Gini index is considered low and equal when the scale is between 20.0 to 29.99. Indeed, out of all these countries mentioned with Gini index below 30.0, Rwanda is having the lowest income inequality among all the developing countries members, implying that Rwanda is the best country in terms of domestic income distribution.

Interestingly, two additional information can be derived from the Table 1.1. Firstly, next to the lower Gini index countries, there are some others developing countries namely, Colombia and South Africa which have Gini index up to the 60.0. Out of these two countries, South Africa recorded Gini index of 64.7 in 2017, indicating the most unequal income distribution when a score of more than 50 can be considered as very high inequality. Secondly, there are few countries that are experiencing a decrease in Gini index. These are Belarus, Brazil, El Salvador, Kazakhstan, Kyrgyzstan, Mexico, Moldova, Panama, Paraguay, Peru, Sierra Leone, Thailand, Tunisia and Ukraine.

More specific, alleviating income inequality issue is one of important agendas under this study and with that, this issue has become a main focus along with related area

which would be emphasizing strategies to reduce income inequality. Hence, income inequality reduction is the central theme of this study and emerge as one of the main challenges faced by developing countries.

1.2.2 Entrepreneurship in Developing Countries

Hisrich and Peters (1998) claim that the word ‘entrepreneur’ is associated to the idea coined in the 18th century by Richard Cantillon. Entrepreneur is defined as the individuals who buy materials, do the production from that material with prices that allow them to produce new product. Meanwhile, Oxford Dictionaries (2018) defines entrepreneurship as the activity of setting up a business or businesses and also willingness to take financial risks in running their business. SESRIC (2018) states that entrepreneurship is about creating economic and social value in the presence of uncertainty and limited resources. In essence, entrepreneurship acts as the backbone and as a source of strength for a country for its development (Islamic Chamber of Commerce, Industry & Agriculture, 2017; Acs et al., 2017; Acs et al., 2018; Ordenana et al., 2019).

A new business via entrepreneurship activity will lead to job creation opportunities (Parker, 2009; Blanchflower, 2000; Acs et al., 2017; Acs et al., 2018; Farinha et al., 2018). In addition, entrepreneurship plays a significant role as a changing agents by creating products from a limited resources to the output with creative thinking mainly via innovation. Innovation helps to spur entrepreneurship as it stimulates the development of entrepreneurial activities. Innovation introduces new products, adding value to existing products, services, processes and technology (Franco &

Haase, 2013). Innovative products provided by the neglected industry, especially agriculture sector through product innovation, can increase the capabilities of the poor in the rural areas particularly to pursue new opportunities to serve their customers. Therefore, entrepreneurship has strong potential and strength in ensuring competitive ways of doing business that helps the poor or less fortunate to improve their living standard (UNCTAD, 2018).

The poor in rural areas also can exploit new business opportunities in relation to traditional strategies to create additional business opportunities through entrepreneurship such as food and handicraft products. Usually, entrepreneurship is closely related to Micro, Small and Medium Enterprises (MSMEs). Food production product from MSMEs can help many people especially those who are living in rural areas to generate income with usage of resources that are available surrounding them such as producing chips from tapioca or bananas to be marketed. Other than that, it can help local farmers in terms of providing raw materials by involving with food production product.

According to Acs et al. (2017), improving entrepreneurship by 10 percent could add US\$22 trillion to the global GDP. A study done in Oman for example mentioned that improving entrepreneurship by 10 percent could add US\$17 billion to the Oman economy in 2017. Oman is ranked at 37 out of 137 countries globally. With all these advantages, entrepreneurship can help developing country to achieve both economic growth and reduction in income inequality.

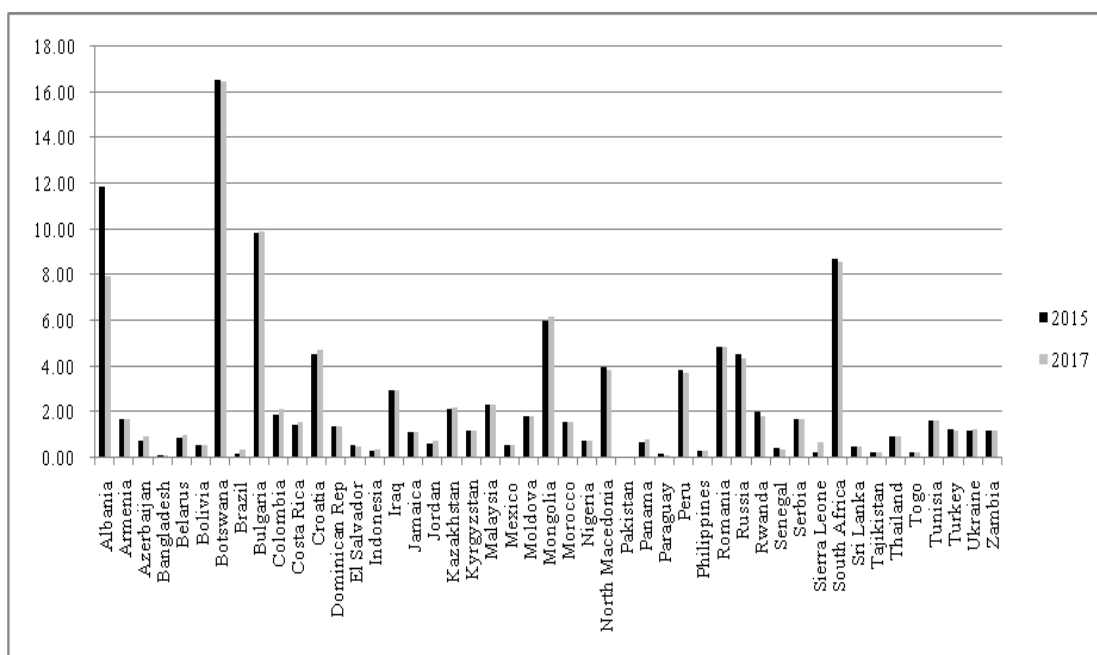


Figure 1.2: Entrepreneurship in Developing Countries for 2015 and 2017.

Note: Entrepreneurship is represented by new business density (NBD). NBD is measured by the number of newly registered limited liability corporations per calendar year, normalized by working age population. It ranges from 0 to 100 percent. The higher percentages of NBD indicate the better level of entrepreneurship.

Sources: World Bank (2018), and World Bank (2019a).

Specifically, Figure 1.2 reveals some facts about the development of entrepreneurship in developing countries. It indicates that the New Business Density (NBD) can be observed from 23 out of 47 developing countries experiencing increasing trends in entrepreneurship between 2015 and 2017. Those countries are Azerbaijan, Bangladesh, Belarus, Brazil, Bulgaria, Colombia, Costa Rica, Croatia, Dominican Rep, Indonesia, Iraq, Jordan, Kazakhstan, Moldova, Mongolia, Panama, Serbia, Sierra Leone, Sri Lanka, Tajikistan, Thailand, Togo and Ukraine. Meanwhile, another 18 developing countries has shown a decreasing trend of entrepreneurship, namely, Albania, Armenia, Bolivia, Botswana, Malaysia, Mexico, Morocco, Nigeria, North Macedonia, Paraguay, Peru, Russia, Rwanda, Senegal, South Africa, Tunisia, Turkey and Zambia. Other than that, El Salvador, Jamaica, Kyrgyzstan, Pakistan,

Philippines and Romania have shown no-improvement entrepreneurship index during the same period.

Out of these 47 developing countries, as can be seen from Figure 1.2 above, Botswana has recorded the highest entrepreneurship level among developing countries in both years, but the country with the largest improvement in entrepreneurship level is Sierra Leone. On the contrary, the lowest of entrepreneurship level is observed in Pakistan, followed by Bangladesh. Nevertheless, country with the largest drop in entrepreneurship level is Albania for the given periods.

1.2.3 Remittances in Developing Countries

By definition, an international migrant is known as a person who is living in a country other than his or her country of birth or from country to another country (United Nations, 2017; Ahmed et al., 2018). While they are working abroad, this foreign workers will transfer and send their earnings or their money back to their home countries, which are known as remittances (Adams, 2011). The enormous inflow of remittances has grown from US\$56 million in 1995 to US\$335 billion in 2010 for developing countries (Masron & Subramaniam, 2018). Globally, the number of international migrants has continued to grow from 173 million in 2000, 191 million in 2005, 220 million in 2010 and 248 million in 2015 reaching 258 million in 2017 (United Nations, 2017).

The potential strength of remittances is that it has become a reality that touches nearly all corners of the globe in line with increase in interconnection globally

(United Nations, 2017). Remittances emerged as an important instrument for economic growth and act as economic growth contributors particularly for developing countries as it provides a significant source of income for recipient families and leads to higher household income (Ahmed et al., 2018; Huay & Bani, 2018). Remittances is subject to encourage in order to give more priority to the low income people in improve the well-being of family members left behind and boost the economies of receiving countries. As an initiative, people or family in migrants home country can access more opportunities.

In this context, remittances can directly give a positive effect and contribute to poverty alleviation if it flows to the neediest group (Huay & Bani, 2018). Remittances made have significant implication on economic development when channeled into productive investment such as in human welfare and physical capital, household expenditure, productive savings and consumption (Ratha, 2007; Ahmed et al., 2018; Awdeh, 2018; Huay & Bani, 2018; Masron & Subramaniam, 2018). The money sent back to the migrants home countries also has the potential to be used to start business after basic consumption needs are satisfied. Thereby, rise in income will increase the capacity of household to do business such as involving in MSMEs industry and this can help them to generate income by creating jobs as entrepreneurs and fill critical labor gaps as well (United Nations, 2017). As a result, remittances can contribute to inclusive and sustainable economic growth and development over a longer period of time both at home and among host communities if supported by appropriate policies.

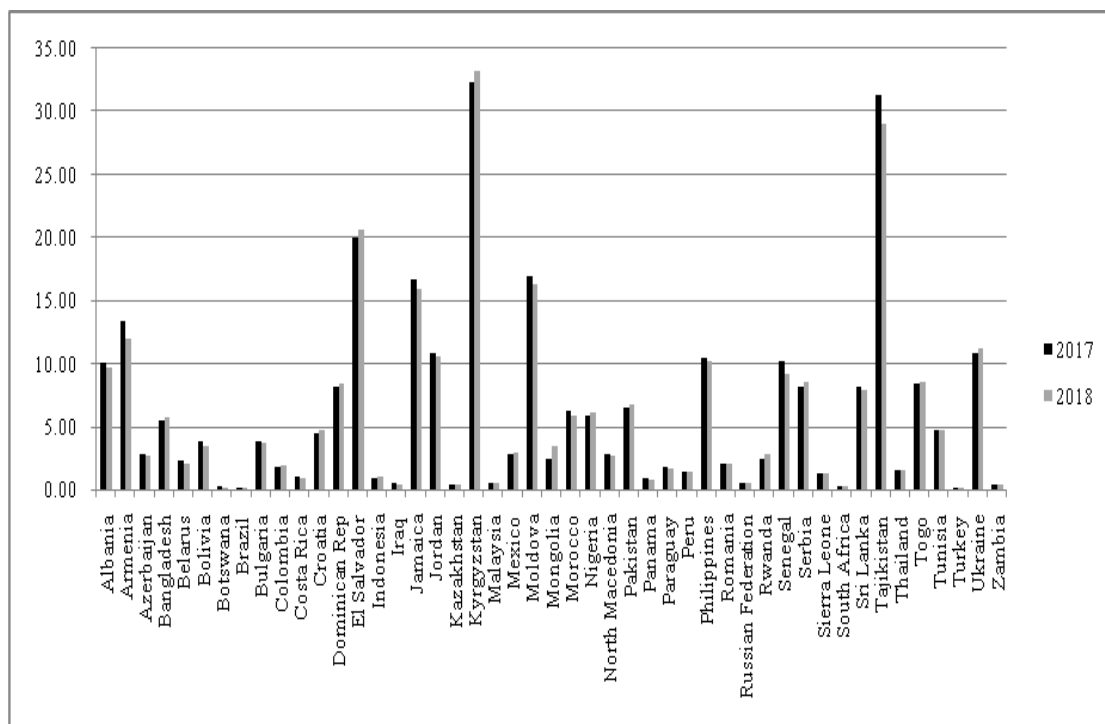


Figure 1.3: Remittances in Developing Countries for 2017 and 2018.
Source: World Bank (2019a).

As shown in Figure 1.3, it indicates that the amount of remittances flows of developing countries has been increasing rapidly and steadily over a long period of time, particularly in 2017 to 2018. Approximately, 20 developing countries has shown an increasing trend of remittances score from 2017 to 2018, namely, Bangladesh, Brazil, Colombia, Croatia, Dominican Rep, El Salvador, Indonesia, Kazakhstan, Kyrgyzstan, Mexico, Mongolia, Nigeria, Pakistan, Rwanda, Serbia, Turkey, Tunisia, Togo, Ukraine and Zambia. The figure also implies that Kyrgyzstan, emerged as country with the highest remittances score among others developing country with 32.27 percent in 2017 and 33.22 percent in 2018 respectively. The second larger amount of remittances score of developing countries in 2017 and 2018 was recorded by Tajikistan with 31.25 percent and 29.02 percent respectively.

Evidently, there are five countries which are showing an increase in remittances from 2017 to 2018. Those are Peru, Russia, Romania, South Africa and Thailand. However, out of all these five countries, Romania has the highest remittances score with 2.03 percent, implying that Romania is the best country in terms of constant movement of remittances in 2017 to 2018. Besides that, it can be seen from the Figure 1.3 above, the flow of remittances in developing countries was quite smaller but it shows a positive movement and this positive movement is very important to the developing countries in order to help them to come out of the poverty trap.

1.2.4 Urbanization in Developing Countries

Urbanization expresses the transfer and migration of population to city (Cai et al., 2019; Sun et al., 2019). People migrated to the urban areas with intention to search for job and generate income in order to improve and achieve better life condition (Huay & Bani, 2018; Cai et al., 2019). According to UNDP (2016), more than half of the world's people are living in urban areas and it is expected to grow. In 1950, urban population in the world has been recorded as much as 30 percent and then continues rise to 55 percent by 2018 and it is projected to increase further to 68 percent by 2050. In 2018, Northern America is the most urbanized region with 82 percent of people living in urban areas, Latin America and the Caribbean was shows as much 81 percent, Europe with 74 percent and Oceania with 68 percent. Meanwhile, almost 50 percent of Asia's population living in urban areas. Instead of that, Africa recorded as much 43 percent which remains it as mostly rural (United Nations, 2019).

Moving on the role of urbanization, urbanization is closely related to the three dimensions of sustainable development which are economic, society and environmental (UNDP, 2016; United Nations, 2019). Planned urbanization has generally provided opportunities and also been a positive force for economic growth with its potential to speed up the economic development, cultural development, poverty reduction, human development and institutional innovation (Guo et al., 2015; UNDP, 2016; Sun et al., 2019; United Nations, 2019).

At the same time, urbanization is very synonym with better access towards sophisticated facilities which is in line with current technology in various areas such commerce, government concern, sophisticated transportation facilities and infrastructure facilities (United Nations, 2019). People can access and enjoy many facilities like roads and transportation facilities, electricity, health care and also better education access. In fact, it can be seen that focusing more on many people in urban areas has effected on the increases of economic development and promoted the rapid development of economy (Guo et al., 2015; Sun et al., 2019). Due to that, urbanization has preceded an amazing technical innovation (Fang et al., 2018).

Urbanization can also help pull people out of poverty and according to World Bank (2013b), urbanization has been a major force behind poverty reduction. Urbanization gives emphasis on the transformation from agricultural labor force to development of non-agricultural industries, whereby it is believe that many people in rural areas usually involved with agricultural industries. Other than that, urbanization also emphasizes on the conversion from rural inhabitants to urban, urban lives practice and urban civilization within urbanization life (Cai et al., 2019; United Nations, 2019). In accordance with that, urban is a center for economic and social progress.

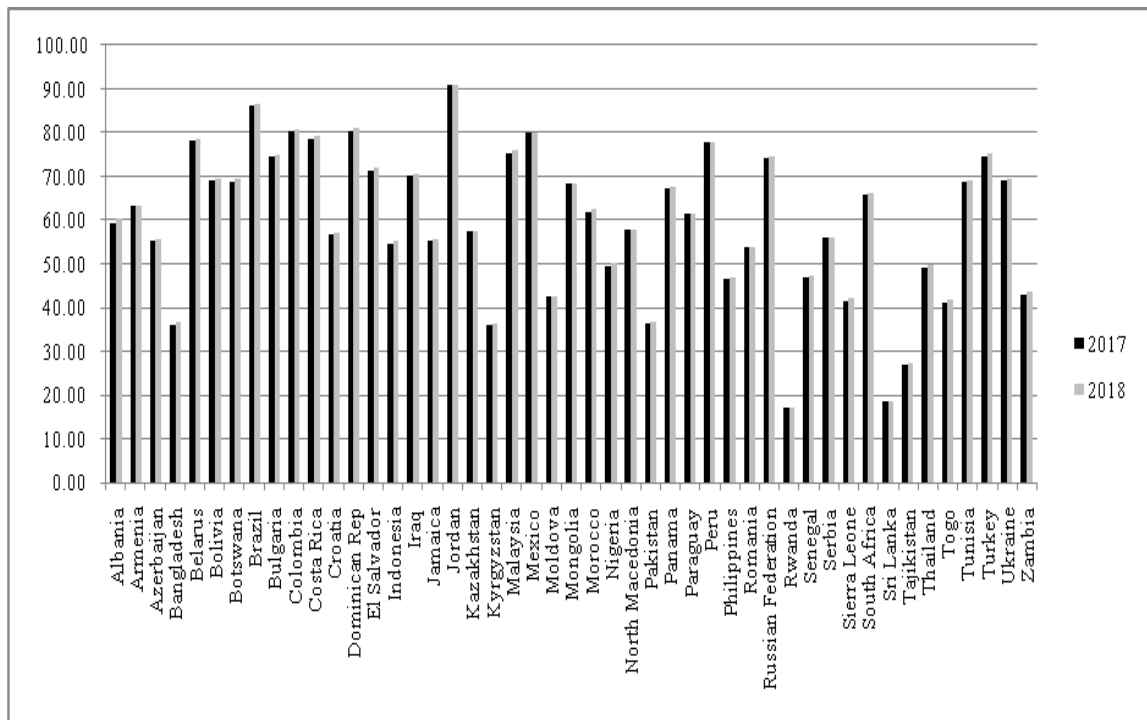


Figure 1.4: Urbanization in Developing Countries for 2017 and 2018.
Source: World Bank (2019a).

Figure 1.4 plots the urbanization trend for developing countries in 2017 and 2018. The main message of this figure is that urbanization in the developing countries for 2017 and 2018 lies between 17.13 percent to 90.98 percent. Meanwhile, Rwanda, Sri Lanka and Tajikistan have recorded the lowest urbanization score in 2017 to 2018 and it has been categorized as low urbanization group of countries. Despite that, these three countries have shown an increasing trend of urbanization with Rwanda (17.13 percent to 17.21 percent), Sri Lanka (18.38 percent to 18.48 percent) and Tajikistan (26.98 percent to 27.13 percent) in 2017 to 2018 respectively and this can be considered as good improvement.

Another interesting feature of this figure is that the top five developing countries in 2017 and 2018 with higher percentages score of urbanization was attained by Jordan, Brazil, Dominican Republic, Colombia and Mexico. Out of all these five countries,

Jordan is having the highest urbanization score with 90.75 percent in 2017 and 90.98 percent in 2018. In connection with that, it clearly indicates that out of these five countries, Jordan was having the highest urbanization score rank in both 2017 and 2018, implying that Jordan is the best country in terms of urbanization score percentages in 2017 and 2018 respectively among other developing countries. While, Brazil emerged as country with second highest percentage of urbanization score after Jordan with 86.31 percent in 2017 and subsequently 86.57 percent in 2018.

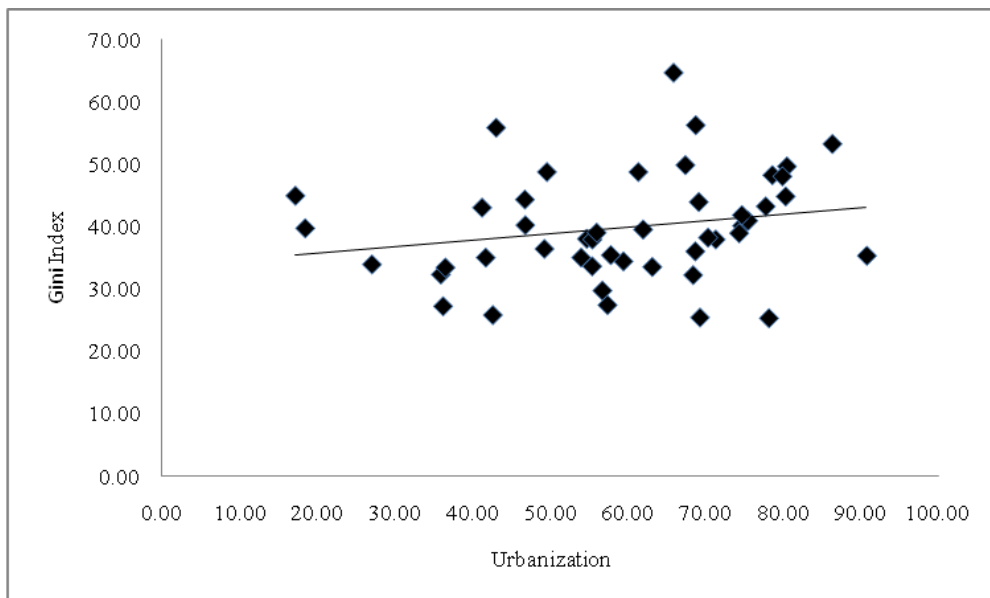


Figure 1.5: Urbanization and Income Inequality Scatter Plots in Developing Countries for 2017.

Note: WIID refer to World Income Inequality Database.

Sources: Bastagli et al. (2012), WIID (2019), and World Bank (2019a).

Figure 1.5 displays the urbanization versus income inequality plot. From the figure, we can glean that urbanization displays a positive relationship with income inequality. Interestingly, this study can see that urbanization is a pertinent corollary of development as countries develop, where income inequality is also on the rise. Therefore, we can say that urbanization emerged as crucial mechanism of development for developing countries especially.

1.3 PROBLEM STATEMENT

While the beauty of having fair income distribution across country could be welcome, the fact is that as confirmed by World Bank (2013a), about 1.2 billion people worldwide still live in destitution, a state of affairs that is morally unacceptable given the resources and the technology available today. Surprisingly, rising inequality and social exclusion seem to accompany the rising prosperity in many countries (World Bank, 2013a). Unarguably, countries in Asia and Sub-Saharan Africa account for nearly half of the total poor living in developing countries (COMCEC, 2013). Interesting to note that, according to Li and Zou (2002), many developing countries especially in Africa, Latin America and Asia have much more unequal income on average than in most developed countries. Between 1990 and 2010, evidence shows that income inequality has increased in developing countries by 11 percent on average. Other than that, more than 75 percent of the population in developing countries which is majority of households are living today in societies where income is more unequally distributed as compared in the 1990s (UNDP, 2015).

At the same time, as measured by the Gini index, income inequality in developing countries is still generally and consistently high (Bastagli et al., 2012; WIID, 2019; World Bank, 2019a). Albania, Bostwana, Croatia, Iraq, Jamaica, Pakistan, Serbia, South Africa, Tajikistan, Togo and Zambia show an incresing trend of Gini index, with South Africa recorded the highest of Gini index of 64.7 in 2017. Even though, some others countries, mainly in Brazil, El Salvador, Mexico, Panama, Paraguay, Peru, Sierra Leone and Thailand indicating the decreasing trend of Gini index, but

they are still considered high with Gini index mostly of more than 40.0 score. Meanwhile, some countries like Bolivia, Colombia, Costa Rica, Philippines, Rwanda and Turkey show a fluctuating trend of Gini index, but their recent Gini indexes in 2017 also are still more than 40.0 as well. In summary, the condition of income inequality in developing countries is still at undesirable level. As a whole, a lot more efforts and strategies need to be designed in order to combat this problem.

There are several factors that have been captured and conducted by past studies as crucial factors in determining income inequality such as economic growth (Cingano, 2014; among others), trade (Chakrabarti, 2000; among others), foreign direct investment (Asteriou et al., 2014; among others), education (Maciel and Oliveira, 2018; among others), corruption (Arif et al., 2019; among others), inflation (Li and Zou, 2002; among others) and rural (Wan and Zhou, 2005; among others). Although this study do agree with those factors, this study believes there are other potential factors that can be effective to alleviate income inequality, namely entrepreneurship, remittances and urbanization.

On a positive note, the role of entrepreneurship in leading job creation opportunities has assisted economic development in many countries (Blanchflower, 2000; Parker, 2009; Acs et al., 2017; Acs et al., 2018). Theoretically, if entrepreneurship is maximum and offered to the suitable poor or less fortunate candidates, less income inequality can be created. It is means that, entrepreneurship by the poor could actually be more productive, by targeting production of the most important goods and services to society, and smarter, by exploring new business ventures that utilize abundant, yet less demanded 'agricultural' inputs available surrounding the poor or

across the country. Nonetheless, entrepreneurship in developing countries is uncommon (Acs et al., 2014). This implies that developing countries are not showing significant progress in entrepreneurship development that only a few people involved in the entrepreneurship sector, albeit huge opportunity. Hence, this study asks '*what is the effect of entrepreneurship in developing countries?*'.

Given the low size of entrepreneurship in developing countries, this study suspects that it may create unfavorable effect on income inequality. Thus, alongside the entrepreneurship, this study also predicts that '*if developing countries could double the size of entrepreneurship to be higher, the favorable effect of entrepreneurship on income inequality can be seen*'. Moreover, given huge unexplored rural opportunities, proper rural development and facilities may help the poor to prosper in various entrepreneurship activities. While the desire to be an entrepreneur is there in everyone's heart, poor rural development and facilities always be part of the dampening factors to the poor. Hence, this study also questions whether '*there is moderating effect of rural development and facility improvement on the effectiveness of entrepreneurship to combat income inequality?*'.

Meanwhile, this study also believes that remittances is one of the crucial factors which can be considered as potential solution in addressing income inequality issue as it is very closed to the poor. Theoretically, remittances can serve as new fund to the poor and thus, can assist them to be out of poverty by engaging in various economic activities. Combined with the fact that remittances are currently the largest form of capital flows, surpassing foreign direct investment (FDI) and official development assistances (ODA) (Awdeh, 2018; Ngoma & Ismail, 2013). Nevertheless, the key challenges in the current practices of remittances is the sharp

difference of remittances inflows among the developing countries, with most of the developing countries exhibited a low amount of remittances, as can be seen in Figure 1.3. Although small, this study asks ‘*what would be the impact of remittances inflow on income inequality in developing countries?*’.

The smallness of the size of remittances received by the developing countries may be by itself ineffective to bring down inequality. However, if the fund can be fully utilized for economic activities, either through business start-up or installation of be utilized for any economic activities such as through new business start-up partially, then it may help to bring the poor out of poverty in the long run as compared to if they fully utilized for one-off consumption. Then, this study interested to ask ‘*what would be the complementary role of entrepreneurship on the remittances-inequality nexus?*’. Remittances can also be utilized to get the mean to go for job (i.e., motorcycle and so on), then it is expected the poor will be able to earn more income. In other words, the surrounding of the rural areas must be properly developed by the authorities with equivalent facilities are also installed. Hence, limited remittances can be so effective in lowering inequality if complemented by the sufficient rural development and facilities. Thus, this study also asks ‘*is there any moderating effect of rural development and facilities on the effectiveness of remittances in bringing down income inequality in developing countries?*’.

Moving on to the role of urbanization, basically, urbanization is a process of cultural transformation along with socio economic process through expansion of non-agricultural activities (World Bank, 2013b; Cai et al., 2019; Sun et al., 2019). Theoretically, urbanization is one of the channels that has potential to lower down income inequality as urbanization generally offers more job opportunities with better

pay than in the rural. However, what interesting to know is that whether urbanization in developing countries helps to improve countries' population welfare in the sense that it will bring down income inequality of the countries. As preliminary highlight, this study observe that urbanization is not really functioning to reduce income inequality as described in Figure 1.5. The figure also offers a hint that urbanization in developing may not have similar favorable effect as in the developed countries. Therefore, this study questions whether '*there is a significant favorable effect of urbanization on income inequality in developing countries?*'.

However, as this study also suspects that urbanization may offer undesirable effect on income inequality in developing countries, this study predicts that the development of rural areas may serve as the buffer to inequality alleviation. Urbanization by definition refers to the size of population, rather than represented by the sophisticated infrastructures and job opportunities. It is always offering a fake hope that urban areas will fulfill all the needs of the rural people who migrated to urban. Under this false hope, many people from rural have moved to urban searching for jobs that offer handsome return. In turn, high migration from rural to urban also has created a problem of lack of labors in the rural areas for big size of agricultural land. Therefore, if government of developing countries can give equal attention to the development of rural areas, e.g. luring more capital and investment in rural areas by upgrading and improving the existing poor facilities and infrastructure, it is expected that less rural youth will be aiming to go to urban for job. Whether or not this could be an effective measure to discourage rural-urban migration, the final question that this study would like to ask is whether '*rural development and facilities improvement can cushion the pressure on income inequality?*'.

1.4 Research Questions

Generally, in line with the statement of the problem, this study have developed the following research questions:

1. Is entrepreneurship is effective in reducing income inequality in developing countries?
2. Does higher entrepreneurship and rural development moderate the effect of entrepreneurship on income inequality?
3. Are remittances helpful in alleviating income inequality in developing countries?
4. Does entrepreneurship and rural development moderate the effect of remittances on income inequality?
5. What is the implication of urbanization towards income inequality in developing countries?
6. Does rural development moderate the effect of urbanization on income inequality?

1.5 Research Objectives

Generally, this study have the following research objectives:

1. To analyze the effectiveness of entrepreneurship in reducing income inequality in developing countries.
2. To analyze the moderating effect of higher entrepreneurship and rural development on entrepreneurship-income inequality relationship in developing countries.
3. To investigate the contribution of remittances in alleviating income inequality in developing countries.
4. To investigate the moderating effect of entrepreneurship and rural development on remittances-income inequality relationship in developing countries.
5. To examine the implication of urbanization on income inequality in developing countries.
6. To examine the moderating effect of rural development on urbanization-income inequality relationship in developing countries.