The Remittance Response of Expatriates in the Land of Oil, Sand and Tall Buildings: A Case Study of Immigrants in Dubai

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Abstract:

In this study, we take advantage of a unique survey that contains information on the self-reported remittance response of immigrants to specific external factors. The survey directly asks immigrants about their remitting decision in response to: host country inflation, exchange rates changes, home country economic conditions and the cost of transferring money. The advantage of this approach is that we do not need to arbitrarily take specific variables as the counterparts of theoretical constructs. In addition to this fact, the current paper contributes to the study of immigrants in Dubai which is an important region of the world for migration that has largely remained unexplored by academics. Our results suggest that among the four factors inflation is the one causing the most changes in flows from immigrants, with most immigrants decreasing their flows in response to an increase in the cost of living in Dubai. Moreover, over forty percent of the immigrants decrease transfers in response to an increase in the cost of remitting. Still about one third of the immigrants reported that they do not change remitted amounts in response to an increase in these costs. The evidence also suggests that immigrant's reaction to these factors varies according to a certain set of immigrant characteristics. These characteristics are discussed in detail in the paper.

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1. Introduction

Everyday millions of international immigrants around the globe send money to their families located in different countries. These transactions are completed under a series of private company policies and macroeconomic conditions. For instance, Mohamed, a construction worker in the United Arab Emirates (UAE), wants to send his grandmother in Bangladesh money to buy a new microwave. Mohamed earns income in UAE dirham but his grandmother needs Bangladeshi taka in order to buy the microwave in Bangladesh. How many UAE dirhams would he need to send his grandmother? Should he send the money right away? Or, alternatively should he wait, invest the money in the UAE for a while and then send the money back home? The answer to these questions depend, among others, on the cost of transferring money abroad, current and expected prices, economic conditions in both countries and the exchange rate.

The literature on remittances indicates that remitters do in fact respond to macro level variables, household (immigrant) related variables and other host (home) country specific factors (e.g. Amuedo-Dorantes and Pozo (2006), Blue (2004), Naufal (2007), Osili (2004), VanWey (2004) and Vargas-Silva (2008a), just to name a few).[2] In this regard, the previous literature has provided valuable insights as to what factors affect immigrant transfers. These studies mainly focus on investigating the remitting decision by examining how different factors affect the level of remittances and the probability of remitting. However, there is a lack of studies (mainly due to data availability) which define a set of immigrants' characteristics that shape the remitter's self-reported response to these specific factors. In this study, we take advantage of a unique survey that allows for the identification of immigrants' reaction to specific external factors. In fact, the survey directly asks immigrants about their remitting decision in response to certain variables such as rising inflation in the host country, exchange rate changes, improvements in home country economic conditions and increases in the cost of transferring money abroad.

[2] See de Haas (2007) and Ruiz and Vargas-Silva (2009) for a summary of the literature on remittances.

Direct observation of the immigrants' responses allows us to answer questions like: What characteristics prompt immigrants to remit more (less) after a home currency appreciation? For what type of immigrants is the cost of living a heavy consideration in order to decide how much money to send back home? These types of questions have been addressed in other studies indirectly by matching immigrant's characteristics with observed immigrant behaviour. We complement the literature by matching immigrant's *self-reported* responses and immigrant's characteristics.

We see a fundamental advantage in our approach. In previous studies authors arbitrarily take specific variables as the counterparts of theoretical constructs. For the case of immigrants, the theoretical constructs may not be perfectly represented by the selected variables. For example, by using regular exchange rates (or even some estimation of informal exchange rates) it is assumed that that specific exchange rate is the one that all (or at least most) immigrants take into consideration when remitting money home. Given that a large volume of money is sent through informal channels (Freund and Spatafora, 2008) it is likely that immigrants have some other exchange rate in mind when remitting such as the exchange rate offer by local *hawaladars* (we discuss this concept further in the next section). Moreover, using inflation measures estimated on a typical basket of goods consumed by natives (e.g. CPI estimated inflation) assumes that immigrants have the same expenditure patterns of natives. Immigrants typically have unique consumption patterns that do not necessarily go hand in hand with native's consumption. For instance, the cost of renting an apartment may have more profound implications for immigrant behaviour than for natives, many of whom are homeowners (as we discuss further below this difference is especially important for immigrants in our survey).

The survey also asks immigrants about the expected use of remittances money by the receiving household (e.g. educational expenses, medical expenses, investment, food purchase, clothing etc.). Therefore, the data set allows us to compare the sensitivity of immigrants'

remittances to different variables based on differences in the perceived use of these transfers by the remitter. For instance, we are also be able to respond to questions like: Are immigrants who remit in the expectation that their money is being used for medical expenses less sensitive to host country inflation relative than those remitting to cover clothing expenses? Finding answers to these questions provides information about possible policies that can be used on the part of sending and receiving governments to manage (encourage or discourage) the flow of remittances.

The survey that we employ contains data on immigrants located in the Emirate of Dubai in the UAE. The UAE experienced strong economic growth during the last decade and until recently it seemed bound to be permanently on the upward trend (GDP growth was 5.2% in 2007 and 7.4% in 2008 but the recent economic crisis has severely affected the economy of the Emirates) allowing its residents to currently enjoy one of the highest incomes per capita in the globe.[3] Coincident with this surge in economic growth has been a huge demand for foreign labour. In the present, and despite a growing local workforce, the UAE is still highly dependent on a massive expatriate labour force. With approximately 3.2 million expatriates living in the country, the UAE ranks 13th in the world in terms of total immigration flows. Yet, expatriates constitute more than 70% of the UAE total population making it the third immigration country by percent of population (World Bank, 2008). In sum, for the previous decade the country has enjoyed a booming economy that stands mainly on the shoulders of immigrant workers. As expected these immigrants send large sums of money back home every year. Just in 2007 the UAE recorded net outflows of remittances (outflows – inflows) of about US$8.7 billion.[4]

An important share of remittances from the UAE originates in Dubai. World Bank migration and remittances expert Dillip Ratha recently asserted that "*Dubai is a must for any one working on migration and remittances. One of the seven Emirates, but one that depends more on trade,*

[3] The World Bank World Development Indicators estimate the GDP per capita of the UAE to be $ 25,192 in 2006.
[4] See the information on the balance of payments on the Central Bank of the UAE webpage at: http://www.centralbank.ae/annualdata/table10.php.

finance and real estate than oil and gas, Dubai is a wonder in the desert. It has a large – perhaps the largest – immigrant population relative to natives (no pun intended) in the world. If you ask me which is the most developed Indian city, I would say Dubai!"[5] Dr. Ratha is not alone in his admiration for the Emirate. Dubai is the second largest Emirate of the UAE after the capital Abu Dhabi and is home to the headquarters of many multinational companies (e.g. the headquarters of Halliburton and the regional headquarters of companies such as IBM and Johnson & Johnson) and therefore has one of the most diverse labour forces (according to our sample, more than 45 nationalities).

The construction industry in Dubai has also been flourishing in recent years. The Emirate prides in having several of the world's tallest and more modern buildings and many prestigious international hotel chains. These facts have lead to the creation of a celebrity vacationing spot in which it is easy to constantly recognize screen idols, sports superstars and business-world big shots. In fact, Dubai has been repeatedly called "The Las Vegas of the Middle East". Keeping this high pace of growth and luxury lifestyle has made the Emirate even more dependent on international immigrants, mainly low skill workers from Asia. However, even with all this recognition about the importance of the UAE and specially Dubai for global migration and remittances there are hardly any studies exploring the remittances from immigrants in this Emirate. One of our intentions is to fill this lacuna by proving more a clear picture of remitters in Dubai.

In addition to the UAE as a country, we believe that this is, in general, an important region of the world for the study of migration and remittances. In fact, several countries in the region rank in the top ten countries in the level of remittances sent. For instance, Saudi Arabia ranks second only to the United States in the value of remittances sent where in 2007 alone more than US$16 billion were transferred from the Kingdom (Saudi Arabian Monetary Agency, 2008). Outward

[5] See http://blogs.worldbank.org/peoplemove/node/1196 for the complete story and Vora (2008) and Zachariah et al. (2003) for more on Indian expatriates in Dubai.

remittances are a noteworthy phenomenon in these countries because of two unique reasons: the percentage of the total population that are expatriates and the imposed restrictions on expatriates. Across the Gulf Cooperation Council (GCC) countries, the expatriates population constitute on average around 50.4% of the total population with the highest being 78.3% (Qatar) and the lowest 24.5% (Oman).[6] Further, the expatriates in the GCC are not allowed citizenship and have numerous restrictions in regards to property ownership which limits the possibilities of investments in the host country. The result is a strong feeling of temporary residence and an incentive to increase remitted amounts.

All in all, we have a survey that will allow us to provide some information about the characteristics that make a remitter increase or decrease flows in response to macroeconomic variables, economic conditions back home and the cost of transferring money abroad. Moreover, the immigrants included in the survey reside in a country (UAE) and Emirate (Dubai) that play a vital role in the overall global flow of immigrants and remittances, but that has not been explored much so far. We believe that these characteristics are ingredients for a relevant contribution to the literature on migration and remittances. In that hope, we now proceed in the next section to discuss the prior literature on the topic and some supplementary facts about migration and remittances in Dubai.

2. Literature Review and Background

There has been considerable deliberation in the literature about the variables that impact immigrant's flows. Several variables that have been pinpointed as determinants of remittances include the variables in which we focus on in the current study: inflation, exchange rates, home country economic conditions and the cost of transferring money. Below we review some of the previous studies that have related remittances to one or several of these variables. We start by discussing the impact of inflation, exchange rates and home country economic conditions. Then

[6] For a more detailed outlook on remittances from the GCC refer to Naufal and Termos (2009).

we proceed to discuss the impact of remittances cost on the amount remitted. Finally, we provide a few additional comments about migration and remittances in the UAE with special emphasis on Dubai.

2.1 Inflation, Exchange Rates and Home Country Economic Conditions

Inflation in the host country lowers the purchasing power of immigrants in that country. As a result, immigrants may need to spend more money in the host country in order to take care of their basic needs, decreasing the amount of money left for other considerations and, therefore, potentially lowering their transfers to the home country. Moreover, immigrants typically earn money in the host currency (e.g. UAE dirham), but their remittance transfers are converted into the home currency in order for the household to consume or invest the money. Therefore, home currency appreciations, an increase in the value of the home currency with regard to the UAE dirham, decreases the purchasing power of remittances in the home country (i.e. each UAE dirham of remittances is worth less in the home country). Improvements in home country economic conditions may discourage altruistic remitters from sending money home. As the home country economic condition improves there may be a lesser need of transfers from the immigrant in order to support the household. On the other hand, immigrants that are thinking about investing in the home country may take the improved economic conditions as a positive sign and increase their flows accordingly.

A series of papers have look at the impact of these variables on remittances from both the macro and micro perspective. Let's kickoff the discussion with a look at the most common of these two: the macro perspective. El-Sakka and McNabb (1999), using data from Egypt, found that the difference between the official exchange rate and the black market exchange rate is negatively related to official remittance flows. The authors claim that a greater gap between the official and black market exchange rate is an incentive for immigrants to remit using unofficial channels. Faini (1994) tests the importance of exchange rates, among other variables, as

determinants of transfers using data from emigrants located in Germany. He shows that exchange rates (home currency vis-à-vis host currency) are positively impacting immigrants' flows. Contrary to El-Sakka and Mcnabb (1999), Faini (1994) finds that home and host country GDP have an impact on immigrant's flows, home country GDP negatively impact remittances, while host country GDP positively impacts remittances. Other papers test if exchange rate uncertainty (and not simply the exchange rate level) has an impact on remittances. If emigrants are risk averse an increase in exchange rate uncertainty, which increases the uncertainty about the purchasing power of remittances in the home country, ought to have a negative effect on remitted amounts. Higgins et al. (2004) show that an increase in the volatility of the exchange rate does in fact decreases immigrant's transfers.

Vargas-Silva and Huang (2006), using data for various Latin American countries, shows that remittances respond more to host country (USA) macroeconomic variables than home country macroeconomic variables. Roache and Gradzka (2007) investigates whether remittances to Latin America depend on the US business cycle and find that remittance flows are, in general, insensitive to the cyclical fluctuations in the US. Vargas-Silva (2008b), using data for Mexico, reaches similar conclusions regarding the impact of the US business cycle on remittances, but also finds that remittances are countercyclical with respect to Mexico's business cycle.

Consequently, there is evidence that immigrant's transfers are related to several macroeconomic variables that include: inflation, exchange rates and economic conditions in the host country. However, the inferences of these previous papers have been made on the basis of aggregate data on remittances that is less than perfect and it is widely known to be suspicious in regards to accuracy. Large volumes of remittance flows are sent through informal channels and are not captured in the official aggregate level data reported by receiving countries.

These informal channels for remitting are especially relevant for the UAE where the *hawala* system is used by large numbers of immigrants to send money back home. The *hawala*

method of transferring money is informal in that it does not depend on a formal financial institution and it is very difficult to trace most of these flows using official government records (El-Qorchi, 2002). For instance, a Pakistani working in the construction industry in Dubai needs to send 500 Pakistani rupees to his wife in Pakistan. He visits a *hawaladar* (or *hawala* broker) that acts as an intermediary and arranges the transfer. He pays a certain amount in UAE dirham and the *hawaladar* contacts a counterpart in Pakistan who makes a payment in Pakistani rupees to his wife. No money cross the border, no transaction was recorded, but the worker just sent 500 rupees to his wife in Pakistan.[7]

In this paper we use micro level data in which the immigrants themselves identify the importance and direction of the impact of macroeconomic variables and other variables such as the cost of remitting on remittances. This has two advantages. First, we avoid the measurement issues related with remittances. Second, we do not impose a certain measure of these macroeconomic variables as the one linked with immigrant behaviour. Yet we do see the previous macro level studies as complementary to our study. It would not be correct to demand for every study on migration and macroeconomic variables to be based on migrants self-selected responses. This would stultify this type of research. Rather, we suggest that analyzing the immigrant's self-identified responses to certain macro events is important in addition to observing the aggregate result of individual immigrant behaviour and its correlation with certain macro level variables.

Just a small number of papers have used micro level data in order to examine the remitters' response to macroeconomic variables. One example is Yang (2008), who takes

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[7] The large volume of remittances flowing from Dubai has also attracted the formal banking sector. For instance, Citigroup recently created a "twin" Dirham/Rupee checking account that consists of having two different accounts, one with Citibank UAE and one with Citibank India. Using both accounts it is possible to transfer money immediately at a very low cost. In addition Citigroup is able to persuade expatriates and their families to use other baking services such as short term loans. See http://www.citibank.com/uae/gcb/paccounts/twin_account.htm.

advantage of information on Filipino immigrants during the 1997 Asian financial crisis to study the impact of exchange rate shocks on remittances. Filipinos tend to migrate to a broad assortment of countries and, therefore, during the 1997 Asian financial crisis these immigrants experienced sudden and heterogeneous changes in exchange rates. Yang (2008) shows that appreciation of an immigrant's currency against the Philippine peso leads to increases in household remittances received from overseas. While Yang's and other microeconomic papers have lessened the concerns about data quality, they just provide information on the impact of these variables on remittances in general, but are limited on their ability to provide a description of the immigrants that responded to these variables in a certain way. In this paper, we take advantage of a unique survey that allows for the identification of the role of immigrants' characteristics in the reaction of remittance flows to specific external factors.

2.2 The Cost of Remittances

A significant portion of the discussion surrounding immigrants' transfers revolves around the cost of sending money across countries. Immigrants are frequently faced with high costs for sending money abroad with several consequences. First, many immigrants simply remit less and some even prefer to carry the money home when visiting the home country. Second, immigrants are typically inclined to send money using informal channels where the costs of remitting are lower. In fact, Freund and Spatafora (2008) estimate that informal remittances may amount to up to 75 percent of official remittances flows to developing countries.

As a result, the main question is how sensitive are remitters to the cost of remitting? If immigrants are really sensitive to remitting costs then decreasing the cost of remittances in formal channels could have beneficial results. The drop in remitting cost may raise the stream of remittances flowing to receiving countries and the portion of remittances that flows in formal channels allowing receiving countries to better track these flows. Increasing transparency about the source and destination of these flows may help authorities to ensure that remittance channels

are not misuse by criminals or terrorists and yet remain open for ordinary immigrants (Looney, 2003). Gibson et al. (2006) provide evidence that remittances are cost elastic, suggesting that a decrease in the cost of remitting may have a significant impact on the volume of these flows. For many regions of the world increased competition in the remittances market may be already reducing transfer costs (Orozco, 2003). Nonetheless, as with the case of macroeconomic variables, previous papers are limited in their ability to describe the characteristics that make remitters sensitive to the cost of remittances. Moreover, it is relatively painless to collect data on the cost of remitting from official remittance agencies (e.g. Money Gram, Western Union), but it is challenging (although certainly not impossible) to collect accurate data on the cost of remittances in informal channels. The nature of our data avoids this issue by asking immigrants their reaction to what they perceive as the cost of remitting.

2.3 Immigrants in the UAE and Dubai: A Few Additional Insights

As we mentioned above, the UAE is one the major sources of remittances in the world. This massive flow of remittances corresponds to a large expatriate community. In many developing countries this land rich in oil, sand and tall buildings is perceived as the land of opportunities (Allen, 2009). The immigrants in Dubai typically come from Asian countries with a special leading role for India, Bangladesh, Sri Lanka, Indonesia, South Korea, Thailand, Pakistan and the Philippines. These expats are mainly unskilled or semi-skilled immigrants employed in the service and construction sectors. The immigrant workers are seldom allowed to settle permanently in the Emirate and for the most part are considered temporary workers. In fact, an expatriate can spend decades in the UAE without obtaining any form of citizenship. As a result Dubai has developed into a guest worker type society in contrast to other destination countries such as the United States that are considered immigrant type societies (Chand and Paldam, 2004). The exception is marriage to a UAE citizen that still grants citizenship to foreigners. By

large, immigrants are male (a fact that is very obvious in our sample) but female domestic workers represent the largest and fastest growing work force in the UAE (Sabban, 2004).[8]

There are clear benefits of migrating to Dubai. One of the main benefits is the tax-free environment. Dubai contains a number of free trade zones that allow foreign investors and corporations to operate with no taxation. This tax exemption attracts many young professionals to the Emirate. Another attraction of Dubai is its low crime rates and relatively safe environment. Finally, Dubai is tolerant in regards to religious diversity and foreigners do not have to follow a strict religious code like in other Middle Eastern countries such as Saudi Arabia. Nonetheless, Dubai is no paradise for every immigrant (Human Rights Watch, 2009). It is argued that some workers complain regarding the ease for transferring sponsorships (Aziz, 2009) and the overcrowding of worker camps (Allen, 2009; Zachariah, 2003). Also, some foreign workers were so upset at one point over low salaries and deplorable working conditions that the situation escalated into riots (see Woollard, 2006).

3. The Expatriate Remittances Survey

In order to carry out the empirical analysis we use information from the Expatriate Remittances Survey sponsored by the Dubai Economic Council in 2008. The data set is a representative sample of the immigrants in the Emirate of Dubai. The original sample includes 1,577 individuals who belong to 650 households. The sample of expatriates is further constrained by the conductors of the survey to include only those households who sent money abroad which limits the sample size to 1,504 individuals and 603 households. These include regular households and labour camp "households". The latter consists typically of several large rooms with a number of workers sharing the same room. There are 977 expatriates who constitute 553 regular households and 527 workers who form 50 households in the labour camp. The design of the sample is based on the 2005 census of the Emirate of Dubai. The sampling strategy followed is a

[8] Still many families in the UAE prefer male domestic workers (Sabban, 2004).

multi-stage random stratified probability sampling method, where all the households were divided into two types: non-labour camp households and labour camp households taking into consideration their actual proportion in the Emirate of Dubai.

The beauty of this survey is that it is focused on remittances transfers and, therefore, provides us with detail information about the responses of immigrant remittances to several important factors. For instance, the survey allows immigrants to respond to factors such as rising inflation in the UAE, appreciating home currency (vis-à-vis the US$), the cost of remitting and rising salaries at home by 1) *decreasing current remittances,* 2) *not changing remitted amounts, 3) saving now in order to increase future remittances,* 4) *increasing the current remitted amount.*

Table 1 reports the portion of immigrants that selected each of these options. Out of the four considered factors that might affect remittance behaviour, inflation seems to have the strongest effect on the amount remitted. Around 60 percent of the remitters say that they decrease their transfers in response to the increase cost of living in the UAE. It is not surprising to see inflation provoking the larger number of adjustments in remittances in the survey. The UAE recorded its highest inflation rate (12%) in 2008 around the time of the administration of the survey with special prominence of the costs of rents and food, two prices that tend to affect immigrants profoundly.

The results in Table 1 also suggest that a home currency appreciation (vis-à-vis the US$) has mixed effects where around 37 percent will likely increase the current amount remitted while a good 29 percent will decrease current remittances. Notice, that in this question we only have information on the response of the remitter to appreciations against the US dollar and not against the UAE dirham. However, since the mid 1990s, the UAE dirham has been pegged to the US dollar, at about 3.67 UAE dirham per US dollar (or about 0.27 US dollars per 1 UAE dirham). Hence, in effect a nominal appreciation against the US dollar is a nominal appreciation against the UAE dirham. Furthermore, a depreciation of the US dollar in the UAE is unlikely to go

unnoticed given the substantial dependence of the country on the oil price which is quoted in US dollars.

Appreciations of the home currency decrease the purchasing power of remittances in the home country. Ceteris paribus, after an appreciation of the domestic currency, each UAE dirham remitted will be able to buy less for the receiving household. This means that the household needs more UAE dirhams to consume a given bundle of goods (again, assuming no changes in prices). If the purpose of the transfer is to make a certain bundle of goods available to the household, then the emigrant should increase the amount of UAE dirhams sent abroad. Furthermore, if the immigrant is making a long-term investment with remittances or remitting to build a retirement nest-egg, then additional UAE dirhams are necessary to accomplish a certain investment goal. On the other hand, now each UAE dirham of remittances is worth less in the home country. If the immigrant has investments in both countries, it may be wise to reduce remittances and put the money into investments in the UAE. Overall, in theory, remittances may increase or decrease after a depreciation of the UAE dirham depending on which of these two effects dominates. As we can see in Table 1, immigrants seem to be split in this regard.

Finally, over 40 percent of the remitters acknowledge that higher money transfer fees will probably decrease the amount remitted. This effect of the cost of remitting on migrants' flows has led several governments (e.g. the Netherlands) and international organizations (e.g. World Bank) to create internet sites that publish the fees associated with remitting in different remittances agencies.[9] Nonetheless, about one third of the remitters in our sample seem to be resistant to increases in costs.

The main focus of this paper is to explore if these responses vary among immigrants with certain identifiable characteristics. Tables 2 and 3 provide some preliminary insights in this regard. Table 2 reports the characteristics of the households according to their reaction to rising

[9] See http://remittanceprices.worldbank.org/.

inflation in the UAE, while Table 3 does the same for the exchange rate changes. In order to save space we do not include similar tables for rising salaries at home and rising transfer's costs but these tables are available from the authors upon request. The numbers in Tables 2 and 3 should be read as follows: x (the number reported) proportion of the immigrants with a certain characteristic (e.g. property owner) selected y (reaction of remittances) in response to the z factor (inflation, exchange rates, etc.). For example, the 60.1 in the first column and first row in Table 2 indicates that about 60 percent of those immigrants that selected to decrease remittances in respond to inflation are less than 35 years old. Likewise the 5.8 in the first column and second row, denotes that around 6 percent of those decreasing remittances in respond to host country inflation are females. In order to facilitate the interpretation of the tables we have included in bold the largest percentages for each characteristic.

The bottom of Tables 2 and 3 report on the expected use of remittances on the part of the immigrant. For instance, the 61.5 in the first row and first column on Panel B in Table 2 indicates that about 62 percent of those that indicated a tendency to decrease remittances in response to inflation expect a share of the remittances money to be used for educational expenses. These categories at the bottom of Tables 2 and 3 are non-mutually exclusive categories as immigrants typically expect remittances to be used for more than one purpose.

A few of the more noteworthy results in Table 2 are that females are significantly more represented in the group that increases remittances as a response to inflation (about double the representation in the other responses), that those that are remitting for special occasions tend to respond by saving in order to remit later (there may be a lack of current urgency in these flows) and that those that are remittances income elastic tend to be more represented amongst those that increase current flows following inflationary events. Being an income elastic remitter indicates that the immigrant suggested that an increase in his/her income leads to a more than

proportionate increase in remittances. For example, immigrant income increases by 5 percent and remittances increase by 7 percent.

Meanwhile, Table 3 suggests that females are more represented amongst those that decrease flows following an appreciation of the domestic currency. Hence, it seems that females may increase flows if faced with a higher cost of living in the UAE, but would decrease flows if face with a decrease in the value of remittances. It also seems that those that are remittance income elastic are more represented amid those that prefer to save in order to remit later. The evidence in both reported Tables (and the ones not included) points out to the same idea: immigrant's reaction to these factors varies according to a certain set of characteristics. Likewise, across all these factors, the perceived use of remittances by the remitter also seems to matter. In fact, durable and non-durable goods consumption shows the largest variations in the expats' reaction (decrease current flows vs. increase current flows). We are going to analyze these differences in characteristics further using regression analysis in the next section.

While the tables above describe most of the variables that we will be using in the regression analysis, below we include several tables that provide additional information about the immigrants in our sample. There is a twofold purpose for including these tables. First, this is a new survey that has not been used for empirical analysis yet and we feel that it is important to show other characteristics of the sample. Second, there is lack of studies about remitters in Dubai and the following tables shed some light on the characteristics and remitting patterns of these immigrants.

The survey asks immigrants to identify possible policies (or regulations) that the government of the UAE can adopt in order to increase immigrant's investments in the UAE (potentially decreasing remitted amounts). Among the available policy options we have the possibility of allowing expats to own properties,[10] disseminating information about investments

[10] Current government policy allows some expats to have a 99 years lease on property.

opportunities in the UAE and setting up a clear nationalization policy for expats. Table 4 provides information about the options selected by the immigrants. It seems that the cost of living is a major restrain on expat investment since inflation, salaries and rent are the most important solutions that the government can provide to encourage investments. This information is very important for the Dubai Economic Council (sponsor of the survey) because in Dubai remittances are often seen as a huge leakage of funds that could have been used elsewhere in the local economy (Diwakar, 2009). Immigrant's answers seem to suggest that working and living conditions (salaries and rent) in conjunction to macroeconomic policy (low inflation) are the best recipe for increasing expats investments in the UAE. It does not seem that property ownership is essential for many expats in this regard. Furthermore, Table 4 reinforces Table 1 in regards to inflation. Note again that during the period when the survey was administered, the UAE was suffering from a double digit inflation level.[11]

Although, looking at the potential factors that might influence the amount of remittance is crucial, remitting is a two party event and shedding light on the receiver of these flows is very pertinent. Table 5 presents a distribution of the relationship of the receiver to the remitting expat in Dubai. The first four categories define the nuclear family which constitutes the bulk of the receiving end. It is not surprising to see that parents are the most targeted by remittances from Dubai since the median age in the UAE is 30 years and almost 80 percent of the population is between 15 and 64 years of age.[12] The other popular receivers are spouses, children and then siblings. Less than 10 percent do send to distant relatives and less than 5 percent send to non-relatives or other organizations which suggest that expats in Dubai are sending money mainly to support their immediate families. Note here that many expats do send to multiple entities where

[11] The International Monetary Fund in the its country report on the UAE "United Arab Emirates: 2008 Article IV Consultation—Staff Report; Staff Statement; and Public Information Notice on the Executive Board Discussion" published in December 2008, estimated the inflation in the UAE to be around 12 percent http://www.imf.org/external/pubs/ft/scr/2009/cr09124.pdf.

[12] These figures were retrieved on June 19, 2009 from the Central Intelligence Agency Word Fact Book at https://www.cia.gov/library/publications/the-world-factbook/geos/AE.html.

in fact around 49 percent send to two or three different receivers. The remaining 45 percent send only to one destination while a small few send to more than three entities.

Table 6 outlines the different reasons for choosing a specific method of sending remittances. It seems that the transaction cost is very important in the choice of how to send money where a little bit over 60 percent of expatriates listed the cost of transfer as a reason for their preference. The ease of use is listed by almost 85 percent of expatriates but this category includes several partitions such as customer service, staff with different language abilities, staff knowledge of the money destination and any relation with the owner of the store. Out of the mentioned partitions, customer service is the most important of all. Finally, while a little bit more than half of expats like the time and location convenience, almost the same percentage worries about the security and speed of the transfer.

Moreover, the survey at hand allows us to depict the common problems that occur while transferring money from Dubai. Table 7 lists these problems. The most common issues are the high and hidden charges that expats face. Together they form almost 25 percent of the problems encountered. About 4 percent complained that the money never reached the intended destination. Upon closer inspection, most of these complaints originated from expats who used *hawala* to send money. This is not surprising given that transactions in the *hawala* system are not enforceable by law. Therefore, there is not a legal framework to complain in case of fraudulent transactions on the part of *hawaladars*. Nonetheless, the *hawala* system depends on reputation and as such even is there is uncertainty given the lack of a formal contract there is a self-enforcing mechanism that assures that most transactions are legitimate (Schaefer, 2008). This fact is evident in our sample given that more than 50 percent of the remitters did not report any issues while remitting, which hints that remittances channels are working properly for a significant number of immigrants in Dubai.

Following this discussion of the survey, we proceed in the next section to discuss the methodological details of our regression estimation and present the regression results.

4. Regression Methodology and Results

Tables 2 and 3 provide an idea about how immigrant characteristics influence their remittance response to certain factors such as inflation and home currency appreciation. However, in order to gain better insights about these characteristics we conduct a series of regression exercises. We conduct a separate estimation for each of the factors of interest (inflation, exchange rate, rising salaries back home and the cost of transferring money abroad). The dependent variable is the reaction of the immigrant to changes in the factors listed above. The reactions are defined with a value of *1* if the response is to decrease remittances, a value of *2* if the response is not to change remitted amounts, *3* if the response is to save for future remittances and *4* if the response is to increase current remittances. Therefore, our dependent variable assumes larger numbers for those immigrants that are more inclined to increase flows following an increase in one of the factors.

The dependent variable is composed of a series of ordered outcomes. Given the nature of our dependent variable we conduct ordered probit estimations in order to explore the relationship of certain immigrant characteristics and their reaction to the factors of interest. The ordered probit is widely used to work with ordered response type of models.[13] The independent variables that we include in the estimation are the same as those included in Tables 2 and 3. The results of this exercise are provided in Table 8. The columns in the table should be read as follows: column (1) reports on the sign and significance of the coefficient of a certain variable in the inflation equation, column (2) reports on the sign and significance of the coefficient of a certain variable in the exchange rate equation, and so on. A "+" indicates that the coefficient is positive and significant identifying an increase (decrease) in the probability of increasing (decreasing) remittances, a "-" indicates that the coefficient is negative and significant suggesting a decrease

[13] See Wooldridge (2002), Section 15.10, Ordered Response Models, for more details.

(increase) in the probability of increasing (decreasing) remittances, while a blank space indicates that the coefficient is not significant.

Results suggest that years living in the UAE do not play a prominent role in the response of immigrants to the factors of interest. All the other characteristics though are significant in at least one of the estimations. Being female and head of household in the UAE play an important role only in the case of domestic currency appreciation in which immigrants with both characteristics tend to be more inclined to reduce the remitted amount. Those that are head of household in the UAE may be more likely to decrease flows probably because they may have a larger portion of their close family members with them in the UAE and remittances are a bit flexible. There are two expenses categories, educational expenses and non-durable goods, which are also only significant for the case of exchange rates and both have a positive effect on the probability of increasing remittances. In the case of education these are expenses that are mostly fixed from period to period, so immigrants may have to compensate for the lost value of remittances by sending more money home.

Marital status and household size in the home country only have an impact on the response to inflation and in both cases immigrants tend to decrease their flows. This is an interesting result, and maybe rather counterintuitive, given that we would have expected remittances from immigrants with both of these characteristics to be pretty resistant to increases in inflation given the greater responsibilities back home. Conversely, a very intuitive result is the one obtained for the likelihood of moving abroad. Those immigrants that are likely to move abroad are also more prone to increase transfers in the face domestic currency appreciations or increasing salaries back home. This makes perfect sense given that many of these immigrants may have some target investment in their home countries in order to build a retirement egg-nest, and the depreciation of the UAE dirham forces them to send more UAE dirham in order to reach their investment goal in local currency. Likewise, this type of immigrant is likely to be pleased

about the fact that things are improving in the home country and increases the amount that he/she is sending abroad. This also coincides with the fact that those immigrants that own properties abroad and those that are just renting in the UAE lean towards increasing their flows as well in response to the rising salaries at home. Furthermore, those that own property in the home country increase their flows in reaction to the lost in value of the UAE dirham. If these property owners are making payments for their properties (e.g. mortgages) or need to cover other costs related to property ownership then they need to send more UAE dirham.

Meanwhile, individuals that have a bank account in the UAE are more likely to increase remittances in response to inflation or rising costs of transfers. Those with bank accounts in the UAE may be more financially literate and as such can either send money back home for investment purposes or can put the money in the bank account in the UAE, and then increase remittances as way of dealing with current inflation. It is also probable that these immigrants have other ways of transferring wealth to their families and hence are not worried about increasing costs of remitting. Also we can see that higher personal income promotes remitting in reaction to inflation. This may suggests that those with higher incomes are not as bothered by inflation as those with low incomes and are encourage by the rising costs in the UAE to spend more money in the home country. This can make sense if we think about rising inflation in the UAE as a change in the relative prices of the home and host country. On the hand, more money is needed to survive in the UAE; on the other hand, commodities are now relatively cheaper in the home country.

It also seems that for those immigrants that are remitting for savings or investments the answer to inflation in the UAE is to decrease remitted flows, while those remitting for medical expenses are unlikely to decrease remittances. This last result suggests that immigrants that expect the money to go to medical expenses (a vital need) are less likely to decrease their transfers even as their living expenses in the UAE increase. However, with regard to the

response to depreciations of the UAE dirham we observe a different pattern. Those that are remitting for accommodations and medical expenses tend to decrease their transfers, while those that expect the money to be used for education or non-durable goods tend to increase their transfers. Hence, contrary to the intuition gained above, just the fact that immigrants think that a share of the transfers are going to be used for medical expenses does not translates into sturdy transfers that are insensitive to changes in each and every one of the macroeconomic factors. It also looks like if those sending larger amounts of remittances also increase their flows when things improved in the home country and that with the exception of those remitting for special events (e.g. weddings, funerals) immigrants in most other expenses categories tend to decrease flows after an increase in salaries at home. A story to explain this finding could be that expatriates families are better off and therefore the migrant is likely to decrease remitted amounts. However, migrants and their families may also reflect the good economic situation at home by throwing a more lavish event which leads migrants to send more money for that specific event.

Finally, as we explained above, a significant share of the households are resistant to the increase in the cost of remitting and this translates into fewer variables having a significant impact. These variables can be divided into two groups, in those that discourage remittances and those that encourage remittances. In the first group we have education and remittances being income elastic. Those with higher education levels may be able to find other ways of helping the family (e.g. looking for educational opportunities abroad for family members) or may be aware of better opportunities in the UAE, while those that are income elastic remitters may by nature be more sensitive to changes in variables related to the cost of remitting. The second group seems to suggest that younger expats with bank accounts in the UAE seem to care less for transfers' costs and actually tend to remit more when faced with higher transfer fees.

5. Concluding Remarks

The migration literature has studied extensively the determinants of remittances. The literature has so far focused on investigating the remitting process by examining the level of remittances and matching those levels with macroeconomic variables, household related variables and immigrant specific characteristics. This approach has provided interested and valuable insights about the variables that influence remittances. In this paper, we take advantage of a unique survey that contains information on the self-reported reaction of immigrants' remittances to a series of specific external factors. The survey directly asks immigrants about their remitting decision in response to certain variables such as: rising inflation in the UAE, exchange rate changes, improvements in home country economic conditions and rises in the cost of transferring money.

The advantage of this approach is that we do not need to arbitrarily take specific variables as the counterparts of theoretical constructs such as inflation. It is not clear what basket of goods is consumed by immigrants, hence, we do not know if using the traditional CPI is going to result in a satisfactory measure of inflation for most immigrants. It is also not clear what exchange rate we should use, what should represent the cost of remitting or what salaries should we use to represent home country salaries. In the survey used in this study immigrants are asked directly to identify their response to what to they perceive to be these factors by 1) decreasing current remittances, 2) not changing remitted amounts, 3) saving now in order to increase future remittances, or 4) increasing the current remitted amount.

In addition to the fact that we avoid this problem of using a specific variable to represent a theoretical construct, we believe that the current paper is a considerable contribution because it analyzes the case of immigrants in Dubai, the second largest Emirate in the UAE and home to a huge number of expatriates. The majority of immigrants in Dubai are unskilled or semi-skilled immigrants that come from Asian countries and are mainly employed in the construction and service sectors. The gigantic proportion of expatriates in the UAE is the result of the availability

of a wide array of job opportunities due to a strong economic growth. At the same time, the UAE economy largely benefits from the flow of expatriates in providing a continual labour supply. Nonetheless, migration to this Emirate and to a certain degree to the UAE as a whole has remained largely unexplored by academics. The data set collected by the Dubai Economic Council on expatriates living in Dubai allows us to provide valuable insights on the remitting patterns of these immigrants.

Our results suggest that among the following four factors: inflation, UAE currency depreciation, rising salaries at home and rising transfer costs; inflation is the one causing the most changes in flows from immigrants, with most immigrants decreasing their flows in response to an increase in the cost of living in the UAE. Moreover, most immigrants seem not to take into account rising salaries at home in order to decide how much to remit, while over forty percent of the immigrants decrease transfers in response to the increase in the cost of remitting. Still about one third of the immigrants reported that they do not change remitted amounts in response to an increase in the cost of remitting.

Other results provide interesting insights about these factors and immigrant specific characteristics. For instance, females are more prone to decrease remittance transfers in response to an appreciation of the home currency. Likewise, across all these factors, the perceived use of remittances by the remitter also seems to matter. For example, immigrants that are remitting with expectation that the money is going to be used for savings or investments tend to decrease remitted flows in response to inflation in the UAE, while those remitting for medical expenses are less likely to decrease remittances due to inflation.

In terms of the policy implications for home countries it seems that inflation in Dubai and the value of the currency lead the way as the key factors affecting the remitting response of expatriates. The first one is out of the control of the home countries governments and the second presents mix results (some migrants increase flows in response to appreciation, while others

decrease flows). Hence, these two factors do not provide much policy openings for home countries. Still the results with regard to the other two factors, rising salaries at home and the cost of transferring money, contain interesting policy implications. First, rising salaries at home do not seem to be heavy consideration in the determination of remitted amounts. According to our data most migrants do not adjust their transfers in response to this factor. Therefore, receiving countries should not worry about the fact that improving conditions at home is going to translate into an immediate decrease of immigrants' flows. Also, it seems that any elements that increase the cost of remitting money home may result in decrease transfers given that about 4 out of every 10 immigrants in the survey decrease transfers in response to the increasing costs of remitting. Home countries should make it a priority to enter in agreements with financial institutions (both in Dubai and at home) in order to reduce the cost of remitting money home.

In terms of policy implications for Dubai, it is interesting to point out that remitters indicated that in order to increase expats investments in the Emirate, the government should lower inflation in general, and the cost renting in specific, in addition to improving expatriates salaries. It does not seem that migrants were terribly bothered with the limitations on property ownership or the lack of a clear nationalization policy. Hence, by improving immigrants working and living conditions, Dubai may be able to increase expats investments without the urgent short term need of further concessions in terms of citizenship and property ownership.

References

Allen, L. (2009) "Dark side of the Dubai dream," BBC News Magazine, April 6, at http://news.bbc.co.uk/1/hi/magazine/7985361.stm

Amuedo-Dorantes, C. and S. Pozo (2006) "Remittances as insurance: evidence from Mexican immigrants," *Journal of Population Economics*, 19, 2, pp. 227-254.

Aziz, Ahmed Abdul "Workers Forced to 'Bribe' Sponsors to Get NoCs," Khaleej Times, 24 January 2009.

Blue, S. (2004) "State policy, economic crisis, gender, and family ties: determinants of family remittances to Cuba," *Economic Geography*, 80, 1, pp.63–82.

Chand, S.K. and M. Paldam, (2004) "The economics of immigration into a Nordic Welfare state – and a comparison to an immigration state and a guest worker state." Working Paper No. 2004-04. Department of Economics, University of Aarhus.

de Haas, H. (2007) "Remittances, Migration and Social Development: A Conceptual Review of the Literature," United Nations Research Institute for Social Development, Social Policy and Development Programme Paper Number 34.

Diwakar, V. "Expat Remittances Cut Both Ways," Gulf News, August 15, 2009.

El-Qorchi, M. (2002) "Hawala," Finance and Development, 39, 4.

El-Sakka, M. and R. McNabb (1999) "The macroeconomic determinants of immigrant remittances," *World Development*, 27, 8, pp. 1493-1502.

Faini, R. (1994) "Workers remittances and the real exchange rate: a quantitative framework," *Journal of Population Economics*, 7, 2, pp. 235-245.

Freund, C. and Spatafora, N. 2008. "Remittances, transaction costs, and informality," *Journal of Development Economics*, 86, pp.356-366

Gibson, J., McKenzie, D. and H. Rohorua (2006) "How cost elastic are remittances? Estimates from Tongan immigrants in New Zealand," *Pacific Economic Bulletin*, 21, 1, pp. 112 – 128.

Higgins, M., Hysenbegasi, A. and S. Pozo (2004) "Exchange-rate uncertainty and workers' remittances," *Applied Financial Economics*, 14, pp. 403-411.

Human Rights Watch (2009) United Arab Emirates: Events of 2008 in World Report 2009.

Looney, R. (2003) "Hawala: The Terrorist's Informal Financial Mechanism" *Middle East Policy*, Vol X(1), pp. 164-167.

Naufal, G. (2007) "Who Remits? The Case of Nicaragua" IZA – Discussion Paper Series No. 3081.

Naufal, G. and Termos, A. (2009) "The Responsiveness of Remittances to the Oil Price: The Case of the GCC" IZA – Discussion Paper Series No. 4277.

Osili, U. O. (2004) "Immigrants and housing investments: theory and evidence from Nigeria," *Economic Development and Cultural Change*, 52, 4, pp. 821-849.

Orozco, M. (2003) "Changes in the atmosphere? Increase of remittances, price decline and new challenges," Inter-American Dialogue, Research Series, Remittances Project.

Roache, S. K., & Gradzka, E. (2007). Do remittances to Latin America depend on the U.S. business cycle? IMF Working Paper WP/07/273.

Ruiz, I. and Vargas-Silva, C. (2009) "To send or not to send. That is the question. A review of the literature on remittances," *Journal of Business Strategies*, 26, 1, pp. 65 - 90.

Sabban, R. (2004) "Women Migrant Domestic Workers in the United Arab Emirates" in S. Esim and M. Smith, eds. Gender and Migration in Arab States: The Case of Domestic Workers, International Labour Organisation.

Saudi Arabian Monetary Agency (2008) Forty Fourth Annual Report, Research and Statistics Department.

Schaefer, E. (2008) Remittances and Reputations in Hawala Money-Transfers Systems: Self-Enforcing Exchange on an International Scale," *The Journal of Private Enterprise*, 24, 1, 1-17.

VanWey, L. K. (2004). Altruistic and contractual remittances between male and female migrants and households in Thailand. *Demography*, 41(4), 739-756.

Vargas-Silva, C. (2008a) "Crime and remittance transfers," *Eastern Economic Journal*, 35, 2, pp. 232 - 247.

Vargas-Silva, C. (2008b). Are remittances manna from heaven? A look at the business cycle properties of remittances. The North American Journal of Economics and Finance, 19(3), 290-303.

Vargas-Silva, C. & Huang, P. (2006). Macroeconomic determinants of workers' remittances: Host versus home country economic decisions. *Journal of International Trade and Economic Development, 15*(1), 81-99.

Vora, N. (2008) "Producing Diasporas and Globalization: Indian Middle-Class Migrants in Dubai," *Anthropological Quarterly*, 81, 2, 377-407.

Woollard, D. "More Worker Riots In Dubai," Luxist, May 1st 2006.

Wooldridge, J. (2002) Econometric Analysis of Cross Section and Panel Data. The MIT Press.

World Bank. 2008. Remittances Factbook. http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,,contentMDK:21352016~pagePK:64165401~piPK:64165026~theSitePK:476883,00.html.

Yang, D. (2008). International migration, human capital, and entrepreneurship: Evidence from Philippine migrants' exchange rate shocks. The Economic Journal, 118, 591-630.

Zachariah,C.; Prakash, B.A. and S.I. Rajan (2003) "The Impact of Immigration Policy on Indian Contract Migrants: The Case of the United Arab Emirates," International Migration, 41, 4, 161 -1 172.

Table 1: Expats Remitting Reaction to Diverse Factors (Percentages)

Factors	Decrease Current Remittances	No Change	Save Now, Remit Later	Increase Current Remittances
Rising Inflation	60.2	15.1	12.0	12.7
UAE Currency Depreciation	29.2	23.2	10.3	37.3
Rising Salaries at Home	23.3	53.5	11.6	11.6
Rising Transfer Costs	43.2	34.2	16.2	6.4

Table 2: Immigrants Characteristics given their Reaction to Inflation (percentages)

A. Characteristics	(1)	(2)	(3)	(4)
Under 35 Years of Age	60.1	**60.9**	55.8	50.0
Female	5.8	5.1	5.8	**10.4**
Married	76.3	**79.0**	72.6	69.7
Over 10 Years Living in the UAE	27.2	24.1	**33.1**	25.2
Likely to Return Abroad to Live	61.5	55.3	**70.3**	48.3
Head of the Household	38.9	45.5	38.9	**48.8**
Has University Degree	27.0	28.3	33.7	**42.8**
Has a Bank Account in the UAE	68.0	77.2	67.4	**83.5**
Rents in the UAE	42.1	40.0	**54.6**	47.8
Owns Property in Home Country	75.4	**79.0**	66.8	71.4
Personal Monthly Income Over 1,999	42.0	53.3	62.7	**63.7**
Over 5 People in the Household	**31.3**	12.0	30.2	19.7
Remits Over 9,999 UAE dirham	43.0	51.1	**62.2**	38.4
Remittances are Income Elastic	17.5	10.7	11.6	**23.0**
B. Use of Remittances:				
Education Expenses	61.5	53.0	**63.3**	51.1
Accommodations	30.7	26.5	29.6	**32.4**
Savings / Investments	32.1	**36.7**	28.4	18.1
Medical Expenses	44.9	36.7	49.4	**57.6**
Durable Goods	18.1	9.7	12.7	**20.3**
Non Durable Goods	**74.5**	67.9	72.6	68.6
Special Events (e.g. Weddings, Funerals)	30.4	25.5	**45.3**	21.4

Notes: (1) indicates decrease current remittances, (2) indicates no change, (3) indicates save now, remit later, (4) indicates remitters increase current remittances.

Table 3: Immigrants Characteristics given their Reaction to Decrease Value of the US dollar (percentages)

A. Characteristics	(1)	(2)	(3)	(4)
Under 35 Years of Age	51.7	59.5	56.8	**65.1**
Female	**9.6**	6.6	7.5	3.7
Married	**79.2**	77.2	75.0	77.0
Over 10 Years Living in the UAE	**30.9**	25.4	28.0	22.7
Likely to Return Abroad to Live	51.7	55.5	59.0	**74.9**
Head of the Household	**50.4**	49.8	39.3	28.3
Has University Degree	**42.6**	34.7	28.6	16.2
Has a Bank Account in the UAE	68.2	**75.5**	65.9	72.0
Rents in the UAE	**56.0**	46.1	48.4	27.1
Owns Property in Home Country	71.4	74.5	63.6	**79.1**
Personal Monthly Income Over 1,999	57.0	59.5	**61.3**	33.8
Over 5 People in the Household	**33.0**	13.0	23.4	28.1
Remits Over 9,999 UAE dirham	**51.7**	49.8	40.9	41.3
Remittances are Income Elastic	16.2	9.0	**26.5**	18.7
B. Use of Remittances:				
Education Expenses	55.4	51.5	53.0	**67.6**
Accommodations	**41.8**	27.7	38.6	23.1
Savings / Investments	30.6	**33.7**	25.0	32.1
Medical Expenses	**53.3**	42.1	50.7	33.8
Durable Goods	**20.8**	13.3	15.1	17.3
Non Durable Goods	64.8	71.2	65.9	**84.1**
Special Events (e.g. Weddings, Funerals)	**31.9**	27.7	31.8	30.2

Notes: (1) indicates decrease current remittances, (2) indicates no change, (3) indicates save now, remit later, (4) indicates remitters increase current remittances.

Table 4: Government Directives to Encourage Investments in the UAE

	Percentage
Decrease Inflation	63.3
Expat Property Ownership	31.3
Improve Expat Salaries	72.3
Decrease Rent Properties	53.5
Investment Opportunities Information Dissemination	12.6
Expat Nationalization Policy	16.4

Table 5: Relationship of the Expat with the Receiver

	Percentage
Spouse	49.0
Parent	58.8
Children	38.9
Sibling	20.5
Other Relatives	9.5
Non Relatives	3.1
Organizations	2.1
Number of Receivers	
Send to 1 entity	45.4
Send to 2 entities	30.5
Send to 3 entities	19.0
Send to 4 entities	3.5
Send to 5 entities	0.6
Send to 6 entities	0.1

Notes: Other relatives include parents in law, grandchildren, siblings in law and distant relatives. Non relatives include live in servant, friends and other people. Organizations include charitable and non-charitable organizations.

Table 6: Reasons for Preferring Remitting Method

	Percentage
Cost of Transfer	61.2
Ease of Use	84.9
Convenience	53.5
Secure Transfer	48.1
Speed of Transfer	51.4
No Identification Requirement	17.0

Notes: Ease of Use also includes customer service, staff with different language abilities, and staff knowledge of the money destination and any relation with the owner of the store. Convenience includes location and time opening.

Table 7: Common Problems while Remitting

	Percentage
Identification Not Accepted	17.0
Money did not Reach Destination	3.5
Delay in Receipt of Money	5.7
Poor Customer Service	4.6
High / Hidden Charges	23.5
No Problem Encountered	54.7

Table 8: Ordered Probit Results of Immigrant's Remittances Reactions to Different Factors.

Variable	Inflation	Exchange Rate	Home Salaries	Transfers Costs
Under 35 Years of Age				+
Female		-		
Married	-			
Over 10 Years Living in the UAE				
Likely to Return Abroad to Live		+	+	
Head of the Household		-		
Has University Degree		-		-
Has a Bank Account in the UAE	+			+
Rents in the UAE		-	+	
Owns Property in Home Country	-	+	+	
Personal Monthly Income Over 1,999	+		-	
Over 5 People in the Household	-			
Remits Over 9,999 UAE dirham			+	+
Remittances are Income Elastic			-	-
Educational Expenses		+		
Accommodations		-	-	
Savings / Investments	-			+
Medical Expenses	+	-	-	
Durable Goods			-	+
Non Durable Goods		+		
Special Events			+	+

Notes: +, - indicates that the coefficient is significant and positive, negative, respectively. A blank space indicates that the marginal effect is not significant.

Appendix

Variable	Description
Under 35 Years of Age	Indicates that expatriate is less than 35 years old.
Female	Indicates that expatriate is female.
Married	Indicates that expatriate is married.
Over 10 Years Living in the UAE	Indicates that expatriate has been living in the UAE for over 10 years.
Likely to Return Abroad to Live	Indicates that expatriate is very likely to go back home.
Head of the Household	Indicates that expatriate is head of household in the UAE.
Has University Degree	Indicates that expatriate has a university degree.
Has a Bank Account in the UAE	Indicates that expatriate owns a bank account in the UAE.
Rents in the UAE	Indicates that expatriate is renting.
Owns Property in Home Country	Indicates that expatriate owns property in home country.
Personal Monthly Income Over 1,999	Indicates that expatriate monthly income is > 1,999 UAR dirham.
Over 5 People in the Household	Indicates that size of household in home country is > 5 people.
Remits Over 9,999 UAE dirham	Indicates that remittances in last 12 months are > 9,999 AED.
Remittances are Income Elastic	Indicates that remittances income elasticity is > 1. That is an increase in income would lead to a more than proportional increase in remittances.
Educational Expenses	Indicates that expatriate perceives that money sent is used to cover education expenses.
Accommodation Expenses	Indicates that expatriate perceives that money sent is used to cover accommodation expenses.
Savings / Investments	Indicates that expatriate perceives that money sent is used to cover savings and investments expenses.
Medical Expenses	Indicates that expatriate perceives that money sent is used to cover health expenses.
Durable Goods Consumption	Indicates that expatriate perceives that money sent is used to cover durable goods expenses (car, electrical items, furniture etc).
Non durable Goods Consumption	Indicates that expatriate perceives that money sent is used to cover non durable goods expenses (food, clothing etc).
Special Events	Indicates that expatriate perceives that money sent is used to cover special events expenses (weddings, funerals, graduation, etc).