

Overseas Filipinos' Remittance Behavior

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There has been much interest on migrants' remittances and their impact on the migrants' economy and families. Over the last few years, the Asian Development Bank together with the World Bank sponsored studies and conferences on the levels, channels, transactions cost and economic impact of remittances in the Asia Pacific region. The studies and fora have inevitably included the Philippines since it is one of the largest out-migration countries and has been receiving one of the largest amounts of remittance in the region. In the last decade, remittances to the Philippines averaged about 20% of its export earnings and contributed more than 7% to GNP. Remittances have come from an estimated 4.5 million overseas Filipino workers or OFWs and more than 3.4 million permanent emigrants who have settled mainly in the United States (2005). Most of the OFWs are employed on short-term contracts though renewable in many cases. The great majority of OFWs are young breadwinners who have to leave their immediate families behind because of immigration and residential restrictions and the high cost of living in the host countries. Only about 20% of OFWs are single with many having financial responsibility for their parents and siblings. The OFWs are the largest source of remittances for they have obligations to support their families. The permanent emigrants tend to have a weaker incentive to remit to relatives for they are usually able to bring their families with them immediately or within a reasonable time in the future. Nevertheless many permanent emigrants are observed to maintain familial and social links to their homeland and send monetary and other gifts to relatives and friends left behind. The paper looks at the remittance behavior of these two groups of migrants, the OFWs and the permanent emigrants. It applies received theory on remittance behavior on cross-section data from the 2004 special survey on remittances sponsored by the Asian Development Bank.

The paper is organized as follows: Section 2 provides a background discussion of Philippine migration and remittances. Section 3 elaborates on theory on remittance behavior and derives the hypotheses to be tested. Section 4 gives descriptive statistics on remittances. Section 5 discusses tests of remittance function using individual observations from one of the ADB surveys. The last section concludes the study and discusses some policy issues that emerge from the findings.

2. Background on Philippine Migration

The country has a long and rich history of emigration spanning all of the 20th Century and continuing on to the present. Colonial links to the United States created the first opportunities for labor migration, albeit under small quotas for farm workers in Hawaii and California plantations. Larger migration followed, first by engineers and technicians for American bases in the Pacific after WWII and by doctors and nurses in

¹ Ferdinand Co assisted very competently in the processing of the raw data and running the regressions. As usual Gloria Lambino tied up the manuscript form.

the 1960's following the liberalization of the US immigration law in 1965. The law allows for immigration of workers to fill occupations in excess demand and most importantly of close relatives of the early migrants under its provision for family reunification. Then the Middle East labor market opened in the mid-1970s attracting thousands of Filipinos to work there. In the late 1980s, the high performing economies of East Asia became a major destination as their labor market tightened with some reaching full employment. Subsequently, employment opportunities were found in other destinations though in much smaller scale so that now Filipinos are reported to be in some 190 destinations. Canada, Australia and New Zealand have also become important places of permanent settlement since the 1980's. Additionally, international shipping has been an old, steady and important employer of Filipino crewmen.

The dimensions and diversity of the country's migration are reflected in Tables 1 and 2. Table 1 shows the distribution of Filipinos abroad or stock of migrants by immigration status and destination in 1998, 2003 and 2005. In the latter year, the stock of 7.9 Million emigrants comprised about 9% of the population. The permanent emigrants comprised 3.4 Million, of which 2.4 Million were in North America and the rest in other advanced economies. There were 3.7 Million workers on temporary work permits and .881 Million on 'irregular', likely illegal status. They are considered here to be migrant workers. Migrant workers would thus comprise 4.5 Million. They consist of land-based workers and seamen or international shipping crew. The Middle East has had the largest share of legal land-based workers, in 2005, 42.9%, next was East Asia, 24.4%, then Europe, 14.3%. The irregular migrants were found mainly in the US, Malaysia and Europe. Tourists visa holders appear able to overstay in the US and Europe and work illegally. There had been much sea border crossings from the most Southern islands of the country to Sabah for trade and plantation work and these account for the large group of irregular workers in Malaysia. There are anecdotal reports of migrant workers who enter Italy and Spain on tourist visas.

Official record of labor migration was started in 1975 with the institution of the Philippine Overseas Employment Administration (POEA) in anticipation of large scale outflow to the Middle East. The government expected that the workers would require assistance in job placement, immigration processes and protection at the work place. Indeed deployment (outflow) of migrant labor destined mostly for the Middle East grew rapidly reaching 380,263 in 1983 from just 12,500 in 1975. (Table 2) The POEA instituted measures to facilitate immigration procedures, collect information and protect migrants from fraudulent recruitment agents and from abusive employers at the work place. The growth of deployment to the Middle East declined in the mid-1980s after the construction boom has peaked but it remained the largest employer of OFW. The employment losses in the Middle East were soon replaced by jobs in the high performing economies of East Asia. Japan, Korea, Hong Kong and Taiwan had reached full employment and had to import labor. But even the newly industrializing economies of Malaysia and Thailand started to import labor from the neighboring countries. In 2005, the recorded outflow of land-based workers was 733, 977 while that of seamen was 247,707 for a total of 981,677 from respective numbers in 1975 of 12,500, 23,530 and 36,035. The recorded outflow of land-based workers does not include the departure of highly skilled workers who are directly hired and do not have to go through the POEA processing routine.

The deployment or outflow figures reflect level of movement but it does not measure net emigration. The recorded outflow includes migrants who come home for

visits and other purposes but return to their foreign destination. Many migrant workers keep their foreign jobs for a number of years averaging 5-7 years (Tan 2005, ADB 2005). Most seamen keep their foreign employment for even longer duration, even until retirement. These workers take regular home visits but their return to work is counted in the outflow. In an attempt to trace changes in demand for workers, the POEA classified the outflow into new hires and rehires or workers who are returning to an existing foreign job after their home visit. But it does not keep track of those who return for good. To get a sense of the net outflow, we compare the changes in stock of migrants reported by the Commission on Filipinos Abroad to the POEA's data on new hires. In 1998 to 2003, the stock of temporary migrants increased by 423,747 or about 85,000 per year. The outflow of new hires in this period averaged 271,000. The difference in the figures must be accounted for by the migrant labor who returned for good. The stock of migrants continued to increase in the following period with the Middle East showing the highest growth rate, 28% over the 1998-2003 period and 14% over the 2003-2005 period. The other destinations had modest growth rate of stock while East Asia reduced its inflow. The growth of stock of permanent migrants was faster than that of legal migrant workers. To be noted is the substantial reduction in the stock of irregular workers especially in the US, Japan and Malaysia. The increase in employed seamen was only 2.25% over the 5-year period. There was a much larger increase in permanent migration than for employment – 22.8% vs. 14.3% in 1998-2003, and 18% vs. 8% in 2003-2005. However, the absolute increase in the stock of temporary workers still exceeds that of permanent emigrants, 690,000 vs. 451,000 over the 1998-2005 period. The oil boom in the Middle East may accelerate the growth of its labor import.

The deployment of migrant workers from the Philippines is the largest of record in Asia. In 2000, India's outflow was 314,673, Sri Lanka, 181,386, Thailand, 160,252, Vietnam 45,600, and the Philippines, 841,628. The US Yearbook of Immigration Statistics shows Filipinos comprised the largest group of Asian legal immigrants in the US in 2003 with 1.673 Million, China next with 1.478 Million and India, .999 Million. In proportion to their respective populations, the Philippines had more than 10 times legal immigrants in the US than either India or China.²

Labor migration has been viewed positively by the nation as a whole. In fact some politicians consider the overseas Filipino workers (OFW) as heroes for their large contribution to the country's foreign exchange earnings that have helped prevent drastic currency depreciation. There is a popular appreciation of the increase in employment opportunity that brings in higher income for the migrants' families. Since 1980, economic growth has averaged only about 5% and job creation barely coped with a rapid labor force growth of about 2.7%. Unemployment rate has been persistent at about 9% in the last two decades. Unemployment has been spread to the labor force of all educational attainment and was highest among the high school and college educated, respectively 11.6% and 13.4% in 2002-2003. The outflow of new hires amounted to less than 25% of the increase in labor force from 1999-2003.

Table 3 shows the trend of remittances over the 1980 to 2002 period. It rose from just \$103 million in 1975 to \$9,727 million in 2005. Remittance to export earnings

² The stock figure given by the Commission on Filipinos Abroad was only 1.479 Million in 2003. Possibly some of the illegal immigrants who took advantage of the amnesty program got reclassified to a legal status. There was a substantial decrease in irregular migrants in the US from 1998 to 2003 of 334,046. The Commission does not explain how it estimated the stock figures.

ratio rose from 4.5% to 24.2% and the remittance to GDP ratio from .6% to 13.5% for the same years. Remittances tended to increase as the number of migrants increased. The increase also depended on the foreign income that migrants earned and variables that determine how much of the income to remit which the paper tries to examine. Foreign wage varies widely not so much because of variation in the migrants' human capital and personal characteristics but on where they find employment. Immigration barriers to international labor mobility tend to segment international labor markets and the segmentation results in highly differentiated wage rates across national borders. For instance, housemaids receive on average monthly wage of \$200 in Saudi Arabia, \$500 in Hong Kong and more than \$1,000 in the US and UK. Entertainers in Japan receive almost double the wage paid in Singapore. Nurses earn about \$500 in Saudi Arabia, \$2,000 in UK and Ireland and \$3,000 in the US. Possibly part of the differential may be attributed to variation in quality of training and experience. On the other hand, immigration status and demographic variables determine how much of the foreign income is remitted. Permanent emigrants tend to remit less than migrant workers.

The variation in remittances has contributed to inequality of family income. Analyzing inequality of major sources of family income and expenditures over six survey years from 1985 to 2000, Ravanilla and Robleza (2003) found that on average the Gini ratio for remittances was the highest, 94%, and that they contributed as much as 11% to the overall Gini of 49%. The total Gini declined from 50% to 48% but the Gini of remittances remained virtually the same during the period. However, the big gainers from foreign employment have been in the middle and lower income and occupational classes composed of skilled blue-collar workers, seamen, domestic workers, entertainers and nurses. The professional group which comprises about 8% is dominated by nurses. Foreign employment could suddenly push a blue-collar worker or a nurse from the fourth decile to the 8th decile and a maid from the lowest to the fifth decile of the income distribution. In 2000, half of the families which received income from abroad belonged to the top two income range with income of at least P100, 000 or \$2000. In this year 11% of families received income from abroad.

Migration is expected to continue given the country's poor economic conditions and a favorable institutional setting for migration. Migration generally yields high returns partly because of the large foreign-domestic wage differentials and partly because of the high unemployment rate. Moreover, the institutional setting encourages migration. Filipinos have developed a high propensity to migrate due to the fairly successful migration experience of friends and relatives. At the same time, the early migrants form networks with communities by disseminating information about their foreign destinations and oftentimes providing financial support for migration. Moreover, those in North America and Oceania have the privilege of reuniting with close relatives. The grant of visas for family reunification opens intergenerational access to these destinations. The US has admitted as much as 88% of recent immigrants on family reunification basis. (Mattou, Neagu, & Ozden, 2005) Two government agencies – the POEA and the Overseas Workers Welfare Administration have been fairly effective in protecting migrants from migration-related risks and facilitating migration processes. Additionally there is an extensive education system that provides a large proportion of the population with skills that those demanded abroad match. There are, however, rigidities in the supply of highly skilled manpower due to the limited number of high quality higher educational institutions. The country has been able to supply middle and low skilled workers but not high level manpower such as IT specialists, good quality teachers and good quality nurses. (Tan 2005, 2006)

Section 3. The Decision to Remit

It appears that in the majority of cases migration is a family rather than an individual decision. The main motivation is to improve the family's wellbeing from expected monetary gains and other benefits such as life in a greener, freer society. Mincer (1978) was the first to consider family involvement by adding up the benefits and costs of migration to both spouses. One spouse may lose from the move and such loss must be compensated by the other spouse's gains. More recent studies provide other reasons for family participation in migration. Stark (1991) argued internal migration is a means of minimizing risk that may arise from volatility of income sources, say from agriculture or salary. Diversifying income sources such as urban wages may reduce risk assuming the sources to be independent or weakly correlated. In many cases, the monetary cost of migration is relatively high and has to be financed by family resources. The family might have to sell land and other assets or else borrow to finance migration cost (Lucas and Stark 1985, Stark and Lucas 1988, Hoddinot 2003, Poirine 1997). Tan (2004) sees the large outlay for placement fees and other migration costs as an investment by the family. The financing decision could be seen as a portfolio choice where family assets are exchanged for investment in migration in anticipation of higher returns. Migration entails its own risk and there is much uncertainty about how well the family could recoup its investment cost. There are employment-related risks for workers who leave for unknown employers in alien and distant lands where recourse to human right and labor laws are not guaranteed. Contract violations have regularly occurred, fraudulent contracts are made by placement agents and physical abuses are committed by employers. The migrant suffers directly from physical abuses though the family shares in the pain. Monetary losses are shared by all. Stark (1991) argues that migration-related risks decline with the duration of foreign employment. In most cases, they occur mainly at the initial stages of foreign employment. On the other hand, the migrant's family assumes the risk of the migrant reneging on his implicit contract to remit to the family. Remittance, after all is a totally voluntary act on the part of the migrant who is not physically accessible to the family. During his foreign sojourn, he will face opportunities for forming new social relations; he may fall in love and form a new family, or simply enjoy himself with higher levels of consumption. We may expect that such risks related to contract enforcement may increase as the duration of foreign employment increases. There are social conventions for enforcing implicit family contracts but at the heart of the motive for remittance is the sense of obligation to children, spouse and parents. This is analyzed as altruism in the Becker sense. Lucas and Stark (1991) introduced one other motive to remit which is to increase or sustain the chance of inheritance from a wealthy parent and other relatives. We refer to this as remittance motive. Stark (1991) found that in Botswana where male migrants can inherit cattle. (Bouhga-Hagbe 2004 and Poirine 1997). Migrants might also remit part of their savings to the home country.

Five motives for remittance are gathered from the literature – altruism, payment of obligation, investment or portfolio choice, risk aversion and returns to remittance. Whatever the motive, the involvement of the family in the migration decision results in a rather complex implicit contracting between all the parties involved – the spouses, the dependent children and other relatives.

Altruism is probably the most important motivation for remittances which is supported by all the tests so far conducted. Becker (1976) defines altruism rather broadly, i.e. the allocation of one's resources to another because of the utility he derives

from the utility of the beneficiary. Implicit in the theory of altruism is that the degree of altruism varies with the nature of the relationship between benefactor and beneficiary or degree of attachment of each to the other. The migrant's degree of altruism to members of his family depends on family position, whether as parent, spouse, child, and other relationship. The highest degree of altruism may be that of a mother to her newborn infant. It might exceed that of the father. A parent's degree of altruism to his child is expected to change with its age. A young child has definite basic needs of nutritious food, shelter, clothing, and healthcare for which it is totally dependent on the parents. Later on the child has to be sent to school. The composition of these needs, hence their costs, change over the child's life cycle. Moreover the quality of consumption and investment goods varies widely. Some parents may choose for their children the highest schooling level in the best school. Altruism may extend to other relatives but the degree of altruism is expected to weaken as the relationship weakens. Lastly, taste is assumed to differ across migrants and may be influenced by their socioeconomic background, age and sex. The duration of foreign sojourn and environmental factors are expected to influence taste.

We follow the Lucas and Stark (1985) model of altruism. The migrant derives utility from the utility of those left at home with the utility of each member depending on his per capita consumption and his relationships to the member.³

$$^3 u_m = u \left[c_m (w - r), \sum_{h=1}^n \alpha_h u(c_h) \right] \quad (1)$$

$$c_h = c \left(y + \frac{r}{n}, n \right) \quad (2)$$

$$r = r(w, y, n) \quad (3)$$

Where

- w = migrant's foreign wage
- r = value of remittance
- c_m = migrant' consumption
- c_h = household member's consumption
- n = household size
- y = household income per capita net of remittance.
- α_h =the altruism weights attached to various household members

The migrant is assumed to maximize his total utility derived from his own consumption and from the utility of his family at home. Assuming diminishing marginal utility from consumption, we expect $\delta r / \delta w > 0$, $\delta r / \delta y < 0$, $\delta r / \delta n$ has an unrestricted sign. The degree of altruism is reflected in (α_h). The beneficiary's relationship and demographic variables determine the value of (α_h). Studies assume that (α_h) is higher for children than for other family relations.

Summarized below are the variables that are expected to influence each of the motives for remittance.

- a) Altruism: foreign income, family income net of remittance, family size, demographic variables, duration of foreign employment or sojourn. The socio-economic profile of the migrant may influence taste for altruism.
- b. Host country variable determines cost of living that depends not just on the price level but the choice of residence, social activities and terms of employment granted foreign workers. Some destinations restrict church attendance, residence and social gatherings of foreign workers.
- c. Investment and portfolio motive: interest rate and risk of financial assets between host and home country and attachment to home and family.
- d. Returns to remitting: value of assets of migrant in parent country and intention to return home to settle there.
- e. Insurance: deviation of current family income net of remittance from long run income net of remittance.
- f. Cost of remittance: The cost of remittance and access to remittance services may encourage or discourage regularity and value of observed remittances.

In theory the various motives can be separated from each other but in fact they overlap each other. Pure altruism is difficult to separate from insurance motive. Insuring family income reflects altruism. In times of economic difficulty the migrant might send more money in order to sustain the standard of living of his family because he sympathizes with their hardship. On the other hand, several variables may affect more than one motive, e.g., immigration status and length of sojourn abroad affect both degree of altruism and returns to remittance. Host country variables reflect relative cost of living and interest rate differential and may change the taste for consumption for host country goods.

How much of his foreign income a migrant will remit to his family and other relations is expected to be influenced by any one or all of these variables. However, econometric studies on remittances tested for particular motives. Agarwal and Horowitz (2002) tested the insurance motive. They have data on the number of migrants per family. If remittances are intended for premium payment on insurance, they will not be affected by the number of migrants in a family. If for altruism, remittances would tend to decrease as the number of migrants (and their foreign earnings) increase. The author found a negative relationship between number of migrants in a family and remittances, supporting altruism motive. On the other hand, Stark (1991) regressed remittance on the migrant's socio-economic and demographic variables and found significant positive influence of education and family relationship on remittance level. Education determines foreign income, hence remittance level. He further found that remittances increased for families who owned cattle in drought affected areas. This reflects interest in preserving wealth, an insurance motive.

We have data with which to analyze the remittance behavior of three groups of migrants – the permanent migrants in the US, the labor migrants in Singapore and a

representative sample of all kinds of migrants. A remittance function is tested on the latter survey which is representative of the population and contains more information. The specifications and results are given in Section 5.

Section 4. Descriptive Statistics

Permission was obtained from the Asian Development Bank to use its surveys on remittances. The ADB study team conducted four related surveys: a) a nationwide survey of Filipinos abroad who were returning for vacation during the 2003 Christmas holidays (Returning Filipinos are called *balikbayan*); b) a survey of Singapore labor migrants; c) a survey of residents of Filipino origin in San Francisco; and d) a survey of remittance receiving families. The nationwide survey is based on a representative sample of 1,200 and collected a rich set of information on many of the explanatory variables of remittances. We run regressions on remittance function using individual observations from this survey. Descriptive analysis of remittances was conducted from the Singapore and San Francisco surveys. The study of uses of remittances from the remittances family survey is left for future work. The Singapore and San Francisco surveys did not collect as much information as the nationwide survey. Besides the sample size seem rather small.

Table 4 gives the descriptive statistics from the nationwide survey. Data on remittances in USD and percent of foreign income remitted were collected. Foreign income was not directly collected and it was estimated to be equal to remittance value divided by percent of income remitted. In Table 5 we find monthly remittance varies across occupations ranging from \$258 for domestic workers to \$474 for nurses. The remittance rate (remittances to foreign economic ratio) ranges from 41.3% for clerks to 66.7% for the Other category of Filipinos abroad. Average income computed from the remittance level and remittance rate ranges from \$413 for domestic workers to \$943 for nurses. The standard deviations of remittances are generally high with the coefficient of variation ranging from .73 for other professionals to 1.25 for domestic workers. These variations could be explained by variation in the variables that determine remittances such as sex, immigration status, and foreign income. Foreign income is expected to be the most significant determinant of remittance, given other variables.

The Singapore and San Francisco surveys (Table 6) bring out the strong effect of immigration status and occupation (hence earnings) on remittance. Foreign workers in Singapore earn low institutionally set wage rates while those in the US earn competitive wage rates. (Tan 2005). Most Filipinos in Singapore work as domestic workers while those in the US are largely professionals. The low income earned in Singapore results in lower remittance levels. Remittance level from the US is also low but for a different reason, i.e., the migrants there are either citizens, permanent residents or workers who intend to obtain permanent status. Thus they have a weaker motive to remit than the temporary migrant workers in Singapore. The table does show that in the US those with Philippine citizenship send more than those who have acquired US citizenship. For the professional group, mean remittance of Filipino citizens was \$655 but only \$246 for the American citizen. The same holds for the Other occupational grouping though the relatively few domestic workers there remitted relatively large amounts. The average remittance rate was 60% for the nationwide survey, 50% for the Singapore survey but only 20% for the San Francisco survey. The high concentration of professional workers in the San Francisco survey is consistent with the deployment data from the POEA and

the Lucas (2001) finding of the high educational attainment of Filipino and other Asian migrants in the US.

Section 5. Regression Results

The hypotheses tested is an eclectic one since it does not try to capture each motive separately. The model is a two-stage regression that tries to separate the influence of education and other variables on foreign income from their influence on remittance itself. Alternative specifications and different measures of some explanatory variables are tried. For instance, the degree of altruism attributed to demographic variables is estimated using separately number of children below 7 years old and number aged 8-17 in one specification and their total in another specification. The analysis considered the possibility that some migrants might not have remitted any amount. But only one observation did not remit so we ignored this problem.

Model 1:

$$R_1 = r_0 + r_1\hat{W} + r_2age + r_3sex + r_4cs + r_5es + r_6work + r_7dur + r_8educ + r_9dest + r_{10}hhinc + r_{11}n_1 + r_{12}n_2 + n_{13}n_0 + e$$

Model 2:

$$\hat{W} = w_0 + w_1age + w_2sex + w_3es + w_4educ + w_5work + w_6dest + e$$

Double log specification was used in both models. Alternatively we tested as explanatory variable $n_3 = n_1 + n_2$ instead of n_1 and n_2 to test for the effect of children's age. The list of variables is in Table 7 and the regression results are in Table 8. The regression results on the wage function is in Table 9. It presents the best specification in terms of the highest R^2 .

Predicted foreign income exerts a strong influence on remittance. Remittances increases by .53% per percentage increase in foreign income. Age also increases remittances by .6% per year, being in Japan instead of Saudi Arabia increases remittances by .30%. Family income of P75, 000 to P100, 000 significantly increases remittance. All the other significant variables exert a negative impact on remittances as follows:

being female by - .27%

being an emigrant vs. migrant or temporary worker by - .41%

being an American citizen by even more, - .53% to - .61%

being an entertainer by - 30%

number working household members by - 3.4% per worker.

All other variables have insignificant effect on remittances.

Except for the effect of family income, the significant variables have the expected sign. Migrant workers are temporary migrants and expect to return home to their

families. They have to send support to their families at home. There is, moreover, a stronger basis for the enforcement of implicit contract if one is to return home. Permanent migrants (emigrants and American citizens) usually have their families with them or plan to bring their families to their foreign destination. Their remittance possibly consists of payment for past obligations or gifts to relatives and friends. Duration abroad is not significant reflecting a sustained attachment to the family. Duration's effect is through foreign income and not directly on remittance. The R^2 is quite high at 62%.

In the foreign income regression (Table 9), The significant variables with positive sign are as follows:

Duration – every year of sojourn abroad increases foreign income by 3.2%

Being an emigrant instead of a temporary worker increases income by 52.2%

Being a college graduate and not with vocational training increases income by 25%

Working as a housemaid reduces income by 50% relative to working as a nurse

Working in Other occupations also reduces income relative to a nurse by 26.4%

The destinations that raises foreign income relative to working in Saudi Arabia:

Other Europe by 46.6%

Taiwan by 27.5%

Hong Kong by 35.1%

Africa by 56.7%

Japan by 67.8%

UK by 116, 5%

US by 47.4%

It is noted that all education categories except completed college relative to having vocational training have insignificant effect on foreign income. For a cross-section regression the R^2 of 21% is acceptably high.

Model 2 has the advantage of tracing the effect of each variable on remittances. For example, duration is not a significant positive determinant of remittance as seen in Table 10 but the effect is not direct. (Table 10 gives the regression results that takes all explanatory variables as exogenous.) Duration exerts a positive impact on foreign wage, and thus indirectly on remittances. Destination affects both income and remittances. Destination may also reflect relative rates of returns and risks to assets, hence portfolio choice. It is noted that number of children did not affect remittance.

Section 6. Concluding Remarks

The empirical results of the remittance function have important policy implications. The country does welcome remittances from all sources. They come from temporary or migrant workers as well as from permanent emigrants to the US and other advanced economies. We highlight three findings:

1. The regression results show that foreign income and immigration status are the principal determinants of remittance level. The migrant or temporary workers have a much stronger motive to remit than permanent emigrants. Majority of migrant workers are unable to bring their families with them and their financial support must be made by remittance of their foreign income. Migration to the US, Canada or Australia is generally for permanent settlement together with their families. The migrants and other families consume and save in their foreign destination.
2. Destination, occupation and duration of sojourn (employment) abroad exerts a positive impact on foreign income. Foreign wage is highest for the college graduate in the US or UK. Working as a housemaid in Brunei earns the lowest wage. Workers in North America earn competitive wages that are much higher than the institutionally set wages in Singapore. Middle East wage rates are much lower for every occupation than in Europe and other Western economies.
3. Demographic variables exert little impact on remittance except for the number of employed family members. This supports the altruism hypothesis.

Working conditions, wage rates and the physical and social environment in North America and Oceania are clearly superior to those other destinations. Those able to emigrate to these democratic and advanced economies enjoy a vast improvement in wellbeing. However, the country loses the migrants' potential contribution to society. For the highly skilled emigrants, the country loses possible externality from their work. And if the government made the investment in their education, it loses the value of its investment.

In contrast to permanent emigration, temporary labor migration generates clear gains to the country. It increases the returns to the human capital of the migrant labor. The country retains the human capital of migrants who return home when their employment is terminated. On the other hand, there is social cost to labor migration. There is the psychic and social cost of family separation. There are physical and financial risks to the migrant. And the foreign income of migrant labor is generally much lower than the foreign income of permanent migrants to the advanced Western economies.

If the government's aim is to maximize the wellbeing of the migrant, permanent migration to the advanced economies should be pursued. It can minimize its losses by making the migrants repay the government's investments in their education. In both temporary and permanent emigration, benefits to the migrant and to the nation are maximized by adopting education/training strategies that increase the elasticity of supply of skills demanded in foreign markets. The supply of skills must be sensitive to the demand in the best destinations or those that offer the highest wage and the best working conditions. If the supply of a skill is elastic, then its loss to foreign employment will be replenished from the education/training institutions. They must produce the

skills that meet the job requirements of employers. Without direction, the education/training institutions might be producing graduates that do not meet the foreign job requirements. The government has the role of setting and enforcing quality standards that match job requirement. The government failure to set and enforce quality standards for nursing and computer science education has disabled thousands of nursing and computer science graduates from qualifying for foreign jobs in the field especially in the destinations that offer the highest wage rates and best working conditions. Only a small fraction of computer science graduates qualify for IT jobs abroad. Only half of nursing graduates who take the professional licensure examination pass it. Achieving the professional license is a minimum requirement for all foreign nursing jobs. American hospitals require even higher standards than just passing the local licensure examination. Schools and students must be informed about the standards and directed to meet them. The semi-conductor industry has complained of shortage of IT specialists. About 200 schools enroll thousands of students in computer science. But without quality standards, majority of the graduates do not qualify for IT jobs in the domestic industry and for foreign jobs.

The literature has drawn little attention to the supply side of migration. While it analyzes brain drain, it does not trace its causes. In an ongoing study for the ILO, Tan argues that brain drain occurs when the supply of highly skilled manpower is inelastic. The inelasticity is traceable, in many cases, to market imperfections in the education market and to incorrect education/training policy that do not address them.