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Determinants of Remittances: The Case of the
South Asian Community in Manchester*

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Abstract

This paper investigates the remitting behaviour of South Asian community using new data from 700 Indian, Pakistani and Bangladeshi households in Manchester. The findings show that the remittances of South Asian community in Manchester are determined by income, social and financial linkages to the home country, the recipient's economic status, and the use of remittances for education and business. There is no tangible evidence that the use of remittances for basic needs and consumption has a significant impact on the size of remittances. In addition, while the remittances of permanent migrants are determined by the standard variables cited above, remittances of temporary migrants are primarily driven by their use for savings, education and loan payments.

1. Introduction

Recent debates on development finance draw attention to the role of remittances in achieving the MDG's (Millennium Development Goals) targets of fostering growth and alleviating poverty in developing and less developed countries.[1] In addition to their role in development, remittances have become of concern since 9/11 because of the possibility that, when sent through informal channels as they often are, they could be used to finance terrorism and money laundering. According to Sander (2003), in 2002 the estimated amount of informal remittances to developing countries was between 25% and 125% of official remittances. Although these developments have prompted academic research on remittances, there is still a gap in our understanding of the underlying causes of remittances from different migrant communities. As has been cited in the literature, the ethnic identity of migrants as well as their country of origin is an important determinant of their remitting behaviour (Vertovec 2006; Sana 2005). Thus this paper aims to contribute to the literature by examining the remittances of the South Asian community in Manchester both as one large ethnic group and as a group of various different nationalities.[2]

The South Asian community are well established both professionally and politically in the United States and Europe. The immigration of South Asian people to the United Kingdom started in the colonial period and continued after independence. Because many of these countries remained in the Commonwealth their citizens were able to pursue their education and economic opportunities in the UK[3]. The expulsion of Indian communities from East Africa also contributed to the strong presence of the South Asian population in the UK.[4] Official remittance

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[1].Remittances are a growing source of external finance in developing countries, which has exceeded official development assistance and is the second largest foreign financial flow to developing countries after FDI (Foreign Direct Investment). They constitute 42% of the total FDI flows and 260% of Overseas Development Assistance (ODA) in 2001 (World Bank, 2004).

[2]Manchester is a multi-cultural city in the UK which has a very long relationship with South Asia. The growth of the city of Manchester from the mid-18th century onwards went hand in hand with the arrival of people of many nationalities and ethnic groups. Many workers from South Asian countries (Bangladesh, Pakistan and India) came to Manchester from the 1950s to work in the mills.

[3]Until 1962 every Commonwealth citizen was entitled to enter the United Kingdom at will. Under the British Nationality Act 1948, citizens of British colonies could simply apply to the Home Office for registration of British nationality and were issued with certificates.

[4]The presence of immigrants has been much debated in the media and by politicians. In 2006, immigrants contributed six billion pounds to the UK economy which should be seen in the context of net immigration figures of

inflows to South Asia have increased continuously over the past decade from $5.6 billion (1.4% of GDP) in 1990 to $43.8 billion (3.2% of GDP) in 2007 (World Bank, 2008). In 2007, the top recipient countries of recorded remittances in South Asia were India ($27.0 billion), Bangladesh ($6.4 billion), and Pakistan ($6.1 billion), collectively making the South Asia region the third largest regional recipient of remittances in the world after Latin America and the Caribbean and East Asia and Pacific (World Bank, 2008).

Although there are various studies on remittances to South Asia such as Ballard (2003), Clark and Drinkwater (2001) and Seddon (2004), there is no study providing an economic analysis of remittances from the South Asian community. Thus this study aims to fill this gap in the literature by providing an in-depth statistical and econometric analysis of remittances from the South Asian community using up to date household data from Indian, Pakistani and Bangladeshi communities residing in Manchester. While in our analysis we treat the South Asian community as one large ethnic group, we also recognize the differences between different nationalities and where possible provide a separate analysis of their social and economic characteristics.

The rest of this paper is organized as follows. The next section reviews the theoretical and empirical background of the determinants of remittances; section three provides information on data and methodology; section four presents recent trends in social, economic and demographic features of the South Asian community in Manchester; section five reports the findings of econometric analysis and section six concludes.

2. Determinants of Remittances – Theory and Evidence

2.1. Theoretical Perspectives

Broadly, the main theories of remittances fall into three categories: altruism, self interest, and intertemporal contractual agreement. The latter category includes any kind of contractual arrangement between the migrant and the household left behind such as insurance and risk

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1, 90,000 per year. EU citizens make up nearly 30 per cent of net immigration and asylum-seekers account for 50 per cent of Britain's annual immigration. Of the remainder, the majority are students who pay hefty tuition fees (The Economist, 2008).

sharing, exchange, and implicit loan agreements (i.e. repayment of schooling and migration expenses). Self interested remittances generally arise from the desire to secure an inheritance, fixed assets or income from one's parents, or to obtain social or financial services from relatives. Purely altruistic remittances involve transfers to the home country to aid the recipient without any expectation of reciprocity. As Lucas and Stark (1985) point out, 'altruistic' remittances often include an element of self interest and so may be better regarded as tempered altruism or enlightened self interest. In other cases altruistic remittances may be accompanied by an element of contractual agreement. Informal transnational networks provide an effective means of facilitating the delivery of remittances, often leading to the generation of institutional structures of considerable complexity, a common phenomenon in South Asia.

Altruistic remitting behaviour, first identified by Johnson and Whitelaw (1974) involves a set of factors which determines remitting behaviour irrespective of the economic situation of the migrants. In many cultures and religions, selfless concern for the welfare of others is paramount, which is different from moral obligations. Specifically, migrants care about the well being of their family because their utility function embodies the utility function of their family members (Agarwal and Horowitz 2002). The main indicators of altruistic remittances cited in Funkhouser (1995) are that remittances are inversely related to the recipient's income; they tend to decrease with the number of other migrants from the same family, and they decrease with the time spent in the host country.

Contractual agreement basically refers to mutual agreement between migrant and his/her family that they will help each other in difficult times (i.e. insurance and risk sharing) and that the migrant will at some point pay back the costs of education and migration incurred by his/her family (implicit loan agreement). Lucas and Stark (1985) explain the implicit contractual arrangement between the migrant and the home country household as being based on investment and risk. The notion of risk sharing appears to be self enforcing and cooperative (Agarwal and Horowitz, 2002), and arises from both self interest and mutually beneficial arrangements (Lianos 1997). In the case of implicit loan agreement the migrant repays the family's human capital

investment either in cash or by financing other migrant family numbers (Poirine 1997).[5] Self interested remitting is mainly associated with the exchange motive put forward by Rapoport and Docquier (2005). This explains the remitting behaviour as being driven by the migrants' intention to return home (and therefore sending money to take care of their assets and relatives). However, exchange motivation can also take place within the mutual contractual agreement.

Although the motivational models provide a structured framework to explain the remitting behaviour of migrants, they are unlikely to provide a holistic picture of this complex issue since many other factors can influence migrants' decisions to transfer remittances to their home country. For instance, Lianos (1997) argues that remitting behaviour can be the result of a complex decision-making framework of a migrant seeking to maximise his/her economic welfare through various rational behaviours. The argument here is that migrants' savings and investment behaviours and the flow of remittances are somewhat difficult to predict because of the many different possible objectives of the migrant which might include permanent settlement in the home country, minimising the time to be spent in the home country, or maximising wealth within a specific period of time. Puri and Ritzema (1999) also refer to alternative explanations for remitting behaviour which can be viewed as a household-specific strategic decision made by the migrants, often with other family members, which takes into account not only household consumption patterns but also the personal as well as structural conditions of the migrants, the nature of private transfers and the opportunities available for investment.

2.2. Determinants of Remitting Behaviour

The nature and patterns of various economic and social factors appear to play a crucial role in determining the size of remittances. Sander (2003) specifies several factors such as the migrant's profile and salary level, the cost of living in the host country, political and economic volatility in the home country, the migration period, and generational patterns. Based on a review of various

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[5] Investment is defined as the costs associated with the creation of human capital through the education and other support of the migrant, while risk refers to the act of spreading or diversifying risks by determining member(s) of the family to migrate in urban areas or foreign countries.

empirical studies, Rapoport and Docquier (2005) conclude that familial inter-temporal contracts appear to have more explanatory power than individualistic considerations. Even though some individualistic considerations such as altruism, an intention to return, and inheritance prospects may explain remitting behaviour, their influence generally takes place within a familial context.

In accordance with the theoretical predictions of altruism and mutual contractual agreement, Clark and Drinkwater (2001) find that immigrant households are more likely to remit than their native-born counterparts, implying that stronger family ties and the repayment of contributions received earlier by the migrant are significant drivers. It is also found that a higher number of foreign-born individuals in the household increases the propensity to remit. Glytsos (1997) opines that some family conditions and attitudes can have a positive or negative impact on remittance size. The former include the migrant's ability to remit (e.g. his/her income and savings) and the claim of his/her family on his income while the latter include the length of stay in the host country. This study also argues that the remitting behaviour of temporary migrants is driven by an obligation to meet the needs of close family back home coupled with an endogenous decision making process by which the migrant's own higher consumption is postponed for future comfort at home after an early return. On the other hand, the permanent migrant's behaviour prioritises improving his/her standard of living and economic and social integration in the host country.

In the case of the UK, Clark and Drinkwater (2001) find that household income has significant positive impact on remitting motivation while neither the length of migration nor the education levels of the household appear to have any significant effect. However, adults with foreign qualifications are more likely to remit. Contrary to the belief that co-ethnic proximity with its consequent shared cultural norms is a determining factor for remittance behaviour, they find no strong effect of ethnic concentration on remittance propensity[6]. In the case of Latino immigrants in the UK, Lowell and De la Garza (2000) find that the likelihood of remitting behaviour declines with the tendency to acculturate, while the size of remittance is positively associated

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[6] They also find that remittances of Indian households are mainly determined by income while remittances of Caribbean migrants are determined by their return intention. Furthermore, they find that Indian migrants are least likely to have parents abroad partly because the majority of the Asians who arrived in the UK from East Africa in the early 1970s were of Indian origin.

with the migrant's earnings. They also found that poor households receiving welfare benefits are less likely to remit.

In terms of the impact of macroeconomic determinants of remittances, Lianos (1997) and Sander (2003) confirm the significant influence of the host country income, exchange rate, and inflation and interest rate differentials. Puri and Ritzema (1999) also show that political risk factors of the host country, the proportion of the female population in the host country and the available facilities to transfer remittances have an impact. Based on an empirical study on Cuba, Blue (2004) opines that economic crisis in the home country in the form of macro-level financial instability (e.g. low income, high inflation) and natural hazards positively influence remittance flows. Vargas-Silva and Huang's (2006) study, based on remittance and macroeconomic data from the U.S., Mexico, Brazil, Colombia, El Salvador and the Dominican Republic, reveals that macroeconomic conditions in the host country have a significant influence on the remitting decisions of migrants. Broadly, these studies have found factors such as the economic situation in the home and host country and the nature or duration of migrants' stay in the host country to be the main macro determinants of remittances.

2.3. Informal Remittances among South Asian Communities

Many researchers consider the *hawala* or *hundi* operating system to be the most common informal method used by migrants from South Asia (India, Pakistan and Bangladesh), the Middle East and other parts of the world to transfer their remittances, though it may be known by other names. In our data 65% of respondents used only informal remittance channels providing evidence in support of previous studies pointing out that informal channels are more common than formal channels among the South Asian community. The emergence of informal transfer mechanisms for remittances has become an important issue in recent times. People are increasingly finding cheaper and easier ways to send remittances through a variety of unofficial or informal service providers. Informal transfer mechanisms or 'informal money transfer systems' (IMTS) appear to exist and operate outside of (or parallel to) conventional regulated

banking or other mainstream financial channels such as Western Union (Buencamino and Gorbunov 2002; Blackwell and Seddon 2004).[7]

The term 'hawala' has emerged from Arabic banking jargon, meaning transfer or wire (El-Qorchi 2002). Facilitated by 'hawladars' (brokers), the hawala system involves the hawladar of the home country delivering money to the recipient as per agreement with the hawladar of the host country who is acting for the remitter (Buencamino and Gorbunov 2002). There is apparently no difference between hawala and hundi apart from the name: the term 'hundi' is mostly used in Pakistan and Bangladesh, whereas 'hawala' is the commonly used term in India and the Middle East. It is important to note that the hawladar is part of an organised network of shop owners and travel agents (Sander 2003), or owners of giro houses, money exchange operators, brokers, wire services or other conventional money transmitters (Buencamino and Gorbunov 2002). The hawladars of both the sending and receiving countries appear to rely on oral (or, less often, written) contractual business relationships: the system depends on mutual trust and benefit.

The most common features of hawala are identified by Looney (2002) and Wilson (2002) as follows: (i) the halawa system permeates international boundaries, (ii) it usually involves more than one currency, and (iii) it usually entails principals (hawladers and clients) and intermediaries (brokers or bankers or exchange houses). Maimbo and Passas (2004) also opine that the element of trust is the primary defining characteristic of informal systems such as hawala. Ballard (2005) opines that the collection, transmission and delivery process of contemporary informal value transfer systems such as hawala have three interconnected core elements - (i) information processing (ii) value transmission and settlement and (iii) consolidation and delivery of the remitted money in the local currency. Nevertheless, it is argued that the settlement of transactions through the hawala system tends to be a complex process involving many parties[8].

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[7] This system has also been referred to as 'informal value transfer systems (IVTS) or alternative remittance systems (ARS) (Blackwell and Seddon 2004), or 'informal fund transfer (IFT)' (El-Qorchi 2002), or 'underground banking' or ethnic banking (Maimbo 2004) in various literatures. In spite of the differences in terminology, all of these informal or unofficial mechanisms seem to be similar in terms of the way they operate.

[8] The process of consolidation and settlement in the hawala system involves well designed coordination among three separate but closely interconnected patterns of communication that may engage three major parties such as UK

3. Data

Data for this analysis was collected from 700 Indian, Pakistani and Bangladeshi households residing in the districts of Greater Manchester that contain the largest South Asian community in the UK. Most interviews were conducted with randomly chosen South Asian individuals in ordinary public places such as offices, shops, parks, community-based organizations, mosques, cafes, streets, and bus stops. When it was not possible to employ random sampling, leads from other interviewees were used to conduct the remaining interviews.[9] In addition, given that the main focus of the study is the remittances of the South Asian community, only those respondents sending remittances were interviewed. Although a mixed sampling strategy was cost effective, we are aware of its shortcomings, particularly in terms of its impact on the statistical properties of the data and on the representativeness of the sample for the whole South Asian community. The distributions of the South Asian population and the data across the districts of the Manchester metropolitan area, and the descriptions of the variables used in the analysis are reported in Tables 1, 2 and 3. This data set is the first to provide methodical information on the remittances and socio-economic backgrounds of the South Asian community in Manchester.

4. Socio-Economic Characteristics and Remittance Patterns of the South Asian Community in Manchester

This section provides an overview of the social, economic and demographic characteristics of the South Asian community in Manchester as well as their remittance patterns. The summary statistics and the frequencies of the main indicators for the full sample are reported in Tables 4a and 4b. As seen from these tables, the average age of a respondent is 36; 67% are married, and 84% of the married respondents have their spouses in the UK.[10] The proportion of respondents from Pakistan, Bangladesh and India is 51%, 27% and 22%, respectively, reflecting their relative

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based wholesale hawaldars, global hawaldars based in Dubai, and major banking institutions in New York together with several other parties including retail hawaldars and a network of agents and sub-agents in the sending country, and retail hawaldars in the receiving country (Ballard, 2005, 2006).

[9]Since the interviewers were not instructed to keep a record of their sampling strategy, we are not able to sort the data according to the sampling strategy used during its collection.

[10]It should be noted that we only interviewed individuals of 18 years and over to ensure the inclusion of those who are economically active and send remittances to their home country. This naturally raises the average age in our data.

representation in the Manchester South Asian community. Given that Pakistani and Bangladeshi migrants are in the majority, it is not surprising that 73 % of all respondents are Muslims, followed by Hindus (26%). 62% of all respondents work full time, 13% part time and 20% are self employed, while 2% are retired. Regarding the respondents' migration status, we find that 38% are UK citizens, 23% are permanent residents, 26% are on a work permit, visa or highly skilled migration program, and 27% are on a student visa. The average time of residency in the UK is 13 years and 31% intend to return to their home country.

On average, a South Asian individual in Manchester is a university graduate, earns £1388 per month net, and remits £1663 a year.[11] In addition, 43% of respondents own their accommodation and 88% have fixed assets in their home country. Finally, 83% of the respondents have parents living in the home country. In terms of the characteristics of recipients, the statistics show that the average monthly net income of the recipient is £238. The main recipient group are the parents of the remitters (59% sent money to their parents) followed by siblings (28%), spouses (8%) and children (3%), and their main income sources are business (26%) and employment (18%) followed by remittances (8%) and agriculture (5%).[12] Moreover, the average number of people benefiting from each remittance for their basic needs is 1.66, followed by an average of 0.88 people using it for education. The number of people using remittances for farm and non-farm business seems to be the lowest, with an average of 0.14 and 0.23, respectively. The most common use of remittances is to finance consumption, followed by saving, education, and land acquisition.

To examine the differences across the key social, economic and demographic indicators across Pakistani, Indian and Bangladeshi communities, we also report the statistics separately for each group in Tables 5a and 5b. Although the average age and education level of the respondents are very similar across these three communities, Indian respondents earn the highest monthly net income (£1784) followed by Bangladeshi and Pakistani migrants (both around £1200). Pakistani migrants sent the largest remittances with an average annual amount of £1796 followed by

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[11]Income and remittances refer to the respondent's own individual income and remittances not the household's income and remittances.

[12]These percentages include the recipients whose income source is exclusively one of the sources mentioned above. The remaining recipients' main income sources include a combination of the cited sources.

Indian and Bangladeshi migrants with an average yearly amount of £1559 and £1486 respectively. In terms of employment, the Bangladeshi community contains the largest proportion of full time employees (76%), the Pakistani community contains the largest proportion of self employed people (26%), and the Indian community contains the largest proportion of part time employees (18%). In addition, even though ownership of fixed assets in the home country is very similar across the three communities (87%), the proportion of people owning a house in the UK varies from 60% of Bangladeshi respondents, through 46% of Indians to 34% of Pakistanis.

Since the remittances literature indicates differences between temporary and permanent migrants' remitting behaviour, in Tables 6a and 6b we present the data for permanent and temporary migrants separately.[13] As seen from the tables, there are differences between these two groups in terms of their age, income, remittances, and time spent in the UK. On average, temporary migrants seem to be 10 years younger, send £391 more, earn £421 less, and have spent 15 years less in the UK than permanent migrants. Unsurprisingly, more temporary migrants intend to return to their home countries and fewer own their accommodation compared to permanent migrants. They do not differ much in terms of what their remittances are used for or their religious and social backgrounds (i.e. rural or urban origins). Most temporary migrants seem to send remittances to their parents (83%) compared to 44% of permanent migrants (similar proportions of both groups have parents living in the home country).[14]

In Figures 1 to 6 we analyse the remittance patterns of the South Asian community over the key variables cited in the literature such as the time spent in the UK, age, education level, and the number of people benefiting from remittances for their basic needs, education or businesses. As seen in Figure 1a, which reports the results across the full sample, remittances from the South Asian community tend to decrease with the remitter's age and with time spent in the UK

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[13]Those who have UK citizenship or permanent residency are referred to as permanent migrants while those who are on work permit/HSMP, short term stay, students visa or asylum seekers are referred to as temporary migrants.

[14]We have also assessed the differences between informal and formal remitters The socio economic characteristics of these two groups are very similar with the only exception being that formal remitters earn more and remit less than informal remitters. In addition, it seems that a larger percentage of the Pakistani community uses informal channels, 68%, compared to 21% of the Indian and 11% of the Bangladeshi migrants (these findings are not reported but available upon request).

supporting the well-known "remittance decay" theory. However, remittances increase with education level possibly due to the positive impact of education on income. Interestingly, there is a very strong association between remittances and the number of people benefiting from them for their basic needs and education, while only a weak correlation with the number of people using remittances for farm and non-farm business. Taken together, these findings suggest that remittances from the South Asian community might be driven by altruistic and/or mutual contractual agreement motives.

Temporary and permanent migrants' remittance patterns are reported in Figures 2 and 3. Comparing these figures reveals that permanent migrants' remittances decline steadily over time spent in the UK and with age. The remittances of temporary migrants, on the other hand, decrease slowly over time but not as the remitter gets older. One reason for this difference is that both the time spent in the UK and the average age of permanent migrants are greater than those of temporary migrants. However, the difference remains even after taking this into account (Figures 2a and 3a). The patterns of remittances with regard to education level differ slightly between these two groups. Specifically, although the remittances of permanent migrants increase linearly with education we observe a sharp decrease in the remittances of temporary migrants from primary education to secondary education before they increase again. This reflects the fact that income premium for the education of temporary migrants is not linear[15] We observe that permanent and temporary migrants' remittances are similar in terms of how they are used, except that the remittances of permanent migrants increase steadily with the number of people using them for their basic needs while the remittances of temporary migrants remain steady after the fifth person.

5. Econometric Analysis of the Determinants of Remittances

This section provides an econometric analysis of remittances of the South Asian community in Manchester using ordinary least squares (OLS) regression analysis. Although OLS has some limitations in controlling for endogeneity and fixed effects, this should not weaken our analysis

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[15]The highest income premium for the education level of the temporary migrants is for post graduate degree, followed by first degree, primary, and secondary education, in that order. There is no such nonlinearity in the income premium of education level of permanent migrants.

given that most of the variables of interest are exogenous to remittances and that the group specific fixed effects have, to some extent, been controlled for by including district and religion dummies. Furthermore, most micro level studies of remittances employ OLS regression analysis due to the unavailability of longitudinal data. We employ a standard remittances econometric model as shown below:

$$\text{Re} \mathit{mit} \tan ces_i = \alpha_0 + \beta_1' X_{1,i} + \beta_2' X_{2,i} + \beta_3' X_{3,i} + \beta_4' X_{4,i} + \beta_5' X_{5,i} + \lambda_i + \varepsilon_i \quad (1)$$

where, X_1: standard variables on the demographic and socio-economic characteristics of the household head; X_2: economic and social capital and rootedness in the UK; X_3: economic and social capital in South Asia; X_4: recipient households' characteristics; X_5: use of remittances; λ: district dummies. The descriptions and the list of the variables in each of the above categories are reported in Table 3. Although some of the respondents (149 out of 590) are not household heads, since the main variables are specific to individuals we included all the respondents in our analysis.

5.1. Determinants of Remittances: Full Sample

The findings of the analysis using the full sample are reported in Table 7. As the table shows, most of the standard variables on the socio-economic and demographic characteristics of the remitter are significant and have the expected sign. More specifically, income, full time employment and education are all positive determinants of remittances with respective coefficients of around 0.65, 0.20, and 0.10. Age, being married and having a rural background are not significant in most regressions, which is not unexpected given that their impact on remittances is shown to be ambiguous in the literature. Surprisingly, an intention to return to the home country is not significant either, suggesting that the amount of remittances sent by temporary migrants is not different from that of permanent migrants. This is in contrast with the evidence in the literature that temporary migrants tend to send more remittances than permanent migrants (Merkle and Zimmerman 1992; Sinning 2007; Ulku 2008). Being a Muslim is highly positive and significant in all regressions suggesting that Pakistani and Bangladeshi communities

send more remittances than the Indian community, given that 99% of the former two communities is Muslim compared to the 2% of the Indian community.

Among the variables included in the analysis to assess the impact of the rootedness of the South Asian migrants in the UK on their remittances, only time spent in the UK and having a spouse and children in the UK are significant. The remaining variables, such as having permanent migrant status, are insignificant (column 2 of Table 1). As expected, having a UK-based spouse and time spent in the UK have a negative impact on remittances, which is consistent with the findings of earlier studies such as Masey and Basem (1992) and Brown (1997). However, the result that having children in the UK is positively related to the amount of remittances is unexpected as it should increase the social and economic prospects of the migrant in the UK leading to lower remittances. This finding thus suggests that those having children might tend to invest more in their social and economic linkages in the home country probably to secure a stable future for their children there and to ensure that their connection to the home country remains strong over generations.

The evidence that the time spent in the UK is negatively related to remittances is consistent with the remittance decay theory, which suggests that the longer the time spent away from the home the weaker will become the social linkages of the migrants to their home country leading to a decrease in remittances over time. Studies such as Stark and Lucas (1985) assert a close relationship between remittance decay and remittances motivated by altruism. According to these studies, if migrants are motivated to remit by self interest or by mutual inter-temporal agreement, remittances will not decrease over time because migrants have a future self interest in the home country or are tied into an implicit contract with the family. In the case of altruism, however, remittances are strongly linked to the social connectedness of the migrants to their home country, and generally this social connectedness weakens as the time spent away from home country increases. The third column of Table 7 reports the impact of social and financial linkages to the home country on the size of remittances. As the column shows, having close family members (i.e. parents and siblings) and financial assets in the home country are positively related to the amount of remittances indicating the importance of familial and financial linkages to the home country for remittances.

To investigate whether or not the recipient's socio-economic characteristics influence the size of remittances, we have also included the main income sources and the recipient's relation to the sender in the analysis. As seen from the fourth column of Table 7, spouses and children receive significantly more. Though the remittances sent to parents and siblings are not significantly higher at the conventional levels (though t values are high) this is due to the fact that we have controlled for the presence of the siblings and parents in the home country, which has a positive impact on remittances. The next set of variables in the fourth column of Table 7 indicates the main sources of recipients' income. As seen from the fourth column, of the four sources of income, namely remittances, employment, business and agriculture, only remittances and employment are significant with positive and negative signs respectively, showing that those recipients who have no income other than remittances receive more while those with full employment receive less. Importantly, this finding implies that remittances from the South Asian community might be motivated by altruism, with poorer recipients receiving larger remittances.

When investigating the determinants of remittances, it is also important to analyse the impact of how remittances are used on the size of what is sent as this is important in the remitter's decision making process. Thus, in the fifth column, we indicate the number of people benefiting from remittances for their basic needs, education, and farm and nonfarm businesses. As the column shows, remittances increase with the number of people using them for their basic needs, education and nonfarm businesses but do not increase with the number of people using them for farm business. Remittances sent for business seem to increase more with an additional person, i.e. one additional person benefiting from remittances leads to a 0.10 percent increase in remittances, followed by education (0.06) and basic needs (0.03). To further elaborate the impact of different uses of remittances on remittance size, we carried out regressions with variables indicating how important remittances were for different uses, namely for consumption, saving, land acquisition and loan payments.[16] As can be observed from the sixth column of Table 7, remittances increase as the level of their importance increases for savings, land acquisition and

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[16]These variables take on values between 0 and 1, 1 shows the most important area of the use of remittances and 0 shows no importance.

loan payments; however they do not change with the increases in their degree of importance for consumption and education.

For a robustness check we also carried out Seemingly Unrelated Regression (SUR) analysis to take into account potential simultaneity between remittances, income and fixed assets in the home country. As observed from Table 8, the findings are similar to those reported in Table 7, except that the affect on remittances of full time employment, education level and the number of people using remittances for their basic needs becomes insignificant.

Briefly, the results of the analysis using the full sample suggest that the standard variables of income, having a spouse and children in the UK, and time spent in the UK are all significant. Contrary to the findings in the literature, having a rural background, intending to return to the home country and permanent migration status are not significant in most regressions. Both social and financial linkages to the home country are important determinants of remittances from the South Asian community. There is also evidence that poorer recipients receive more and that remittances are positively associated with the number of people using them for education and non-farm businesses while they are not significantly related to the number of people using them for their basic needs. Similarly, the size of remittances is not significantly related to the degree of their importance for consumption and education, but there is a positive association with the degree of their importance for savings, land acquisition, and loan payments. From the viewpoint of the motivational models, we can infer that the South Asian community's remittances are influenced by a combination of altruism, (as their remittances decay over time and are higher for poorer recipients) and mutual agreement and/or self interested motivations (given that their remittances are positively associated with savings, land acquisition and loan payments and are not significantly associated with consumption and the number of people using them for their basic needs).

5.2. Determinants of Remittances: Permanent and Temporary Migrants

It has been widely cited in the literature that the remitting behaviour of permanent migrants differs from that of temporary migrants (Merkle and Zimmermann 1992; Brown 1997; Ulku

2008). To investigate whether this holds for the South Asian community, in this section we conduct a separate econometric analysis of remittances from permanent and temporary South Asian migrants. Permanent migrants are defined as those holding UK citizenship or permanent residency in the UK, and temporary migrants are defined as those holding a work permit visa, a highly skilled migrant program visa, a student visa, their dependents or asylum seekers.

The findings of the ordinary least squares (OLS) analyses are reported in Table 9. As the table shows, remittances of both permanent and temporary migrants are significantly associated with their income, education, and the economic position of the recipients, while they are not related to their marital status or intention to return to their home country. However, there are also stark differences in the determinants of remittances of these two groups. Specifically, having children in the UK, having close family in the home country and time spent in the UK are all significant determinants of remittances for permanent migrants while they are not significant for temporary migrants. In addition, unlike the permanent migrant's remittances that increase with the number of people benefiting from them for education and business use, the remittances of temporary migrants are not sensitive to the number of people using them for different purposes. Furthermore, while the remittances of permanent migrants are mainly related to land acquisition, the remittances of temporary migrants are related to savings, education and loan payments.

To check the robustness of the OLS findings we also present the results of seemingly unrelated regression (SUR) analysis which, to some extent, takes into account the simultaneity between remittances and income. As seen in Table 10, although income and the economic position of the recipient are still significant in both groups' remittances, there are some differences between the two models' results. First, education becomes insignificant in permanent migrants' remittances, implying that its impact on this group's remittances is through income. Second, having a spouse in the UK, having fixed assets in the home country and the number of people using remittances for their education become significant determinants of the remittances of permanent migrants (remaining insignificant in temporary migrants' remittances) while having a rural background becomes a significant determinant of the remittances of temporary migrants.

All in all, we can conclude that permanent migrants' remittances are mainly driven by their familial linkages in the UK, their social and financial linkages to the home countries, the economic position of the recipients, the number of people using remittances for their education, and the use of remittances for land acquisition. The remittances of temporary migrants are mainly determined by having a rural background, having a spouse in the UK, and the use of remittances for savings, education and loan payments. Neither financial nor social linkages to the home country have any impact on remittances for temporary migrants. Unsurprisingly, remittances of both groups are also determined by income and the economic status of the recipients.

6. Conclusion

This paper attempted to analyse the remitting behaviour of the South Asian community residing in Manchester using newly developed household level data. To the best of our knowledge, this is the first study assessing the remittance behaviour of a South Asian community as a whole in the UK. It is also the first study providing statistical analysis of the recent trends in social, economic and demographic characteristics of the South Asian community in Manchester.

Statistical analysis of the socio-economic features of the South Asian community reveals that the average individual in our study holds a university degree, which is higher than the education levels of other migrant groups cited in the literature (Ulku 2008). Their average monthly net income is £1388 and they send about 10% of their yearly net income to their home countries. Although the Indian community are the highest earners, the Pakistani community sends the highest amount of remittances. In addition, 43% of the South Asian community in Manchester owns a house in the UK while 88% own fixed assets in their home country. Comparison of the key features of temporary and permanent migrants reveal that they do not actually differ much in terms of their socio economic characteristics, though temporary migrants tend to earn less and to send more remittances than permanent migrants. Also there is no decay in the remittances of temporary migrants implying that temporary migrants' remittances might not be motivated strongly by altruism.

Our econometric analysis suggests that remittances from the South Asian community are primarily determined by income, social and financial linkages to the home country, the level of dependency of the recipients on remittances, the number of people using remittances for their education and business, and how important remittances are for savings, land acquisition, and loan payments. There is no evidence that the use of remittances for basic needs and consumption has a significant impact on remittance amount. These findings imply that remittances from the South Asian community are influenced by a mix of altruism, mutual agreement, and/or self interest motivations.

Although the determinants of permanent migrants' remittances are in line with those obtained from the full sample, remittances of temporary migrants seem to be primarily determined by their use for savings, education and loan payments. In addition, neither social nor financial linkages to the home country have a significant impact on the size of remittances, and their remittances do not decay over time, implying that temporary migrants might be more incentivised by self interest than other motivations such as altruism or familial contracts.

Table 1. Distribution of South Asian Community Across the Wards Having the Largest South Asian Community

	Population of Districts	Indian Pop (%)	Pakistani Pop (%)	Bangladeshi (%)
Cheetham	12846	2.8	27.6	0.4
Longsight	16007	2.7	24.6	7.2
W.Range	12109	3.7	22.2	0.7
Rusholme	14422	4.7	11.5	6.5
% in SA Community	100	11.86	74.94	12

Note: The South Asian population of Withington is not available.

Table 2. Distribution of the Surveys in Manchester

Districts	Total	Pakistan	India	Bangladesh
Cheetam	169	106	41	22
Longsight	203	100	43	59
Rusholme	137	47	35	55
Wrange	157	101	39	17
Withington	31	1	30	0
Other	3	0	3	0
Total	700	355	191	153
% in Total	100	0.51	0.27	0.22

Table 3: Description of Variables

Variable Name	Category	Description
Log of remittance		Natural log of yearly amount of remittances
Log of income		Natural log of monthly net amount of income earned in the UK
Fulltime		Dummy variable for being employed full time or being self employed
Retired		Dummy variable for being retired
Age bracket	X1	Age bracket: 1: 20-30; 2: 31-40; 341-50; 4: 51-more
Education		Education level, 1 OL; 2 AL; 3 Univ, 4 Post Graduate
Married		Dummy variable for being married
Return plan		Dummy variable for having intention to return to the home country
Permanent migrant		Dummy variable for having UK citizenship or permanent residency in the UK
Rural		Dummy variable for being from rural background
Children in UK		Number of children in the UK
Spouse in UK	X2	Dummy variable for having spouse in the UK
Time in UK		Years spent in the UK
Close family in HC		Parents plus number of siblings in the home country
Fixed assets in HC	X3	Dummy variable for having fixed assets in the home country
Recipients of remittances: spouse		Dummy for sending money to spouse in the home country
Recipients of remittances: children		Dummy for sending money to children in the home country
Recipients of remittances: close family		Dummy for sending money to parents and siblings in the home country
Income source of recipient: remittances	X4	Dummy for recipient's main source of income being remittances
Income source of recipient: employment		Dummy for recipient's main source of income being employment
Income source of recipient: business		Dummy for recipient's main source of income being business
Income source of recipient: agriculture		Dummy for recipient's main source of income being agriculture
# of people using remittances: basic needs		Number of people using remittances for their basic needs
# of people using remittances: education		Number of people using remittances for their education
# of people using remittances: farm business		Number of people using remittances for their farm business
# of people using remittances: business		Number of people using remittances for their business
Use of remittances for: consumption	X5	An index variable between 0 and 1 showing the importance of remittances for consumption use, higher values refer to higher level of importance
Importance of remittances for: saving		An index variable between 0 and 1 showing the importance of remittances for savings, higher values refer to higher level of importance
Importance of remittances for: land acquisition		An index variable between 0 and 1 showing the importance of remittances for land acquisition, higher values refer to higher level of importance
Importance of remittances for: education		An index variable between 0 and 1 showing the importance of remittances for education, higher values refer to higher level of importance
Importance of remittances for: loan payments		An index variable between 0 and 1 showing the importance of remittances for loan payments, higher values refer to higher level of importance

Table 4a. Summary Statistics for Full Sample

variable	N	mean	max	min	p50	sd
Remittances (annual)	695	1663	4000	100	1500	1188
Income in UK (monthly net)	682	1388	2500	500	1250	694
Age bracket	700	2.04	5.00	1.00	2.00	0.97
Age	644	36	81	18	34	10.65
Education	692	2.93	4.00	0.00	3.00	0.91
Children in UK	700	1.27	8.00	0.00	1.00	1.56
Time in UK	682	12.46	50.00	1.00	7.00	11.89
Income of recipient (monthly net)	609	238	500	0	150	137
Numbers using rem: basic needs	693	1.66	15.00	0.00	0.00	2.38
Numbers using rem: education	696	0.88	11.00	0.00	0.00	1.37
Numbers using rem: farm business	699	0.14	20.00	0.00	0.00	0.91
Numbers using rem: business	698	0.23	8.00	0.00	0.00	0.77
Remittance use for consumption	700	0.77	1.00	0.00	1.00	0.39
Remittance use for saving	700	0.25	1.00	0.00	0.00	0.36
Remittance use for land	700	0.10	1.00	0.00	0.00	0.24
Remittance use for education	700	0.19	1.00	0.00	0.00	0.31
Remittance use for loan	700	0.07	1.00	0.00	0.00	0.24

Table 4b. Frequency Table for Full Sample

Variable Name	N	%	Variable Name	N	%
Full time employed	700	62.43	Remittances to spouse	700	8.29
Self employed	700	20.00	Remittances to children	700	3.29
Part time	600	13.30	Remittances to siblings	699	28.18
Retired	700	2.14	Remittances to parents	698	58.60
Return plan	700	30.71	Income source of recipient: remittances	698	8.02
Female	700	10.57	Income source of recipient: employment	699	17.45
Married	700	67.29	Income source of recipient: business	699	25.46
Muslim	700	73.86	Income source of recipient: agriculture	699	4.58
UK citizen	700	37.86	Residency: Cheetham	700	24.14
Permanent resident	700	24.57	Residency: Long sight	700	29.00
Work Permit/HSMP	700	16.29	Residency: Rusholme	700	19.57
Student visa	700	17.43	Residency: Whaley Range	700	22.43
Rural	697	22.53	Residency: Withington	700	4.43
Spouse in UK	700	58.29	Country of Origin: India	700	27.29
Own accommodation	700	42.57	Country of Origin: Pakistan	700	50.71
Fixed assets in home country	697	87.66	Country of Origin: Bangladesh	700	21.86
Parents in home country	700	82.71			

Table 5a. Summary Statistics by Country of Origin

	Pakistan		India		Bangladesh	
Variable	N	Mean	N	Mean	N	Mean
Remittances (annual)	354	1796	187	1559	153	1486
Income in UK (monthly net)	351	1230	178	1784	152	1286
Age bracket	355	2	191	2	153	2
Age	343	35	148	38	152	36
Education	353	3	187	3	151	3
Time in UK	338	10	191	14	152	15

Table 5b. Frequency Table by Country of Origin

	Pakistan		India		Bangladesh	
	N	%	N	%	N	%
Full time	355	59.72	191	56.54	153	75.82
Self employed	355	25.92	191	16.23	153	11.11
Part time	355	11.55	191	18.32	153	11.11
Student	355	0.28	191	0.52	153	1.96
Retired	355	1.69	191	4.71	153	0.00
Return plan	355	34.65	191	32.98	153	18.95
Female	355	6.48	191	23.04	153	4.58
Married	355	60.00	191	67.02	153	84.31
Muslim	355	98.59	191	7.33	153	99.35
Rural	353	20.96	191	12.04	152	38.82
Own accommodation	355	33.52	191	46.07	153	58.82
Fixed assets in HC	354	87.57	190	86.84	152	88.82

Table 6a. Summary Statistics for Temporary and Permanent Migrants*

	Temporary Migrants		Permanent Migrants	
Variable Name	N	Mean	N	Mean
Remittances (annual)	262	1800	433	1581
Income in UK (monthly net)	257	1160	425	1526
Age bracket	263	1.41	437	2.41
Age	239	29.58	405	39.84
Education	262	3.31	430	2.71
Children in UK	263	0.20	437	1.92
Time in UK	262	3.15	420	18.27
Income of recipient (monthly net)	252	279	357	209
Numbers using rem: basic needs	260	1.60	433	1.70
Numbers using rem: education	263	0.73	433	0.97
Numbers using rem: farm business	262	0.16	437	0.13
Numbers using rem: business	261	0.18	437	0.27
Remittance use for consumption	263	0.75	437	0.78
Remittance use for saving	263	0.32	437	0.20
Remittance use for land	263	0.03	437	0.14
Remittance use for education	263	0.20	437	0.18
Remittance use for loan	263	0.16	437	0.02

Those who hold British citizenship or have permanent residents are classified as permanent the remaining classified as temporary.

Table 6b. Frequency Tables for Temporary and Permanent Migrants*

	Temporary Migrants		Permanent Migrants	
	N	%	N	%
Full time	263	69.20	437	58.35
Self employed	263	4.94	437	29.06
Part time	263	23.46	437	7.27
Retired	263	0.38	437	3.20
Return plan	263	57.79	436	14.45
Female	263	9.89	437	10.98
Married	263	41.44	437	82.84
Muslim	263	70.34	437	75.97
Rural	262	20.23	435	23.91
Spouse in UK	263	25.48	437	78.03
Own accommodation	263	7.98	437	63.39
Fixed assets HC	262	91.60	435	85.29
Parents in HC	263	97.34	437	73.91
Remittances sent to: spouse	263	14.83	437	4.35
Remittances sent to: children	263	2.66	437	3.66
Remittances sent to: siblings	263	20.91	436	32.57
Remittances sent to: parents	263	82.89	435	43.91
Income source of recipient: remittances	260	8.46	438	7.76
Income source of recipient: employment	260	15.38	439	18.68
Income source of recipient: business	260	31.15	439	22.10
Income source of recipient: agriculture	260	5.00	439	4.33
Cheetham	263	24.33	437	24.03
Longsight	263	33.84	437	26.09
Rusholme	263	23.57	437	17.16
Whalley Range	263	17.11	437	25.63
India	263	30.42	437	25.40
Pakistan	263	58.94	437	45.77
Bangladesh	263	10.27	437	28.83

Table 7. OLS Regression of Log of Remittances

	Basic Variables	Rootedness in UK	Ties to HC	Recipient's Characteristics	Use of Remittances	Use of Remittances
Log of income	0.556	0.722	0.735	0.690	0.671	0.717
	(7.19)***	(9.06)***	(9.23)***	(8.71)***	(8.57)***	(9.38)***
Fulltime employed	0.295	0.251	0.232	0.180	0.161	0.201
	(2.99)***	(2.61)***	(2.39)**	(1.92)*	(1.75)*	(2.17)**
Retired	-0.618	-0.363	-0.511	-0.602	-0.533	-0.520
	(2.55)**	(1.50)	(2.09)**	(2.51)**	(2.09)**	(2.18)**
Education	0.122	0.071	0.073	0.104	0.126	0.105
	(3.21)***	(1.78)*	(1.84)*	(2.65)***	(3.18)***	(2.67)***
Rural	0.107	0.072	0.047	0.023	0.006	0.020
	(1.48)	(1.03)	(0.67)	(0.34)	(0.09)	(0.29)
Muslim	0.276	0.274	0.212	0.134	0.094	0.128
	(3.33)***	(3.17)***	(2.44)**	(1.48)	(1.02)	(1.38)
Children in UK		0.058	0.053	0.062	0.068	0.060
		(1.63)	(1.51)	(1.75)*	(1.91)*	(1.70)*
Spouse in UK		-0.486	-0.467	-0.234	-0.233	-0.235
		(4.22)***	(4.03)***	(1.74)*	(1.72)*	(1.76)*
Time spent in UK		-0.022	-0.016	-0.010	-0.009	-0.009
		(4.63)***	(3.11)***	(1.92)*	(1.79)*	(1.80)*
Number of close family members in HC			0.052	0.053	0.046	0.053
			(2.99)***	(3.01)***	(2.62)***	(3.00)***
Fixed assets in HC			0.221	0.192	0.157	0.172
			(1.98)**	(1.73)*	(1.39)	(1.55)
Remittances sent to: spouse				0.269	0.183	0.264
				(1.79)*	(1.19)	(1.80)*
Remittances sent to: children				0.447	0.465	0.432
				(3.88)***	(3.96)***	(3.72)***
Remittances sent to: close family				0.053	0.053	0.046
				(1.47)	(1.48)	(1.27)
Income source of recipient: remittances				0.251	0.193	0.218
				(3.51)***	(2.70)***	(2.97)***
Income source of recipient: employment				-0.158	-0.159	-0.174
				(2.32)**	(2.31)**	(2.55)**
Income source of recipient: business				-0.015	-0.026	-0.001
				(0.20)	(0.33)	(0.02)
Use of remittances: basic needs					0.029	
					(1.91)*	
Use of remittances: education					0.050	
					(2.32)**	
Use of remittances: business					0.103	
					(2.92)***	
Importance of remittances for: consumption						0.072
						(0.76)
Importance of remittances for: saving						0.252
						(3.07)***
Importance of remittances for: land acquis.						0.273
						(2.33)**
Importance of remittances for: education						0.137
						(1.37)
Importance of remittances for: loan payments						0.260
						(2.09)**
Observations	659	643	639	636	630	636
R-squared	0.19	0.26	0.28	0.32	0.34	0.34

Robust t statistics in parentheses * significant at 10%; ** significant at 5%; *** significant at 1%

Note: The variables agebrack, married, returnplan1, sourceagr, numfarmbus, permmig are included in all regressions but not reported as they are not significant in any of the regressions.

Table 8. SUR Regression of Log of Remittances[a]

Log of income	1.195	1.234
	(17.29)***	(17.92)***
Fulltime employed	0.019	0.050
	(0.21)	(0.55)
Retired	-0.545	-0.558
	(2.29)**	(2.38)**
Education	0.040	0.025
	(1.08)	(0.67)
Rural	0.088	0.101
	(1.22)	(1.40)
Muslim	0.239	0.273
	(2.92)***	(3.29)***
Children in UK	0.065	0.057
	(2.20)**	(1.93)*
Spouse in UK	-0.305	-0.301
	(2.46)**	(2.47)**
Time spent in UK	-0.016	-0.016
	(3.49)***	(3.47)***
Number of close family members in HC	0.054	0.059
	(3.14)***	(3.48)***
Fixed assets in HC	0.307	0.337
	(3.16)***	(3.47)***
Recipient of remittances: spouse	0.144	0.206
	(0.98)	(1.43)
Recipient of remittances: children	0.364	0.337
	(2.26)**	(2.09)**
Recipient of remittances: close family	0.042	0.036
	(1.01)	(0.87)
Income source of recipient: remittances	0.151	0.170
	(2.26)**	(2.53)**
Income source of recipient: employment	-0.125	-0.135
	(1.92)*	(2.11)**
Income source of recipient: business	-0.020	-0.001
	(0.29)	(0.02)
Use of remittances: basic needs	0.022	
	(1.49)	
Use of remittances: education	0.039	
	(1.63)	
Use of remittances: business	0.081	
	(2.14)**	
Importance of remittances for: consumption		0.056
		(0.72)
Importance of remittances for: saving		0.197
		(2.53)**
Importance of remittances for: land acquisition		0.213
		(1.91)*
Importance of remittances for: education		0.107
		(1.20)
Importance of remittances for: loan payments		0.203
		(1.65)*
Observations	630	636

Absolute value of z statistics in parentheses * significant at 10%; ** significant at 5%; *** significant at 1%
Note: The variables agebrack, married, returnplan1, sourceagr, numfarmbus, permmig are included in all regressions but not reported as they are not significant in any of the regressions. a. The endogenous variables that have been taking into account are income and fixed assets. The regression results of these variables are not reported, but available upon request.

Table 9. OLS Regression of Log of Remittances-Permanent versus Temporary-Migration Status

	Permanent Migrants		Temporary Migrants	
Log of income	0.647	0.691	0.690	0.744
	(6.66)***	(7.22)***	(4.93)***	(5.42)***
Fulltime employed	0.092	0.122	0.264	0.317
	(0.64)	(0.84)	(1.94)*	(2.39)**
Retired	-0.653	-0.698	0.000	0.000
	(2.37)**	(2.64)***	..	..
Education	0.126	0.115		
	(2.30)**	(2.10)**	(2.71)***	(2.25)**
Rural	-0.063	-0.027	0.158	0.130
	(0.70)	(0.28)	(1.64)	(1.42)
Muslim	0.110	0.107	0.058	0.136
	(0.78)	(0.76)	(0.37)	(0.92)
Children in UK	0.069	0.066	0.003	0.013
	(1.69)*	(1.64)	(0.04)	(0.16)
Spouse in UK	-0.274	-0.256	-0.218	-0.232
	(1.52)	(1.37)	(1.08)	(1.35)
Time spent in UK	-0.009	-0.009	0.002	0.001
	(1.61)	(1.60)	(0.18)	(0.09)
Number of close family members in HC	0.057	0.062	0.002	0.013
	(2.55)**	(2.78)***	(0.07)	(0.34)
Fixed assets in HC	0.238	0.280	-0.056	-0.068
	(1.51)	(1.86)*	(0.34)	(0.43)
Recipient of remittances: spouse	0.329	0.426	0.065	0.117
	(1.61)	(2.17)**	(0.26)	(0.53)
Recipient of remittances: children	0.535	0.481	0.266	0.227
	(3.30)***	(2.86)***	(1.58)	(1.40)
Recipient of remittances: close family	0.035	0.018	0.061	0.115
	(0.78)	(0.39)	(0.68)	(1.27)
Income source of recipient: remittances	0.206	0.200	0.205	0.273
	(2.11)**	(2.01)**	(1.63)	(2.31)**
Income source of recipient: employment	-0.122	-0.129	-0.210	-0.269
	(1.35)	(1.45)	(1.89)*	(2.38)**
Income source of recipient: business	0.021	0.078	-0.140	-0.127
	(0.21)	(0.82)	(1.07)	(1.08)
Use of remittances: basic needs	0.021		0.040	
	(1.09)		(1.53)	
Use of remittances: education	0.048		0.059	
	(1.87)*		(1.12)	
Use of remittances: business	0.117		0.074	
	(2.83)***		(1.00)	
Importance of remittances for: consumption		0.067		0.146
		(0.50)		(1.03)
Importance of remittances for: saving		0.174		0.381
		(1.44)		(3.28)***
Importance of remittances for: land acquisition		0.317		-0.415
		(2.50)**		(0.75)
Importance of remittances for: education		-0.002		0.311
		(0.01)		(2.21)**
Importance of remittances for: loan payments		0.180		0.377
		(0.53)		(2.35)**
Observations	388	390	242	246
R-squared	0.36	0.35	0.36	0.38

Robust t statistics in parentheses * significant at 10%; ** significant at 5%; *** significant at 1%

Table 10. Sur Regression of Log of Remittances[a]

	Permanent Migrants		Temporary Migrants	
Log of income	1.163	1.199	1.214	1.248
	(13.06)***	(13.47)***	(10.62)***	(11.24)***
Fulltime employed	0.012	0.033	0.078	0.126
	(0.09)	(0.22)	(0.66)	(1.10)
Retired	-0.573	-0.639	-0.573	-0.639
	(2.11)**	(2.37)**	(2.11)**	(2.37)**
Education	0.039	0.032	0.111	0.089
	(0.78)	(0.63)	(1.91)*	(1.62)
Rural	0.025	0.055	0.202	0.180
	(0.26)	(0.57)	(1.80)*	(1.66)*
Muslim	0.225	0.226	0.219	0.290
	(1.92)*	(1.90)*	(1.81)*	(2.41)**
Children in UK	0.066	0.064	0.009	0.011
	(1.94)*	(1.89)*	(0.09)	(0.12)
Spouse in UK	-0.293	-0.281	-0.388	-0.383
	(1.80)*	(1.71)*	(1.79)*	(1.99)**
Time spent in UK	-0.016	-0.016	-0.009	-0.009
	(3.07)***	(3.05)***	(0.53)	(0.59)
Number of close family members in HC	0.057	0.060	0.006	0.014
	(2.54)**	(2.65)***	(0.19)	(0.46)
Fixed assets in HC	0.487	0.551	-0.229	-0.238
	(3.83)***	(4.35)***	(1.36)	(1.44)
Recipient of remittances: spouse	0.256	0.329	0.053	0.095
	(1.21)	(1.57)	(0.22)	(0.43)
Recipient of remittances: children	0.416	0.371	0.215	0.184
	(1.98)**	(1.75)*	(0.77)	(0.69)
Recipient of remittances: close family	0.027	0.014	0.049	0.093
	(0.55)	(0.28)	(0.56)	(1.08)
Income source of recipient: remittances	0.160	0.154	0.165	0.221
	(1.77)*	(1.68)*	(1.58)	(2.26)**
Income source of recipient: employment	-0.095	-0.100	-0.170	-0.217
	(1.13)	(1.20)	(1.47)	(2.04)**
Income source of recipient: business	0.016	0.060	-0.113	-0.103
	(0.18)	(0.68)	(0.90)	(0.93)
Use of remittances: basic needs	0.017		0.032	
	(0.86)		(1.25)	
Use of remittances: education	0.037		0.048	
	(1.30)		(0.86)	
Use of remittances: business	0.091		0.060	
	(2.06)**		(0.75)	
Importance of remittances for: consumption		0.052		0.118
		(0.48)		(1.08)
Importance of remittances for: saving		0.135		0.308
		(1.15)		(3.03)***
Importance of remittances for: land acquisition		0.245		-0.336
		(2.00)**		(0.86)
Importance of remittances for: education		-0.001		0.251
		(0.01)		(1.93)*
Importance of remittances for: loan payments		0.139		0.305
		(0.44)		(2.32)**
Observations	388	390	242	246

Absolute value of z statistics in parentheses * significant at 10%; ** significant at 5%; *** significant at 1%
Note: The variables agebrack, married, returnplan1, sourceagr, numfarmbus, permmig are included in all regressions but not reported as they are not significant in any of the regressions. a. The endogenous variables that have been taking into account are income and fixed assets. The regression results of these variables are not reported, but available upon request.

Figure 1a. Patterns of Remittances According to the Residency Time, Age and Education Level of Remitters (Full Sample)

Remittances vs Time Spent in UK

Remittances vs Age
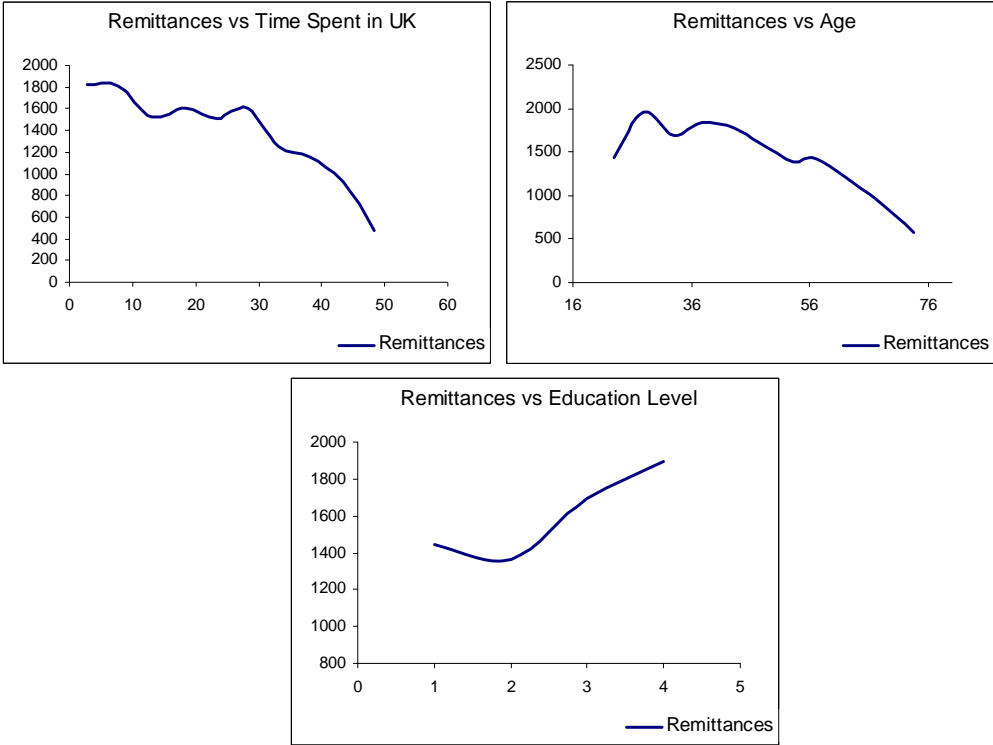
Remittances vs Education Level

Figure 1b. Patterns of Remittances According to the Number of People Using Remittances for Basic Needs, Education, Farm and Non-Farm Businesses (Full Sample)
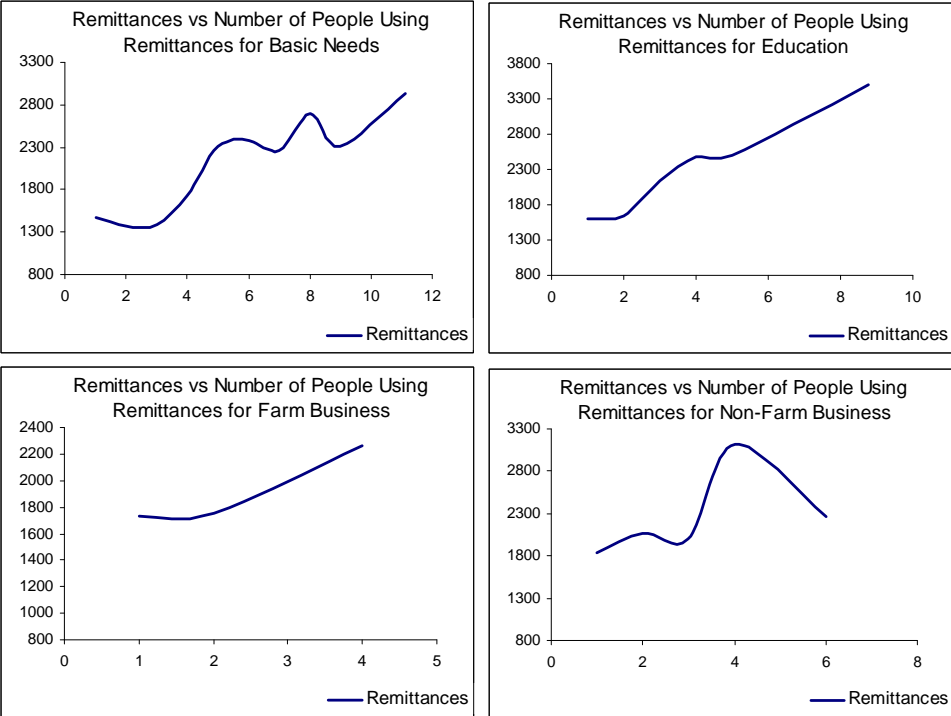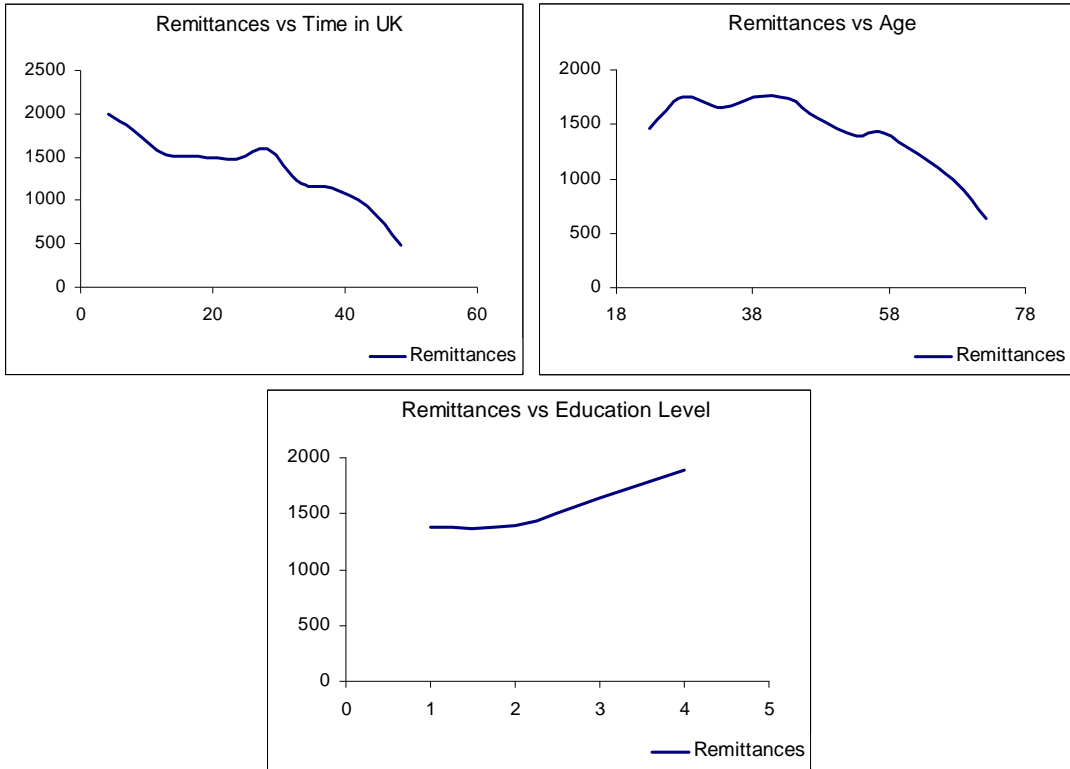
Remittances vs Number of People Using Remittances for Basic Needs

Remittances vs Number of People Using Remittances for Education

Remittances vs Number of People Using Remittances for Farm Business

Remittances vs Number of People Using Remittances for Non-Farm Business

Figure 2a. Patterns of Remittances According to the Residency Time, Age and Education Level of Remitters (Permanent Migrants)

Figure 2b. Patterns of Remittances According to the Number of People Using Remittances for Basic Needs, Education, Farm and Non-Farm Businesses (Permanent Migrants)
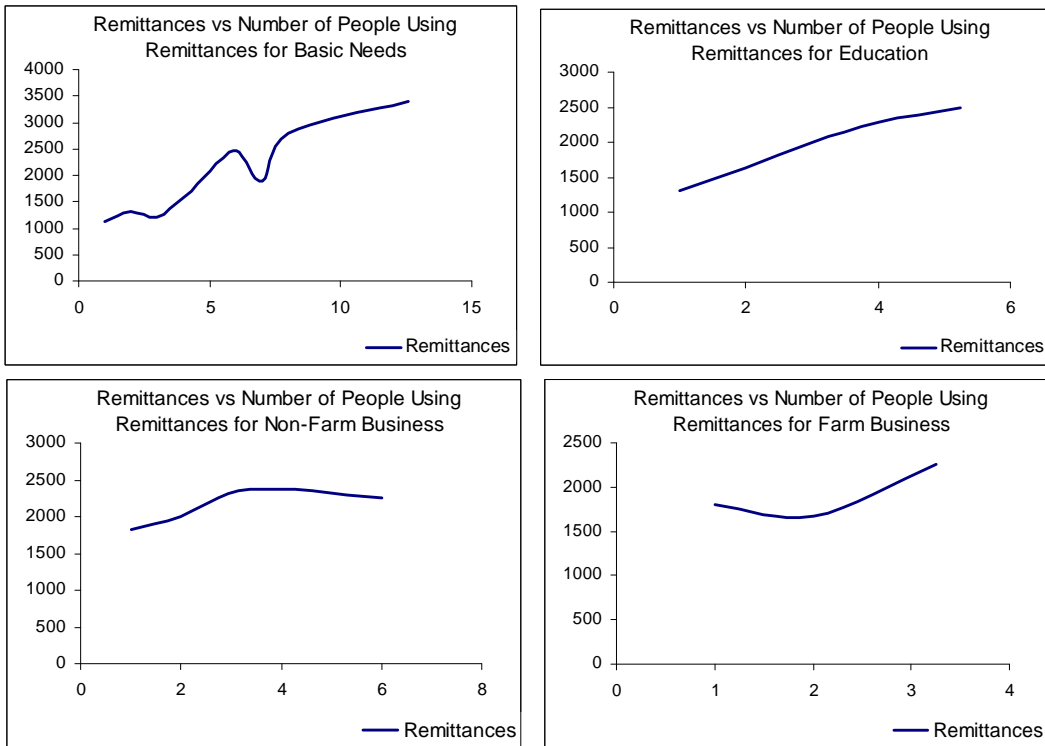
Figure 3a. Patterns of Remittances According to the Residency Time, Age and Education Level of Remitters (Temporary Migrants)
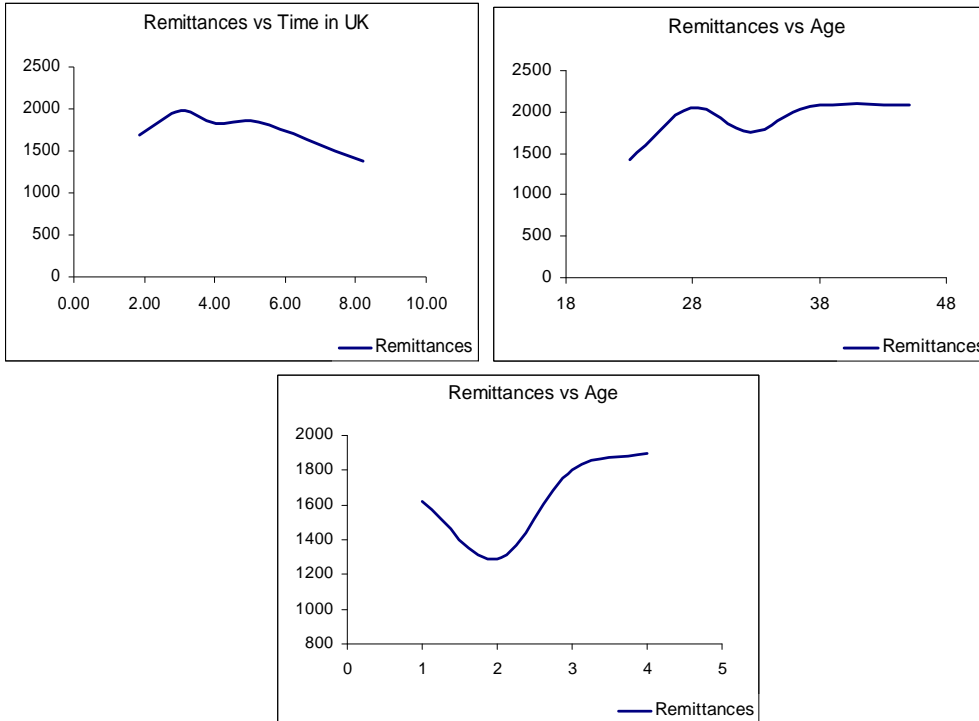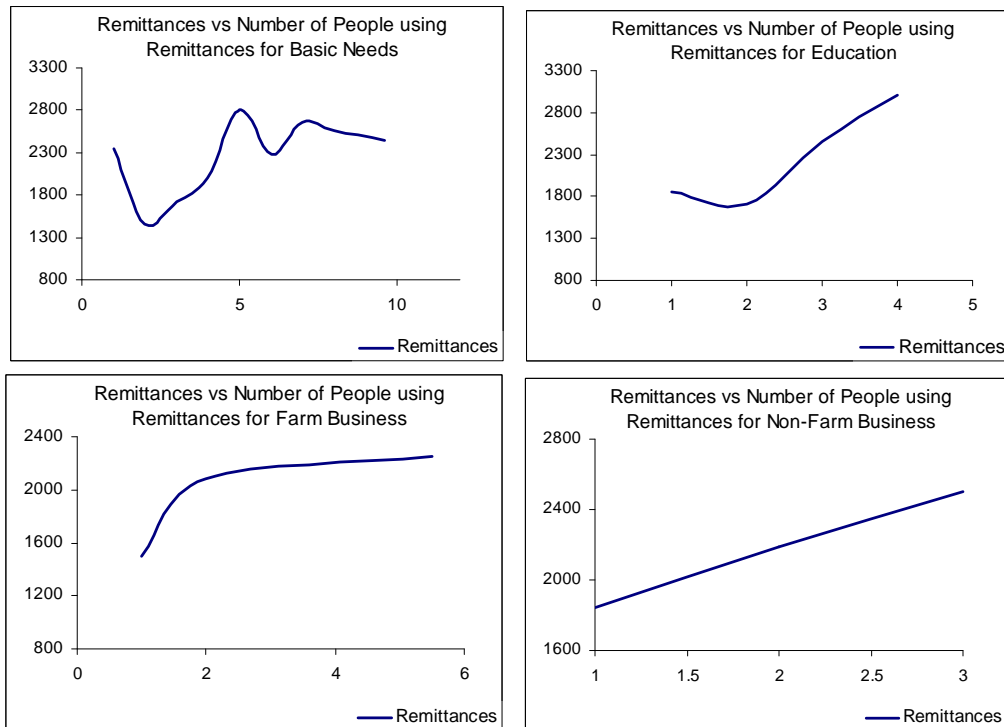

Figure 3b. Patterns of Remittances According to the Number of People Using Remittances for Basic Needs, Education, Farm and Non-Farm Businesses (Temporary Migrants)

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