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Remittance Inflow and the Brain Drain Issue in Malaysia

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Abstract — This paper intends to study the impact of remittance inflow on the Malaysian economy. It was found that recipient countries benefited from the inflow of remittance economically, financially and socially. Malaysia is one of the remittance recipient countries besides Philippines, Mexico and India. In the Malaysian context, most of the remittances come from skilled workers or professionals. Although remittances received will have positive effects on the Malaysian economy, it also creates brain drain issues due to the outflow of high skilled workers and professionals to other countries. As reported, more than two million people have emigrated since Malaysia's independence in 1957 resulting in increase in remittances which shows the inflow of capital. This is only the short run impact. In long term, the country might face 'double whammy' on decrease in the remittance inflow.

Keywords – *Remittance inflow, recipient countries, brain drain, skilled workers, 'double whammy*

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I. Introduction

The global movement of migrant workers and the flows of remittances have increased and become more significant over the past decade. Currently, more than 247 million people or about 3.4 percent of global population is residing outside their country of origin (World Bank 2016). This increased trend of external migration has renewed the interest of researchers, observers and policy makers to study the implications of this ongoing phenomenon of temporary workers' migration across the countries.

In 2015, worldwide remittance flow was estimated to exceed US$601 billion of which developing countries accounted for US$441 billion of the total remittances. However, a large flow of remittances is believed to be unrecorded. The size of remittances, including unrecorded flows through formal and informal channels, is believed to be larger. The top recipient countries of recorded remittances were India, China, the Philippines, Mexico and France. High-income countries are the main source of remittances. The United States is the top amongst the most sources of remittances with an estimated US$56.3 billion in recorded outflows in 2014. Saudi Arabia ranks as second largest followed by Russia, Switzerland, Germany, United Arab Emirate and Kuwait (World Bank 2016). Within the middle income countries, the top three remittances recipient in 2015 were India with US$72.2 billion followed by China with US$63.9 billion and the Philippines with US$20.7 billion.

It was reported that the growth rate of remittances to developing countries fell from 3.2 percent in 2014 to 0.4 percent in 2015. The slowdown in growth is largely due to economic weakness in the major remittances sending countries caused by weak oil price and currencies. However, the rate of remittance flows to developing countries is projected to rise about 4 percent per year during 2016 to 2017. The acceleration of remittance flow is driven by a modest rise in GDP growth in United States and Euro Area and an improvement in growth in Russia (World Bank Group 2016). Remittances continue to play an important role in recipient economies. It can be seen that worker's remittances are major foreign exchange earnings in small economies such as Tonga where remittance is equal to 27% of its GDP. Remittances to Philippines support domestic consumption, a key source of economic growth. Money sent by overseas Vietnamese has boosted the local business and real estate markets.

II. Positive and negative impact of remittances

Many studies have found that remittances have a positive impact on poverty and health in the developing world while others have found that migration and remittances can also have negative effects on labor supply, education and economic growth (Adams, 2011). The study by Ang (2007) attempted to contribute to the country-specific case study literature by exploring how a remittance – recipient country like Philippines has made use of its remittances for development purposes. The study looks into both national and regional impact of remittances in the economy. The result reveals that at the national level, remittances do influence economic growth positively and significantly.

Giuliano & Arranz (2009) analyzed the importance of remittances in promoting economic growth, looking specifically at the interaction between remittances and the financial sector. They studied how local financial sector development influences a country's capacity to take advantage of remittances. Well-functioning financial markets by lowering costs of conducting transaction may help direct remittances to projects that yield the highest return and therefore enhance economic growth rates. On the other hand, remittances might become a substitute for inefficient of nonexistent credit markets by helping local entrepreneurs bypass lack of collateral or high lending costs and start productive activities. The result shows that remittances boost growth in countries with less developed financial systems by providing an alternative way to finance investment and helping overcome liquidity constraints. There could be an investment channel through which remittances can promote growth especially when financial sector does not meet the credit needs of the population. In contrast, while more developed financial systems seem to attract more remittances; they do not seem to magnify their growth impact.

Study by Simon et al. (2014) examines the impact of remittances on economic growth in Small Island Developing States (SIDS) which receive much higher levels of the remittances inflows relative to GDP than other developing countries. The research empirically investigated the link between remittances inflows and per capita income growth using macroeconomic data. Key findings provide no evidence that per capita income growth would be lower in the absence of remittances in developing countries not classified as SIDS. In contrast, it found a positive, statistically significant association between growth and remittances to SIDS. This suggests that remittances reduce economic volatility in the Pacific group of SIDS and have a favorable labor-supply impact in sub-Saharan African SIDS.

A look at remittances in Mexican states suggests that they have a range of positive effects on economic development. Higher remittances are correlated with better outcomes in labor markets although these effects are difficult to discern in states where migration is less common. In high-migration states, we find evidence that wages and employment rise with remittances while unemployment rates fall. Orrenius et al. (2009) found remittances raise wages on average, primarily by shifting the lowest-wage workers higher up the wage distribution. In general, remittances are expected to have a positive effect on the economic growth of the recipient countries when they complement national savings and enhance the total pool of financial resources for investment purposes. Ramirez (2013) found that remittances flow has a positive and significant impact on economic growth in selected Latin American and Caribbean countries during 1990-2007 periods. The effect of remittance is more obvious once the countries' financial development and degree of economic freedom are taken into account.

Adams and Cuecuecha (2010) found positive impact on household expenditure and investment using Guatamela data. Findings from the research supported the view that remittances have positive impact on economic development by increasing the level of investment in human capital and physical capital. Households receiving remittances in Guatamela tend to view their earning as a transitory stream of income and spend more on investment rather than on consumption. Azam (2013) discovers that there is evidence and significant findings of migrant worker's remittances as a source of economic growth. The study examines four developing countries namely Bangladesh, India, Pakistan and Sri Lanka based on annual time series data covering the period 1976-2012. It was found that inflow of migrant remittances increase aggregate expenditure through consumption and investment which are needed for economic development.

Abu Siddique et al. (2010) investigated the causal relationship between remittances and economic growth in Bangladesh, India and Sri Lanka using data for the period 1976 to 2006. The results show that there is only a one-way causal relationship from remittances to economic growth in Bangladesh; there is no causal relationship between growth in remittances and economic growth in India; but in Sri Lanka, a two-way directional causality is found. In Bangladesh's case, the majority of remittance payments are in fact used for consumption purposes as opposed to investment and savings. The causality of remittances on economic growth in Bangladesh could be due to a number of factors, including the multiplier effect, whereby injected capital through consumption indirectly contributes to economic development and growth through the flow on effect. Additionally, despite remittance spending on investment being low, even a small portion can help to alleviate liquidity constraints and directly contribute to growth. This is especially compelling for Bangladesh given that employment overseas helps somewhat in alleviating unemployment pressure at home.

Gupta et al. (2009) makes a first attempt at studying the impact of the steadily growing remittance flows to sub-Saharan Africa. Though the region receives only a small portion of the total recorded remittances to developing countries, and the volume of aid flows to sub-Saharan Africa swamps remittances, the paper finds that remittances have a direct poverty-mitigating effect and a positive impact on financial development. Migrant transfers help ease the immediate budget constraints of recipient households, and provide an opportunity for small savers to gain a foothold in the formal financial sector.

A study by Azam, Haseeb & Samsudin, (2016) reveals that foreign remittances Granger cause poverty among the lower middle and upper middle income countries. Foreign remittances have a convincing and statistically significant effect on poverty alleviation. The finding signifies that there are considerable conceivable benefits related with foreign remittances for poor people. Therefore, the significance of remittance inflows need not be negated in terms of growth expansion and poverty mitigation which successiv ely enhance the economic and social conditions of the migrant origin country. Thus, foreign remittances must be accepted as an anti-poverty device. Proper policy and efforts are required to upsurge remittances inflows, in which case, remittances should be channeled to more productive uses rather than merely for consumption in order to maintain sustainable reduction in poverty.

At the macroeconomic level, remittances often provide a significant source of foreign currency, which is necessary for financing imports which in turn contributes to the balance of payments. Studies by Le & Bodman (2011) showed that less-developed countries benefited from R&D investment conducted in industrialized countries through spillover effects which are channeled from highly skilled workers in developing countries to more developed countries. The study also obtained enough evidence to conclude that remittances when employed for investment purposes provide a financial channel from skilled emigration that positively and significantly affect growth.

On the other side of view, remittances can affect the economy negatively. The common consequences of the remittances flow on the exchange rate of the local currency and on the domestic price level. Study by Chowdhury & Rabbi (2014) found that the inflows of foreign exchange earnings can exert adverse effects on the international competitiveness of an economy as postulated by the" Dutch Disease" theory. The external trade competitiveness is measured by the movements of real exchange rate (RER) of the country. This study used Johansen Cointegration and Vector Error Correction Model (VECM) and annual data from 1971 to 2008. The result of the study suggests that the influx of worker's remittances significantly appreciates the real exchange and deteriorates the external trade competitiveness of Bangladesh. While increased terms of trade indicate similar adverse effects, openness in goods and capital markets and nominal devaluation improve the trade competitiveness of the country. Therefore, greater trade openness and channeling remittances to the priority investment projects can be powerful policy devices to improve the external competitiveness and avert "Dutch Disease" in Bangladesh.

It is necessary to remind that such an effect is only possible if the country is receiving remittances and suffering a rise of its real exchange rate and also if it is an industrialized country at certain level and exporting some manufactured goods. Otherwise, the country has to be a country exporting some commodities or services whose cost of production and selling prices will increase due to the entry of remittances (Yaseen, 2012). The remittances, in some beneficiary countries or families, can stimulate members of the family who profit from these incomes, living in the country of migrants' origin, to be satisfied to live without working or by withdrawing from the local labor market. The impact of workers' remittances may also have a negative impact on the local income distribution inequality.

III. Remittance Inflow and the Channels of Remittance Inflow in Malaysia

Table 3.3: Migrant Remittance Inflows (US$ million) for the year of 2000-2012 Among the ASEAN-5 Countries

Year	Countries (US$ million)			
	Malaysia	**Indonesia**	**Thailand**	**Philippines**
2000	342	1190	1697	6961
2001	367	1046	1252	8769
2002	435	1259	1380	9735
2003	571	1489	1607	10243
2004	802	1866	1622	11471
2005	1117	5420	1187	13566
2006	1365	5722	1333	15251
2007	1556	6174	1635	16302
2008	1329	6794	1898	18642
2019	1131	6793	2776	19765
2010	1102	6916	3580	21423
2011	1198	6924	3994	23 065
2012	1272	7207	4124	24 453

Source: World Bank

The table above shows that, among the selected ASEAN countries, Philippines is the highest recipient of remittances from the year of 2000 until 2012. Philippines is one of the countries in the world with a long history of sending workers abroad. In 2005, the Philippines received approximately US$11 billion of remittances, almost 10% of its GDP. It ranks as the 3rd largest recipient of remittances in the world after India and Mexico. The Philippine version of the diasporas is a well-known phenomenon that can be traced back to the early 1900s when the first group of migrants arrived in Hawaii as sugar plantation workers (Ramos, 2006). As the centennial of this event unfolds, the number of Filipinos living and working abroad has reached roughly by 10% of the total estimated population of 85 million (Commission of Filipino Overseas, 2004). Called Overseas Filipino workers (or OFWs), they are recognized as modern heroes in the Philippines. No doubt their remittances have shielded the economy from the wild swings of the Asian Financial Crises in the late 1990s.

Malaysia is the 4th after Philippines, Indonesia and Thailand. The remittance inflow to Malaysia has increased tremendously in the last decade. Malaysia remittance or money transfer market has shown immense growth in the recent years owing to the increased international migration. The increased international migration and robust economic growth are two of the main reasons responsible for the growth in remittance market. Malaysia is primarily an outward focused remittance country with the outward international remittance flows leaving the inward remittance flows far behind in terms of market size (The Business Journals, 2015)

Table 3.4 Channels of Remittance Inflow in Malaysia

	2011	**2012**	**2013**	**2014**	**2015**
	RM million				
Total Inflow	5215.8	4966.6	5764.8	6866.0	8433.3
Remitted via:					
Banks	4654.7	4362.9	4984.6	5885.3	7111.9
Money services business licenses	561.1	603.7	780.2	980.7	1321.4

Source: Bank Negara Malaysia

There are a number of channels of remittances inflow into Malaysia. There seems to be more in the number of service providers other than banks such as financial institutions and licensed non-bank remittances service providers. The remittance and money changing industry in Malaysia has grown significantly in the last decade. Traditionally, remittance service in Malaysia was provided only by the banking institutions. With the growing importance and significance of remittance flows, in particular remittances abroad by foreign workers in the country and the objectives to increase access to formal remittance channels, Bank Negara Malaysia as the Central Bank has liberalized the policy to allow non-bank players to provide remittance services.

The number of non-bank remittance service providers had increased from 3 as at end 2005 to 39 as at end 2010, hence increasing the access points for remittance services. Consequently, total outward remittance through the formal channels had grown significantly by 119.7% to RM13.4 billion in 2010 (2005: RM6.1 billion). A more competitive environment in the remittance industry has also contributed towards enhancing services to consumers in terms of lower cost, faster speed and more extensive channels for remittance transactions.

The money-changing industry has evolved over time. Over the years, it has developed gradually as reflected in the increased total turnover of exchange transactions. As at end August 2011, the total turnover of the industry stood at RM17.7 billion, an increase of 49% from 2005. Presently, there are over 800 licensees operating at more than 1,000 premises. The remittance industry is regulated under the Exchange Control Act 1953 and the Payment Systems Act 2003. Specific legislation to regulate the money-changing industry, that is the Money-Changing Act 1998, was enacted in March 1998. Both industries are regulated by BNM. In addition to licensed money-changers which provide retail money changing services, BNM also regulates currency wholesalers. The main objective of regulation is to promote the protection of consumers though reliable, transparent and professional conduct in the provision of remittance and money-changing services, and preventing the industry from being used as a conduit for money laundering and terrorist financing.

In 2009, BNM initiated a review of the legal and regulatory framework for the money changing, remittance services and wholesale currency business industry in Malaysia, with the objective of modernizing the industry landscape, and strengthening safeguards to protect the integrity of the industry. The review culminated in the passing of the Money Services Business Act 2011 (MSB) in July 2011 which provides for the licensing, regulation and supervision of money changing, remittances and wholesale currency business under a single Act. Collectively, these businesses are described as money services business in the new landscape.

IV. The Inflow of Remittances and Brain Drain Issue in Malaysia

The increasing inflow of remittances on the other side reflects the increasing number of workers' emigration from Malaysia.

Table 3.1: The Outflow of Migrant Stock in Malaysia and Other ASEAN-5 countries in 2010

Destination Country	Outflow
Indonesia	2,504,297
Malaysia	**1,481,202**
Philippines	4,275,612
Singapore	297,234
Thailand	811,123

Source: World Bank (2010)

Table 3.1 shows the outflow of migrant stock in ASEAN-5 countries in 2010. Malaysia recorded the 3rd highest outflow of migrants after Philippines and Indonesia. Malaysia, as an emerging country, experience the outflow of migrants of nearly 1.5 million compared to Indonesia and the Philippines with outflow of migrants of nearly 2.5 million and 4.7 million respectively. This is not surprising as both Indonesia and Philippines are the key labor export countries in the region. The other emerging country of Thailand also experience outflow of migrants of nearly 0.8 million people. As a small open economy, Singapore has an outmigration of nearly 0.25 million as of 2010.

The increasing phenomenon in the remittances inflow is associated with a huge and growing worker emigration from Malaysia. It is estimated that about one million Malaysian worked and lived abroad in 2010 which included those highly educated and skillful labor (Koay & Choong, 2013). Most of them are residing in Singapore, Australia, Brunei, United Kingdom and United States. Remarkably, Singapore has absorbed about 57% of the entire Malaysian migration. One of the push factors for Malaysians to work abroad is due to the better remuneration offered by the host countries for workers to earn a livelihood.

Other push factors are better standards of living and quality of life, access to advanced technology and more stable political conditions in the developed countries which have attracted talent from less developed areas. The majority of migration is from developing to developed countries. These statistics suggest that if developing countries provided world-class education and training opportunities, as well as opportunities for career advancement and employment, the migratory flow could be reduced. However, in reality, this may not make much difference. On the plus side, foreign-born graduates acquire expensive skills which are not available within their countries. On the negative side, these skills and knowledge never migrate back to their own countries.

Table 4.1: Number of Malaysians Migration by Location and Sectors

Country	Total No. of Malaysians	Selected State/City	Key Sectors
US	61, 765	New York; 10413 Los Angeles; 5833 San Francisco; 3660 San Jose; 2387 Washington; 2 362 Others; 37110	Professional & related services – 15 593 Manufacturing-5667 Finance, Insurance & real estate-3731 Business & repair services-3616
Australia	116 193	Melbourne; 37 840 Sydney; 24170 Perth; 23942 Brisbane; 9233 Adelaide; 6691 Others; 14317	Healthcare & social assistance-12 346 Professional, scientific & technical services-9582 Financial & insurance Services-5147
Canada	23 530	Ontario; 9905 British Columbia; 8550 Alberta; 3695 Quebec; 845 Manitoba; 370 Others; 165	Professional, Scientific & Technical Services – 1820 Healthcare & Social Assistance – 1820 Finance & Insurance -1480 Manufacturing-1250
UK	69939	Not available	

Source: World Bank analysis, American Community Survey 2007 – 2011, Australia Census 2011, Canadian 2011 National Households Survey (NHS), 2012 UK Annual Population Survey.

The outmigration of high-skilled professionals is linked to what is termed as brain drain. Table 4.1 shows the migration of Malaysian by location and sectors. Malaysia is currently facing a problem to strengthen its human capacity building due to the issue of brain drain. Brain drain migration always involve a migration of elites from a developing country to an industrialized country. The outflow of Malaysian talents may deteriorate the economic growth as professionals are the bedrock of a developing economy. Economic literature has highlighted positive and negative effects of high-skilled emigration. Studies by Marchiori, Shen & Docquier (2013) on the impact of brain drain on developing economies assessed the implication on the basis of Gross Domestic Product (GDP) per capita. It was found that the short run impact of brain drain on resident human capital is extremely crucial as it affects not only the number of high-skilled workers available to produce domestic production but also the economy capacity to innovate or adopt modern technologies.

Positively, finding shows that leakages that occur through brain drain can be counterbalanced through remittances sent back home. High skilled-migrant usually earned more and are expected to remit more. Money sent home injects wealth into the source country economy and these remittances would be lost without the emigration. Remitted money may provide a family fund that can be used to increase their standard of living, providing money for basic needs such as food, clothing, housing, medical care and education. Niimi, Ozden &

Schiff (2008) studied whether remittances actually increase with migrant's level of education. Skilled migrants tend to have higher income and can afford to send more remittances to their families at home. Hence, they tend to come from better families whose demand for remittances is lower relative to poorer ones. Thus, the net impact of an increase in migrants' level of education on remittances is ambiguous. Their study obtains unambiguous result regarding the relationship between migrant's education level and remittances flows. Their finding was that remittances decrease for migrants with tertiary education. Studies by Ngoma & Ismail (2013) examine the short run and long run impact of skilled migration rates on human capital formation in migrants' source developing countries and found evidence on positive impact of migration of skilled workers through remittances sent back home.

The outflow of high skilled immigrants tends to lower the source country's employment level and thus has negative welfare implication for the source country. In the long term, the remittances inflow will potentially decline over time as high-skilled migrants might decide to settle permanently and bring their families to their host countries and hence tend to remit less in the long term. They are more likely to reunite with their families in the host countries and might migrate permanently. This situation is called "double whammy". Some studies suggested that incidence of double whammy happened for developing countries that is linked to lower remittances. The sending countries lose the skilled workers while these workers are not earning as much as they should or below their qualification. Finding by Mendoza (2013) shows little evidence that high-skilled migration is linked to lower remittances. The study was at macroeconomics and aggregate-level perspective and a data set on Philippines shows there is no double whammy and on contrary, more high-skilled migration appears to be linked to even higher remittances. It was found that country specific factors such as ties that keep migrants linked to their home country are important in explaining these possible patterns.

Hence, a "brain gain" programme is supposed to reverse this trend through a remigration of elites, who have acquired invaluable skills and experiences living in an industrialized country back to the home country. The Malaysian government has implemented many strategies and plans, involving huge capital outlay, under various government and non-government related agencies such as Ministry of Science, Technology and Innovation (MOSTI), Malaysian Development Corporation (MDC), Talent Corporation and others to try to lure back our top talents from abroad. Malaysia is very concerned about this issue and making concerted efforts to encourage the return of Malaysian professionals from abroad by launching programmes such as Returning Expert Program (REP), the Talent Acceleration in Public Service (TAPS) and the Scholarship Talent Attraction and Retention (STAR).

However, the response to these programmes might not be good owing to the fact that the benefits package of working abroad is much better than that of working in Malaysia. This can be seen when MOSTI launched its first brain gain programme in 1995 till 2000, which successfully attracted 94 scientists, of whom only one remains in Malaysia. The second brain gain scheme which was implemented from 2001 to 2004 was intended to attract 5000 talents a year. Unfortunately, only 200 took advantage of the offer. India and China were examples of successful countries that reverse brain drain to brain gain. Reverse brain drain can occur when the skilled workers and professionals return to their home countries after several years of experience working overseas.

There are many pull and push factors that contribute to the brain gain study. Below are the findings from Hoo, Siti Rohaida & Chai (2016) regarding factors influencing return intentions of Malaysia's professional diaspora.

Table: Summary of factors that have the potential to influence return intentions of Malaysia's diaspora

Pull factors that have the potential to influence return intentions	Push Factors that have the potential to influence return intentions	Non-Pull and Push Factors that have the potential to influence return intentions
Better employment conditions	Economic instability and uncertainty	Preference for Western lifestyle
Employment or job opportunities	Unfavourable employment conditions	Family ties
Enhanced quality of life	Unemployment or underemployment	Moral duty
Low level of corruption and police brutality	Social injustice	Religion
Access to modern technology	Lack of safety and security	Awareness of Talent Corporation
Better public transportation	Poor living conditions	Attractiveness of incentives
Political stability	Public mismanagement and corruption	
Democratic norms	Bureaucracy	
	Unsure political situation	
	Autocratic norms	

Source: Hoo, Siti Rohaida & Chai (2016)

V. Conclusion

It can be seen that the inflow of remittances into the ASEAN-5 countries including Malaysia is increasing from year to year especially through the formal channel due to increasing number of banks and non-banks that offer t services related to the sending of remittances. Remittances inflow do impact the recipient countries positively since it increases growth rate, reduce poverty, increase consumption and investment. Negatively, it will also result in 'Dutch disease' effect and reduce the number of labor of the country itself. The amount of inflow of remittances into Malaysia also depicts the increasing number of Malaysian staying outside the country which will also result in loss off skilled labor. This phenomenon is known as brain drain. Hence, Malaysia's drive to achieve its 2020 vision, that is moving towards the K-economy, would require the country to have sufficient skilled and professional workers.

Study reveals that remittance inflow could counter cycle the loss of skilled workers in the short run, but in the long run, when the migrants settled down in the country that they migrated, the country of origin will experience the state of "double whammy". Therefore, a more attractive program should be offered in order to attract back our skilled and professional citizens.

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