Remittance and Basic Expenditure Behaviour of Low-Income Immigrants in South Africa.

Introduction

In the last decade reports about the flow of remittances have increased as much as the sharp rise in the amount remitted. It is estimated that from 1995 to 2005 world remittance more than doubled, rising from US$102 billion to US$260 billion (World Bank, 2007). National statistical agencies and central banks have recently become more interested in tracking these flows. At the same time various econometric models are being used to estimate the impact these flows of money and goods are making on the receiving households. Some work has been done in giving general description of remitters (Lucas &Stark, 1985; Lowell, 2004). Since remittance behaviour has strong relationship with income of the remitters and receivers it is important for researchers to begin to look into differences in remittance behaviour across various categories of income levels. What is the percentage weight of migrants' income that goes into remittances? How much are individual migrants willing to send to relatives at home from every Dollar, Euro, Pound or Rand he or she earns? And to what extent are migrants willing to vary their expenditure on remittance with change in their income? These are questions that need to be answered to help us know the impact remittance makes in the financial lives of the migrants at various levels of income.

Remittance Behaviour: Amount and Frequency of Remittances

The factors determining the likelihood and volume of remittance transfers by the migrants and the factors they perceive to affect the extent to which they remit reflect either the level of their motivation or of their capacity to remit, or the presence of obstacles to their so doing.

Socioeconomic Conditions

Socioeconomic circumstances are strictly connected with remittance behaviour of migrants. The plans of migrants, which invariably are derived from their socioeconomic settings, determine the amount and flow of remittances. A migrant is not simply an agent found in a sweet stable environment in which he/she tries to maximize his/her satisfaction. On the other hand a migrant cannot also be said to be one who is always trying to send or invest one's income in one's home of origin. Migrants evaluate all the

circumstances they face develop remittance behaviour as a response to this evaluation. The circumstantial elements that affect the lives of migrants are so many that it is, most often, difficult to speak of a representative migrants and to make generalized claims about their remittance behaviour (Lianos, 1997). In the altruistic motive, migrant send money and goods to improve the well-being of their loved one by giving them additional income. In this case remittances are motivated by an obligation to the household – they are sent out of affection and responsibility towards the family. The migrant is simply part of a spatially extended household that is reducing the risk of impoverishment. The point is that remitting home is part and parcel of migration especially for migrants whose families back home are struggling to live decent lives. In some societies derogatory terms have been coined to describe non-remitting migrants. For example in Zimbabwe a migrant who does not send remittances back home is referred to as *umadliwa* or *umgewu*. The term is derived from the noun *ukudliwa,* meaning to be eaten up or devoured. The connotation is of a person who has been devoured by the pleasures of South Africa[1] especially one who spends all his money on women and beer forgetting relatives left behind (Maphosa, 2005). Thus no matter how much you earn, once one crosses one's national border, one is highly expected to send something home. Thus even though the amount being remitted is likely to vary positively with the level of migrants' income, it is found that poorer migrants remit more often than their richer counterpart (Lowell, 2004; Briant, 2005). This is because the poorer migrants are from poor homes who mostly need the support of their absent members or relatives

Channels of Transfers

Apart from the effects of high expectations from poor households on amount of money migrants send, the mode of transmission can also affect the amount poor migrant can send home. In remittance-source countries, outward remittance flows are affected by exchange controls. For example, South Africa's policy of limiting foreign exchange dealings only to banks has prompted poor remitters to use informal channels. It is estimated that only 5 percent of remittances to other Southern African Development Community (SADC) countries are sent through formal channels (Genesis Analytics, 2005). The pure monetary cost (transaction cost) of remitting money across borders using official channels is estimated to be about 13 percent of the remittance value. In a

[1] South Africa is the destination of most Zimbabwean migrants.

survey conducted in South Africa, it was found that remittances up to R250 to neighbouring countries cost R25 and R50, through friends and taxi drivers, respectively, as compared to over R100 through registered banks and over R80 through money transfer agents like MoneyGram and Western Union (Ibid, 2003). So the mode of transmission of remittances is also likely to affect the amount and frequency of remittances. One of the reasons for using this channel to send remittances is that for most of these low-income migrants, there are no banking facilities in the areas of origin. Another reason behind the preference for informal channels to formal ones is the undocumented status of most of them. Undocumented migrants often avoid the formal and official ways of doing business to lower their risk of being forcefully sent back home.

Apart from the socioeconomic circumstances and transmission cost, migrants' remittance behaviour may also be determined by their length of stay in the host country, their level of education and employment status, size of the household etc (Niimi & Ozden, 2006). Generally it has also been found that the amount being remitted increases with increase in migrants' income, but in terms of number of remitters, it is has been found that a greater percentage of remitters are mostly the poor migrant households (Lowell, 2004).

The forgoing review gives the determinants of amount and frequency of remittances. Transmission cost, family ties or obligations, length of stay in the host country, socioeconomic background such as education, employment, income etc, are among the factors affecting the amount migrants do send home. However, it emerges that family ties or obligations are the strongest factors making migrants especially the poor ones remit. As one respondent put it, "remittance sending was such a strong habit that she could not even imagine not sending the money" (sited in Melo 2006). But we are yet to know how much migrants, especially the low-income ones, are willing to respond to these huge expectations of them to remit with the change in their incomes. The purpose of this paper is therefore to estimate the impact of remittance on every Rand a low-income international migrant earns, and the degree he or she is willing to vary his/her expenditure on remittance with a change in income. That is how much are these low-income migrants willing to respond to amount remitted with changes in their income. The focus on low-income migrants is due to two reasons. One, they are the ones who

mostly remit home as various literature shows, and two, they are more likely to feel the impact of the money they send on the little income they earn than the well-to-do migrants.

Estimating Model

The model used is an adoption of the Working-Leser Model. This is used because it linearly relates budget share of every expenditure to the logarithm of total expenditure, and also it has the property of additivity (Adams, 2005). In addition this model can control for the endogenous factors associated with remittance flows. This follows from the assumption that remittances are part of expenditure migrants undertake in the host country. Also due to the fact that migrants or respondents generally tend to underreport income, total expenditure is used as a proxy for total income (Hentschel, 2000; Ravallion, 2003, Adams, 2005, 2006).

$$Cr/EXP = \beta i + ai/EXP + \gamma i\ (log\ EXP) \quad (1)$$

Where Cr/EXP is the share of income that goes into remittance from total expenditure/income, (EXP). Equation (1) is equivalent similar to Engel function:

$$Cr = ai + \beta i\ EXP + \gamma i\ (EXP)\ (log\ EXP) \quad (2)$$

If we allow the budget share of remittance to vary with the individual (δj) the complete model becomes

$$Cr/EXP = \beta i + ai/EXP + \gamma i\ (log\ EXP) + \Sigma j[(\mu ij)\ \delta j/EXP + \lambda ij(\delta j)]. \quad (3)$$

Where μij and λij are constants. The major characteristics that have been found to be influencing both the amount of remittances include the average level of education for primary school or less (edu); length of stay in the host country (stay), number of children (chld), average age (agehm), gender (gender), mode of transmission of remittance (trans), and the region (REG) from which the migrants come, namely Southern Africa, East Africa and Congo.

From equation (3) the marginal and average budget shares for remittance (the MBSr and ABSr, respectively) and the expenditure elasticity (€) can be derived from the following equations:

$$MBSr = dCr/dEXP = \beta i + \gamma i\ (log\ EXP) + \Sigma j[(\gamma ij)(Zj)] \quad (4)$$

$$ABSr = Cr/EXPr \quad (5)$$

$$€ = MBSr/ABSr \quad (6)$$

The expanded form of equation (3), can be given as

$$Cr/EXP = \beta_1 + \alpha_i/EXP + \gamma_1(\log EXP) + \mu_1 staye/EXP + \lambda_1 stay + \mu_2 age/EXP + \mu_3 chld/EXP + \lambda_3 chld + \mu edu/EXP + \lambda_4 edu + \mu_5 trans/EXP + \lambda_5 trans + \lambda 5 educ + \delta_2 \sum_{j=1}^{7} \lambda_j REG_j + \varepsilon_i \quad (7)$$

Data

The dataset used for the study is from Migration and the New African City project carried out by Forced Migration Program of the University of the Witwatersrand in 2006. The project has a sample size of about 937 individuals and households of international immigrants in Johannesburg Municipality, South Africa, with a design that statistically representative of the low-income immigrants of the municipality. The survey covered information on socioeconomic and demographic characteristics that is good enough for this paper. About 3% of this municipality has a population made up of international immigrants (Gauteng Demographic Profile, 2006). And this is as a result of an increase of about 21% between 1996 to 2001.

However, there are some limitations of the dataset. It is a bit limited in expenditure patterns of immigrants. The only expenditure patterns covered are food and accommodation. But since a greater percentage of income of low-income earners goes into food and accommodation, the estimates should give a good picture of impacts of remittance on every Rand an immigrant earns. Another limitation of the dataset is that the survey has no information on socioeconomic characteristics of the receivers of the remittances. Given that the characteristics of the remittance receiving households also affect the amount and the flow of remittances, it would have been helpful to control for these effects. Nevertheless, since most of the immigrants in this paper fall under low-income category, it is right to assume that they would have similar households in their homes of origin. Perhaps the most serious limitation of the dataset is the small number of remitters for some countries. This was because the survey was concentrated in central Johannesburg suburbs like Yeoville, Troyville who the Congolese are mostly

found. So the percentage distributions are not actual representation of immigrants from various regions in South Africa. Obviously those from southern Africa are much more than people from any other geographical group in the real immigration situation in Johannesburg. Hence a country specific analysis has been avoided.

Results

Table 1 shows the basic socioeconomic characteristics of immigrants in Johannesburg Municipality. Most of them (55%) are from Democratic Republic of Congo (DRC). Even though there are lots of them in the municipality, I think there is a bit of over-sampling of Congolese. Much greater percentage (about 78%) of the immigrants earn between R9000 and R20000 a year, and most of them (over 60%) are petty traders, hawkers, or own a little business such as spaza shop. Level of education for most of these immigrants is just primary school, though a good number have finished secondary school (47%). Of the 925 immigrants only 34% do send remittances to their homes of origin.

Table 1: Basic characteristics of low-income immigrants

Factor	Category	Frequency	Percent			Category	Freq	Percent
Gender	Male	545	58		**Expenditure / Income per annum**	9000-20000	324	78
	Female	389	42			20001-35000	58	14
						>35000	35	8
HH Size	1	83	9					
	2-3	175	19		**Country of origin**	Congo	401	59
	4-6	356	39			E. Africa	154	23
	7-9	204	22			Stn. Africa	118	18
	10+	105	11					
Education	Primary/-	492	53					
	Secondary/+	445	47					
Age hh head	18-34	500	58					
	35-44	219	25		**Occupation**	Unemployed	59	8.6
	45-54	88	10			Agriculture	17	2.5
	55+	55	7			Security	17	2.5
						Professional	45	4.7
Remit	Yes	315	34			Domestic worker/catering	45	6.6
	No	620	66			Driver	11	1.6
No of Children	No child	247	28			Hawker	96	14
	1-2	239	27			Petty trader	218	31.8
	3-6	273	31			Own business	109	15.9
	7-9	88	10			Construction	61	8.9
	10+	45	5			Student	21	3

In Table 2, some basic characteristics of remitters are presented. The percentage of people who remit from the total number of immigrants in various categories of socioeconomic characteristics are given. Because the column percentages of those who remit are basically the reflection of the totals of each category not much information can be obtained for comparative purposes. Hence in the table below the row percentages of migrants who remit are given. Even though overall, most of the remitters earn only between R9000 and R20000, a greater percentage (51%) of those who earn more than R35000 annually remit home than those who earn R20000 or less annually (31%). More (38%) male immigrants remit more than females ones, but there is not much difference between the percentage of immigrants who remit across the two levels of education.

Table 2: Basic remittance behaviour of immigrants

Factor	Category	Total	% that remits			Category	Total	% that remits
Gender	Male	541	38		Expenditure / Income per annum	9000-20000	322	31
	Female	385	27			20001-35000	20	35
						>35000	18	51
HH Size	1	83	34					
	2-3	175	31		Country of origin	Congo Brazza	13	38
	4-6	356	40			DRC	388	28
	7-9	204	27			East Africa	16	44
	10+	105	30			Mozambique	26	46
						Rwanda	68	22
Education	Primary/-	486	32			West Africa[2]	14	43
	Secondary/+	443	35			Zambia	58	25
						Zimbabwe	13	23
Age	18-34	496	31			Angola	33	27
	35-44	218	43			Burundi	70	30
	45-54	88	42					
	55+	53	25		Region of origin	Congo	401	29
						East Africa	154	28
No. of Children	No child	243	28			Southern Africa	130	30
	1-2	238	39					
	3-6	270	38		Transmission mode	Informal	242	81
	7-9	88	31			Formal		19
	10+	45	31					

Even though a significant percentage of Mozambicans and West Africans do remit home, less than 50% of all the immigrants remit home. But as stated earlier, for some of these countries are too low to be useful for significant generalisation. However when the countries are grouped according to regions, there is no significant differences in the

[2] West Africa is omitted from the regional groupings and subsequent analyses because the observations from this region are too few.

percentage of migrants who remit. In Figure 1, the percentage of immigrants' income that goes into remittances is presented by region of origin. In all the regions, most of the remitters send between 1 to 5% their income on remittances. It is surprising to find that immigrants from SADC region are generally found to be spending less percentage of their income on remittances. Upon further investigation it emerged that greater percentage of the immigrants from the SADC region has bigger family sizes than their counterparts from other regions (Ref. Appendix A).

Fig. 1

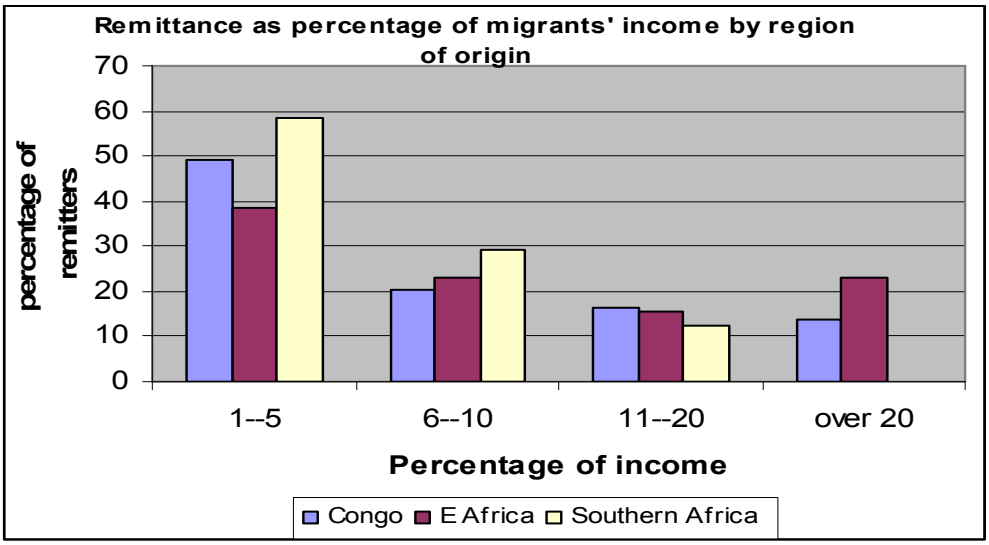


Figure 2 shows how remittance to countries of origin increases with length of stay for the first 8 years and then begins to decline. The impact of remittance transfers takes some time to be effective. Migrants do not generally send remittances for at least the first six months as they need time to find employment and meet housing costs. They may also have committed a large part of their wages in the first few months, perhaps a year, to a recruitment agency. Similarly, received remittances may be absorbed in repaying agents' fees or bank loans taken out to finance migration. With time family members at home of origin begin to join the migrants; migrants naturalize and align with local politics as they integrate with local communities. And with this integration remittance begin to reduce both in flow and in amount. Furthermore, even when remittances do start to be

sent regularly, the full extent of their impact on the household takes time to emerge.

Fig. 2

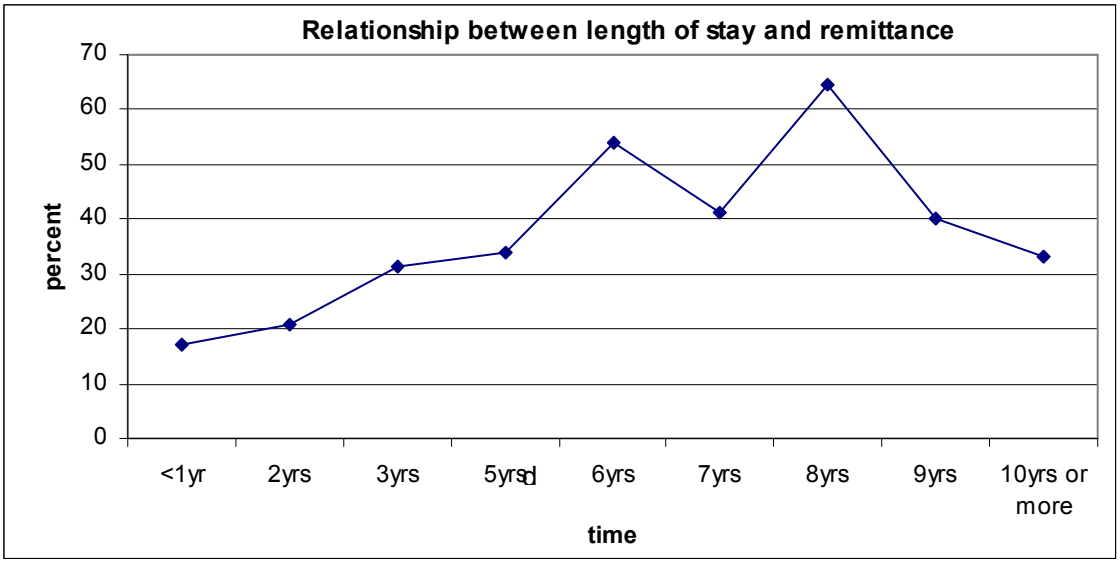
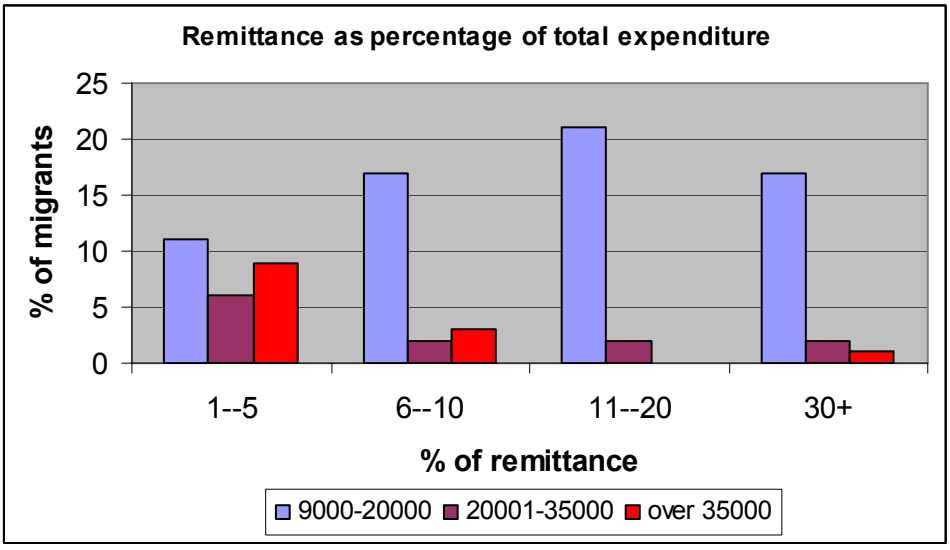


Figure 3 shows the percentage of total annual expenditure that goes into remittance. Immigrants appear to remit in line with their ability to do so. Generally poorer immigrants are more likely to remit, but the amount remitted increases with

Fig. 3



Note in 2006: R6.00 = US$1.00

individual income. However in terms of percentages of total income poorer immigrants spend much more of their income on remittances than others. For example there are significant differences between the percentage of expenditure that goes into remittance between those who spend 20000 or less and those who spend more than 20000 year.

In Table 3, the mean of per capita household expenditure, budget share to remittance, and remittance expenditure elasticities are presented for the three income groups and regions of origin of immigrants. When the gender, education level, household size and length of stay in the municipality are controlled (ref Appendix B), marginal budget share that goes into remittance (4.72) is much higher for lower income/expenditure group than the higher ones (about 0.40), confirming the earlier findings of the percentage of expenditure on remittance. It is interesting to note that immigrants from Congo do spend more at the margin of their income on remittances than the rest. This is because most (87%) of the immigrants from Congo who remit are found in the lowest income or expenditure category (Ref Appendix A), and also most of them do not have big family or household size.

Table 3: Model 1

	Categories	**Mean of per capita household expenditure**	**Budget share to remittance**	**Remittance Expenditure elasticity coefficient**
Expenditure/ Income group	9000-20000	109.79	4.72	0.043
	20001-35000	124.73	0.37	0.003
	>35000	190.98	0.40	0.002
Region of origin	Congo	108.64	3.24	0.03
	East Africa	133.26	1.33	0.01
	Southern Africa	119.08	1.19	0.01

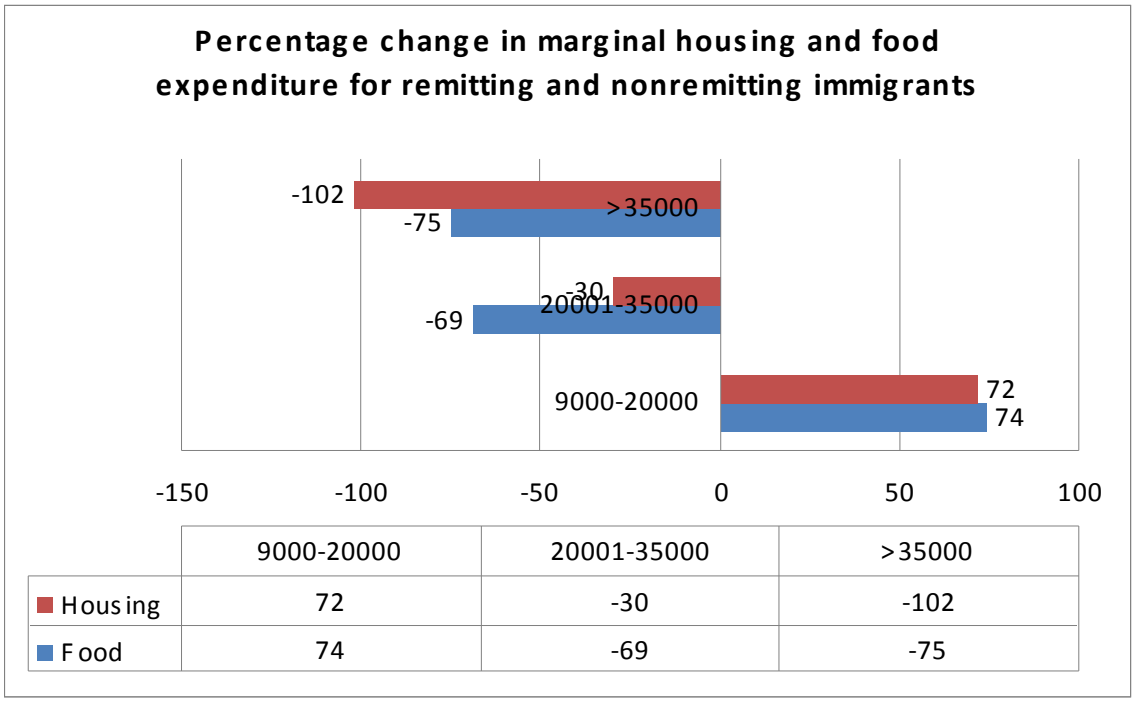
Note in 2006: R6.00 = US$1.00

The sensitivity of amount of expenditure on remittance to changes in total income or expenditure is measured by remittance expenditure elasticity coefficient. If the coefficient is greater than one, it means a unit change in income of the immigrants results in a larger percentage in amount that goes into remittance. Conversely if the elasticity is less than one, a unit change in income results in corresponding smaller change in remittance expenditure by the immigrants. As Table 3 shows, all the immigrants in various categories have responses that tell that a percentage increase in their income does not necessarily result in an equal percentage increase in the amount

they remit home. However, this response is a bit more relaxed for the poorest immigrants than the rest. There are virtually no differences in response to income changes as regards the regions of origin of immigrants.

Figure 4 below shows percentage change in marginal spending on housing and food for remitting immigrants compared to those that are not remitting. The nonremitting immigrants are the reference group at 0%. The poorest immigrants that remit would like to spend over 70% at the margin of their income on food and housing, compared to the nonremitting counterparts. Their remitting colleagues at the higher income level seem to be fine with their living conditions so at the margin they would have negative attitude toward spending more on food and housing. This could mean that the very poor immigrants are not satisfied with their basic living conditions, and yet they are the ones who are more willing to remit home.

Fig. 4



	9000-20000	20001-35000	>35000
Housing	72	-30	-102
Food	74	-69	-75

Discussion and Conclusion

Immigrants inevitably make some tradeoffs when they decide to send part of their income back to their families. When migrants devote part of their income to remittances, it implies that there is a direct trade-off between the amount of money sent and the

additional services and expenses that he/she could incurs in the host nation, be it on health care, improved housing or other daily expenses. If most of the immigrants are not at a high income level to begin with, the effect of sending remittances could be a reduction in their standard of living in the host nation. For instance given the same level of income and socioeconomic characteristics, non-remitting migrants are found to be generally enjoying better housing conditions than the remitting ones (ref. Appendix C). Thus saving on rent is one of the strategies that low-income migrants use to make some money for their relatives and loved ones back home. It must be emphasized that migrants, especially the poor ones, give up a lot in order to send something home.

Increasing competition within courier services and transfer agencies has helped reduced the transfer costs of remittance by Ecuadorian immigrants in USA (Suro 2005, 47). South Africa can learn from this. The poorest of the poor immigrants are the ones more willing to spend more of their income on remittances, and they have bigger families (ref. Appendix A). It will therefore help them to reduce their burden by reducing the cost of remitting home. The lack of competition in money transfer business in South Africa makes these poor immigrants vulnerable to cross-border drivers who sometimes fail to deliver the goods and money sent through them (Maphosa, 2005). The situation is even worse for the poor immigrants who are not from the bordering countries of South Africa. Since there are no reliable cross-border transports, they have limited options, so they are forced to use the expensive formal channels. Regulatory regimes should not drive informal systems further underground but rather encourage their formalization. One way of achieving that is to include concerned stakeholders such as informal remittance service providers into the regulation making mechanisms.

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Appendix A: Some basic characteristics of remitters by region of origin and income group

	Categories	Congo (%)	East Africa (%)	Southern Africa (%)
Length of stay (yrs)	1--3	11	20	9
	4--6	39	38	51
	7--9	9	34	11
	10+	41	8	29
	Total freq.	*106*	*40*	*35*
Amount remitted (R)	100-400	44	27	45
	401-700	18	5	13
	701-1000	15	14	13
	1001-2000	12	32	16
	2000+	11	23	13
	Total freq.	*93*	*22*	*31*
No. Of Children in SA	0--3	60	77	56
	4--6	17	23	26
	7+	23	0	18
	Total Freq.	*108*	*43*	*34*
Income (R)	9000-20000	87	38	67
	20001-35000	7	43	8
	35000+	5	19	25
	Total freq.	*55*	*21*	*12*

		9000-20000 (%)	20001-35000 (%)	35000+ (%)
No. Of Children in SA	0--3	74	90	82
	4--6	17	10	18
	7+	9	0	0
	Total Freq.	*97*	*20*	*17*
Length of stay (yrs)	1--3	13	28	19
	4--6	34	39	31
	7--9	22	27	38
	10+	31	6	12
	Total freq.	*93*	*18*	*16*

Note: In 2006 R6.00 = US$1.00

Appendix B: Multivariate analysis

Source	SS	df	MS		
				Number of obs	108
				F(6, 101)	11.04
Model	28064346.6	6	4677391.1	Prob > F	0.000
Residual	42802209.7	101	423784.255	R-squared	0.396
				Adj R-squared	0.3601
Total	70866556.3	107	662304.265	Root MSE	650.99

remit_weig~d	Coef.	Std. Err.	P>t
expTotal	-0.026282	.0154222 -1.70	0.045
logTTexp	885.6242	410.6478 2.16	0.033
no_hh_memb~s	140.8454	19.80973 7.11	0.000
gender	150.0957	152.7117 0.98	0.328
length_of_stay	-16.36969	22.8696 -0.72	0.045
education	141.9954	78.82929 1.80	0.015
_cons	-8453.134	3702.693 -2.28	0.025

Appendix C: Type of housing for remitters and non-remitters compared

	9000-2000		20001-35000		over 3500		All	
	Remit (%)	Not-remit (%)	Remit (%)	Not-remit (%)	Remit (%)	Not-remit (%)	Remit (%)	Not-remit (%)
Free-standing housing	37	31	50	43	39	41	39	33
Semi-detached house	12	14	5	16	6	12	10	14
Single-family apart.	19	24	15	30	33	35	20	25
Multi-family apart.	16	19	20	5	0	0	15	16
Hostel	3	3	10	0	6	0	4	2
Self-Built/Informal H	11	9	0	5	11	6	9	8
Other	1	1	0	0	6	6	1	1
Total Freq.	*99*	*222*	*20*	*37*	*18*	*17*	*137*	*276*