

# **The impact of international remittances on local living standards: Evidence for households in Ghana**

By

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## **1. Introduction**

The importance of remittances from migrants to their home countries is gaining increasing recognition internationally. The World Bank has estimated that ‘official’ remittances amounted to US\$31 billion in 1989 or over half of the total value of official development assistance (World Bank 1995). Ghana is no exception. Estimates for Ghana range from US\$ 500 million (World Bank) to US\$ 1 billion (estimate of the IMF and the Bank of Ghana) for 2003. These figures are estimates of ‘official’ remittances, however, much of what comes from migrants is brought through the hands of travelers and goes unregistered. Choucri (1986) and Russell (1986), for example, estimate that ‘official’ remittances comprise less than half of total transfers from developed to developing countries. Preliminary data from the Ghana Transnational Networks<sup>4</sup> research program indicate that unregistered remittances can comprise as much as 65% of total remittances.

What is clear from the above is that it is very difficult to estimate accurately remittance levels. Depending on what is counted and what is not, one can get very different estimates such as the two-fold discrepancy between remittance estimates of the World Bank and the Bank of Ghana mentioned above. Still, even with the most conservative estimates and not including unregistered transfers, remittances amount to approximately 8% of Ghana’s GDP (estimated at US\$ 6,160 million in 2002), attesting to the importance of remittances for Ghana’s economy. This begs questions about the dynamics of these remittances: who sends them, from where, how are they distributed within Ghana and what effects do these remittances have on local living

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standards? This paper investigates these questions at the micro-economic level by looking into the effects of remittances on individuals and households in Ghana. In section two we analyze some of the characteristics and dynamics behind remittances at the household level by using the Ghana Living Standards Survey (GLSS). In section three we discuss these results in light of preliminary findings from the Ghana Transnational Networks research program that has collected data on remittances at the network level and from migrants themselves. Section four presents our conclusions.

## **2. Effects of remittances on local living standards**

The Ghana Living Standards Survey lends itself particularly well to looking into the characteristics and effects of remittances because it collects data on remittances received by Ghanaian households and is statistically representative of all of Ghana. In this paper we make a first step in looking at the impact of remittances by analyzing the fourth round of the GLSS conducted in 1998/99 (from here on referred to as GLSS4)<sup>5</sup>. In specific, section 11 of the GLSS4 asks about remittances received by households from anyone living outside of the household within the past year. It asks the relationship between the giver and the head of the household, the sex of the giver, the frequency of the remittances, whether the remittances need to be paid back by the household, the total amount of remittances, food and goods received from the giver over the 12-month period, and where the giver lives. We first look at some of the characteristics of the givers, then of the households that receive transfers, the geographical distribution, the share that remittances comprise of total household income and finally we present some preliminary results on the relationship between remittances and living standards of the receiving households.

### *2.1 Characteristics of givers*

We first look at who are the givers, their sex, where they are located in the world and how much on average they transfer in order to understand some of the characteristics of remittances.

Table 1 shows that most givers are children and siblings of the household head comprising 38% and 23% of all givers, respectively. However, by far those who remit

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<sup>4</sup> see [www.users2.fmg.uva/ghanatransnet](http://www.users2.fmg.uva/ghanatransnet)

<sup>5</sup> In the near future we plan on conducting a comparative analysis with the previous three rounds and a fifth round that is due to be completed in 2005.

the greatest amounts are spouses of the household head averaging US \$474 over a 12 month period or almost four-fold the total mean amount remitted. Most givers are male.

Table 1 Characteristics of givers of transfers (1998/1999)

Relationship with household head	Percent of givers	Mean amount given yearly (1999 US\$)
child	38	120
parent	6	134
sibling	23	125
spouse	6	474
other relative	18	74
non-relative	10	109
<i>Sex of giver</i>		
female	42	96
male	58	159
<i>Total</i>		<i>133</i>

Source: own calculations from the Ghana Living Standards Survey (1998/1999)

Where are these givers located? Table 2 shows that migrants located in urban locations in Ghana comprise the largest group of givers. Notably those living outside of Africa are a relatively small group comprising 12% of total givers however they donate the largest average yearly amount (US\$ 410) or three times as much as the total average amount remitted. This means that remittances from outside of Africa constitute 37% of total transfers<sup>6</sup>. It is important to note in all the hype around international remittances, that transfers between people living in the same village or town (here marked as 'local') are just slightly less than transfers from the capital city, Accra, and equal to transfers from all other Ghanaian urban destinations in terms of total remittances given.

Table 2 Characteristics of givers and amounts given (1998/1999)

Location of giver	Percent of givers	Mean amount given (1999 US\$)	Percent of total remittances given
local	15	119	13
rural	14	50	5
Accra	22	114	19
Kumasi	10	111	8
other urban	24	76	13
abroad Africa	3	127	3
abroad other	12	410	37

Source: own calculations from the Ghana Living Standards Survey (1998/1999)

<sup>6</sup> We use the terms remittances and transfers interchangeably.

## 2.2 Characteristics of receiving households

We now turn to the characteristics of households who receive remittances. Forty-one percent of all households in Ghana receive at least once a year a transfer (table 3). On average US \$218 are received per household. This means that there are 1.6 givers/household (mean amount received (US \$218) divided by mean amount given (US \$133)). Most of the receiving households are located in the Ashanti, Eastern, Central, Brong Ahafo and Greater Accra Regions. Interestingly, the Ashanti, Eastern and Central Regions have a disproportionately large amount of recipient households (column B compared with column A) meaning that households in those regions have a higher chance of having migrants overseas than households in other regions.

Table 3 Geographical distribution of households and remittances (1998/1999)

Location	Households (A)	Recipients (B)	Recipients of domestic remittances (C)	Recipients of foreign remittances (D)
	<i>(percent of households)</i>			
Western	10.7	8.9	8.7	8.9
Central	11.7	13.2	14.3	7.5
Greater Accra	14.3	13.2	11.8	21.0
Volta	10.7	9.8	10.0	7.7
Eastern	13.7	15.8	16.5	13.9
Ashanti	17.7	20.3	19.4	28.6
Brong Ahafo	9.0	10.0	9.7	8.9
Northern	6.0	3.8	4.1	1.9
Upper West	2.0	0.6	0.7	0.0
Upper East	4.3	4.4	4.7	1.7
Total receivers (%)		41	35	8
Mean amount received (1999 US\$)		218	149	452
Total non-receivers (%)		59	65	92

Source: own calculations from Ghana Living Standards Survey (1998/99).

Furthermore, 61% of remittances received by a household are in the form of cash (Table 4). Table 4 shows that the shares of total remittances received follow the same patterns as the shares of total givers presented in section 2.1. Children and siblings of the household head remit the largest share of total remittances received by a household as do remittances from Accra and other urban areas. Table 4 also shows how spread out the data are for each category through the coefficient of variation with the share of cash remittances showing the least variation and shares from parents, spouses and Africa abroad showing the most variation.

Table 4 Shares of total household remittances by remittance type (1998/1999)

	Share of total remittances received	Coefficient of variation
<i>form of remittance:</i>		
cash	61	0.57
food	16	1.75
goods	23	1.30
<i>relationship of giver with household head:</i>		
child	33	1.39
parent	7	3.43
sibling	26	1.62
spouse	8	3.38
other relative	17	2.12
non-relative	9	3.11
<i>sex of giver:</i>		
female	38	1.18
male	62	
<i>location of giver:</i>		
local	15	2.27
rural	14	2.36
Accra	21	1.81
Kumasi	10	2.90
other urban	24	±2.00
abroad Africa	4	4.75
abroad elsewhere	13	2.46

Source: own calculations from the Ghana Living Standards Survey (1998/1999)

### 2.3 Share of remittances in household income

How important are remittances to households? We answer this question by looking at the share of household income that comes from remittances. Transfers comprise on average about 20% of total household income and are most important for households in the rural forest area, (corresponding with parts of the Brong Ahafo, Ashanti, Eastern and Volta Regions) and urban localities. More details on the importance of overseas remittances for people in regions of the rural forest area can found in Kabki et al. (2004).

Table 5. Average sources of household income by locality (1998/99)

Location	Wages	Own account agric.	Non-farm self empl.	Rent (incl. imputed)	Remittances	Other sources	Total
<i>(percent of household income)</i>							
Accra	31	5	40	5	16	2	100
Other urban	24	10	35	5	23	3	100
Rural coastal	15	26	32	9	18	1	100
Rural forest	12	36	22	4	25	2	100
Rural savannah	4	58	17	7	12	2	100
Ghana	16	28	28	6	20	2	100

Source: Table 6.1 in Coulombe and McKay (2004)

## 2.4 Remittances from abroad

Next we focus on remittances from abroad in order to shed light on some of the dynamics behind the large numbers quoted at the beginning of this paper from the World Bank, IMF and the Bank of Ghana. Most transfers from abroad are received in Ashanti and Greater Accra Regions (Table 3). Both of these regions also receive a disproportionately large share of the overseas remittances (column D compared with column A). This reflects the fact that most Ghanaian migrants located outside of Africa come primarily from these regions (Ghana Statistical Service 1995). Table 6 shows that overseas remittances follow the same trends as overall remittances (Table 1) with the highest remittances being sent by the spouse of the household head while the largest number of givers from overseas are the siblings of the household head. However, the amounts remitted from overseas are much larger than overall remittances.

Table 6 Average amounts given from overseas (1998/1999)

	Percentage of givers	Mean yearly remittances (1999 US\$)
<i>Relationship with household head</i>		
Child	29	443
Parent	2	442
Sibling	35	337
Spouse	3	2,413
Relative	19	170
Non-relative	11	289
<i>Sex of giver</i>		
Female	33	306
Male	67	461
<i>Total</i>		<i>410</i>

Source: own calculations from the Ghana Living Standards Survey (1998/1999)

## 2.5 Remittance effects on living standards

The question that many development economists ask is, do these remittances contribute to a country's development (for an overview of the literature see Taylor 1999)? In particular, this paper asks whether remittances have an effect on living standards. That is, do households that receive remittances differ from those that do not and if so, are they better off? If no difference or no effect were detected in the data, this would be an indication that there are other possible investments available within the country that yield the same fruits as having someone remit. We conduct a

regression in order to determine if remittances have an effect on living standards and what characteristics of remittances (form of remittance, location of giver and relationship of giver with household head) are the most significant in creating this effect. Table 7 defines the variables used in the regression. Per capita expenditures is taken as an indicator of living standards and the explanatory variables include household size, employment, education and remittances. Because we are also interested in understanding which component of remittances is most influential in affecting living standards, we also included variables indicating the various characteristics of remittances (cash or in kind, sex of giver, relationship of giver to the household head, and the location of the giver).

Table 7 Variables used in the analysis of the relation between per capita expenditures and remittances

Variable	Description	Unit	Transformation
<i>Dependent</i>			
Logexp	per capita expenditures	1000 cedis	log
<i>Independent</i>			
Size	household size	no.	log
Agri	hhld. members employed in agriculture	no.	
Indu	hhld. members employed in industry	no.	
Serv	hhld. members employed in services	no.	
Pupils	hhld. members attending school	no.	
Remit	if household received remittance	0 or 1	
Amt	amount of cash remittances sent by a male child from the same location as the household	1000 cedis	amt./total amt. received
Food	amount of remittances received in food	1000 cedis	amt./total amt. received
Goods	amount of remittances received in goods	1000 cedis	amt./total amt. received
Women	amount remitted by women	1000 cedis	amt./total amt. received
Parent	amount remitted by parents	1000 cedis	amt./total amt. received
Spouse	amount remitted by spouses	1000 cedis	amt./total amt. received
Sibl	amount remitted by siblings	1000 cedis	amt./total amt. received
Relat	amount remitted by other relatives	1000 cedis	amt./total amt. received
Nonrel	amount remitted by non-relatives	1000 cedis	amt./total amt. received
Rural	amount remitted from rural areas	1000 cedis	amt./total amt. received
Accra	amount remitted from Accra	1000 cedis	amt./total amt. received
Kumasi	amount remitted from Kumasi	1000 cedis	amt./total amt. received
Sektak	amount remitted from Sekondi/Takoradi	1000 cedis	amt./total amt. received
Tamale	amount remitted from Tamale	1000 cedis	amt./total amt. received
Othurb	amount remitted from other urban areas	1000 cedis	amt./total amt. received
Afric	amount remitted from Africa abroad	1000 cedis	amt./total amt. received
Abroad	amount remitted from other abroad	1000 cedis	amt./total amt. received

## 2.6 Discussion of regression results

Table 8 presents the results of the regression. There are various precautions one has to make in interpreting the results. As with all regressions estimating the effects of variables on living standards, there may be a problem with endogeneity that prevents

us from determining the direction of causality between remittances and living standards. For example, it may be that households that have lower expenditures receive more remittances because they are poorer thus indicating that remittances is not an independent variable. However, endogeneity problems in living standards equations are difficult to eliminate and often the cure may be worse than the disease. Instrumental variables can be used to remove the endogeneity problem, but it is very difficult to find meaningful instruments for remittances, and if they are found, the risk is high that the explanatory power of the model will be destroyed because they eliminate most of the variation in the explanatory variables (Bound et al. 1995; Wang and Zivot 1998). We therefore choose to present these results as evidence that there is a correlation between living standards and certain of the remittance variables indicating that the two influence each other while making no claim for causality. This is still of interest because were remittances and per capita expenditures of no influence on each other, this would be an indication that remittances can easily be replaced with some other source of income and thus is of no particular importance for households who want to improve their living standards. Below follows a discussion of the remittance variables. We first look at the difference between receiving remittances and not receiving them, captured in the variable REMIT and then proceed to look at, when one receives remittances, the effects of the different types of remittances, captured by all variables below REMIT.

The REMIT variable is significant and negatively correlated with per capita expenditures. The negative correlation is counterintuitive. It indicates that if a household receives remittances, its per capita expenditure is lower than if it does not. This may be explained by the possibility that poorer households receive remittances more than richer ones and poorer households have lower per capita expenditures than do richer ones<sup>7</sup>. This explanation seems particularly plausible for remittances sent within Ghana because there are indications that within a given locality poorer households have more internal migrants than do richer households (Mensah-Bonsu 2004). However, for overseas remittances this seems less plausible as the poorest households do not have the resources to send their members overseas. In future

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<sup>7</sup> This indeed would attest to the endogeneity of remittances, i.e. remittances influence expenditures just as expenditures influence remittances.

analysis we will disaggregate this variable between remittances from within Ghana and from abroad to test this hypothesis.

Table 8 Nonlinear OLS regression of per capita expenditures (1998/1999).

Source	Sum of squares	df	mean square		
Residual	2027.6	24	0.3394		
Variable	Coefficient	s.e. of coefficient	t-value	pr >  t	
<i>constant</i>	7.495812	0.0218	343.74	<.0001	
<i>size</i>	-0.65792	0.0158	-41.61	<.0001	
<i>agri</i>	-0.02289	0.0155	-1.48	0.1393	
<i>indu</i>	0.281661	0.0205	13.73	<.0001	
<i>serv</i>	0.343835	0.0156	21.98	<.0001	
<i>pupils</i>	0.037966	0.00656	5.79	<.0001	
<i>remit</i>	-0.31437	0.0362	-8.68	<.0001	
<i>amt</i>	0.028249	0.0120	2.35	0.0187	
<i>food</i>	-0.04048	0.0131	-3.10	0.0020	
<i>goods</i>	0.02321	0.0121	1.92	0.0551	
women	-0.00986	0.00724	-1.36	0.1734	
<i>parent</i>	0.062501	0.0116	5.39	<.0001	
<i>spouse</i>	0.028435	0.0101	2.82	0.0047	
<i>sibl</i>	0.025326	0.00792	3.20	0.0014	
<i>relat</i>	0.035154	0.00970	3.62	0.0003	
<i>nonrel</i>	0.050069	0.0110	4.55	<.0001	
rural	-0.0032	0.0123	-0.26	0.7942	
<i>accra</i>	0.025303	0.00997	2.54	0.0112	
<i>kumasi</i>	0.027262	0.0119	2.28	0.0225	
sektak	0.036589	0.0210	1.74	0.0812	
tamale	0.006801	0.0385	0.18	0.8597	
<i>othurb</i>	0.026434	0.0105	2.52	0.0119	
afric	0.007168	0.0179	0.40	0.6888	
<i>abroad</i>	0.079114	0.0104	7.61	<.0001	

Source: own calculations using Ghana Living Standards Survey (1998/1999).

Notes: variables and coefficients in italic are statistically significant.

The other remittance variable coefficients show whether there is a significant correlation between living standards and the different types of remittances. The variable AMT is the default variable and relates to remittances given in the form of cash from a male child living in the same location as the household and is positively significant. When the remittance is given in the form of food, this affects the elasticity negatively, while remittances in the form of goods are estimated to have a higher correlation than cash remittances. The sex of the giver is statistically insignificant. The relationship of the giver to the household head matters. Estimated elasticities are all higher than for the child, with parents having the largest correlation with living standards, followed by remittances from a non-relative, other relative, spouse and

sibling. The location of the giver also matters with a particularly large correlation between expenditures and overseas remittances.

### **3. General discussion**

There are some precautions with interpreting GLSS remittance data and some gaps that these data leave unanswered that we would like to discuss based on some preliminary results from the Ghana Transnational Networks (henceforth referred to as Ghana TransNet) research program. Quantitative results are not yet final and subject to change but they are used to indicate some general patterns of which we are already confident. The program studied remittance flows within 30 networks of Ghanaian migrants based in The Netherlands from June 2003 to July 2004. It asked migrants over the one-year period about all remittances they sent and received to and from their family and friends in the rest of the world. Concomitantly, those people with whom they transacted who were based in Ghana were interviewed about those same transactions to gain insights into how remittances were used. While the sample is not statistically representative, the in-depth character of the study helps to elucidate some of the dynamics of remittances and gives us indications as to how to interpret results from the GLSS.

The first point concerns the interpretation of amounts remitted. The GLSS survey only covers transfers that are intended for the recipient of the remittance and therefore underestimates the total amount of remittances received from overseas. The GLSS questionnaire asked receivers of remittances how much they received and from where. This means that remittances sent from migrants overseas for building their own houses or for investing in their own businesses will not be registered by the GLSS as the direct beneficiary of that remittance is the migrant him or herself who will most likely have been overseas at the time of the interview and thus does not appear in the GLSS sample. Indeed, if we use GLSS data to estimate total overseas remittances, we get a total of US \$152 million (average value of remittances received from overseas (US\$ 452)  $\times$  the percent of receivers of overseas remittances (8%)  $\times$  the number of households in Ghana in 1999 (4.210 million)), which is much lower than the conservative estimate of the World Bank cited in the introduction. The GLSS figure relates to 1999 while the World Bank estimate is for 2003 but the difference is

too large to be explained by an increase in remittances over four years. Data from the Ghana Transnational Networks indicate that remittances sent for a migrant's own house construction and/or own business investment can amount to 16% and 28% of total remittances sent, respectively (Table 9). This result also concurs with more qualitative data collected in Accra with regards to migrants' investments (Smith and Mazzucato 2004). While these are still preliminary results, they indicate that the GLSS figures greatly under report total remittances received from overseas.

Table 9 Characteristics of remittances based on data from migrants (2003/2004) <sup>a</sup>

	Percent of total remittances
<i>sent for:</i>	
own housing	16
own business	28
funeral ceremonies and development projects	11
<i>sent to:</i>	
urban	49
rural	32
unknown	18
rest of world	1
<i>sent unregistered:</i>	
share sent through people traveling	64

Source: Ghana Transnational Network, monthly transactions data 2003-2004

Notes: <sup>a</sup> Data are preliminary and subject to change.

A second point is that remittances are also sent for purposes that do not benefit one single individual or household and therefore do not get recorded in the GLSS as the survey asks household heads what remittances they or their household have received. Two cases of such type of remittances are those sent for funeral ceremonies and community development projects. Data from the Ghana TransNet program indicate that remittances for funerals and development projects are often carried in cash by migrants traveling to Ghana and therefore they do not get registered. Furthermore, these remittances get spent directly in all sorts of businesses and services and therefore are never 'received by an individual or household' as GLSS asks. In the case of funeral ceremonies migrants spend the money on the purchase of a coffin, hospital and morgue fees, transport costs, musical entertainment and food offered at the ceremony, video productions, material for funeral clothing, printing services and the like (Mazzucato et al. 2004). In the case of development projects, funds and goods go to village development committees or directly to the benefiting institution such as a hospital. Data from the Ghana TransNet program indicate that remittances for funerals and development projects amount to 11% of total remittances sent, therefore,

again, leading to an under estimation of remittances by GLSS data as well as national accounts data.

A final point is that remittances from abroad most likely have spin-off effects that are not captured in the GLSS data, which may lead to an over estimation of remittances from within Ghana and an under estimation of remittances from abroad. Data from the Ghana TransNet research program indicates that remittances are often sent with no particular use intended by the migrant. A migrant will say, “I just gave it for chop money” meaning that the recipient can decide how to spend it. At Christmas time many such gifts are made. The recipient, say a woman in Accra, may then choose to use her remittance by sending a portion of it to her mother in her hometown, for example. The GLSS survey would interview the mother and find out that she received a remittance from her daughter in Accra and count this as a within Ghana remittance, while it was only possible to do this because the daughter received a remittance from overseas. These kinds of spin-offs are not counted. Given that overseas remittances are the largest, they most likely provide possibilities for recipients to redistribute portions to other people in the country. Furthermore, the Ghana TransNet data show that most receivers of overseas remittances are in urban areas 49% (Table 9). This then potentially leads to GLSS estimates that are inflated for remittances from urban givers and are under estimated for remittances from abroad.

#### **4. Conclusions**

What can we conclude from the above analyses regarding the dynamics of overseas remittances? First, it is very difficult to get accurate estimates about remittances from abroad from national accounts data and the GLSS survey data. What is needed is a national survey that is specifically designed to capture detailed data about remittances, while concomitantly surveying Ghanaians in overseas destinations. Information should be collected not only about remittances accruing to individuals and households, as the GLSS currently does, but also about remittances spent for funeral and other ceremonies and community development projects. The Ghana TransNet research program is a first step in this direction and sheds light into some of the dynamics of remittances from overseas. Based on the results from this program, a survey can be designed to widen the sample. Anyone embarking in such a survey should be warned that it will be a time-intensive exercise as migration is a sensitive

issue for both the receivers and the senders and getting reliable data will entail gaining the trust of respondents. In the case of Ghanaians overseas, this is particularly the case as a representative sample will require including undocumented migrants who are naturally cautious with any data collection exercise. Furthermore, getting a matched sample of migrants and those back home to whom they remit will also take time as tracing people in a country like Ghana, where people are often on the move, is particularly challenging. As an indication, in the Ghana TransNet program, with a sample of only 30 networks, the setting-up phase of identifying and locating members of these networks to interview lasted 10 months (September 2002-June 2003).

Second, international remittances are the largest source of remittances, comprising 41% of the total value of transfers. Furthermore, remittances and living standards are significantly correlated. The form of the remittance, and whom and where it comes from are of importance. In particular, remittances from overseas are the most highly correlated with per capita expenditures, followed by those from parents and non-relatives of the household head.

Third, remittances are geographically unevenly distributed. The Ashanti, Eastern and Greater Accra regions receive most remittances both from domestic as well as foreign sources. The northern part of Ghana, instead, receives a negligible amount of remittances.

Fourth, in the hype around overseas remittances, it is important not to lose sight of the fact that many transfers to Ghanaian households come from locations within Ghana. In particular, as indicated also by Coulombe and McKay (2004), transfers from Ghanaian urban locations constitute an important source of transfers, especially those from Accra. The question that arises, however, is how many of these transfers are indeed a spin-off of transfers made from overseas to urban locations. Indeed, preliminary results from the Ghana TransNet research program that follows the flow of cash transfers throughout Ghanaian migrants' networks indicates that many overseas transfers are made to urban areas and then get distributed to other locations in Ghana. Another important national source are those transfers that take place within the same town or village as where the household is located. This indicates that locally based social networks are still important for Ghanaian households today.



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