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Remittances and Household Expenditure in Rural Nigeria

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Abstract

This paper examines the relationship between remittances and household expenditures in rural Nigeria by using the 2004 living standard survey to analyze how the receipt of domestic remittances (from within Nigeria) and foreign remittances (from abroad) affects the marginal spending behaviour of households on various consumption and investment goods. Expenditures were categorized into six namely food, education, housing, health, consumer goods and others. Results show that households receiving remittances spend less at the margin on consumption of food, consumer goods and durables than do households receiving no remittances. The analysis further shows that a large amount of remittance money goes into education. At the margin, households receiving domestic and foreign remittances spend 45 and 58 percent more, respectively, on education than do households with no remittances. Like other studies, this paper finds that remittance-receiving households spend more at the margin on housing.

JEL- Classification: F36, F15, G11, G12.

Keywords: *Remittances, Household expenditures, Consumption and investment goods, Marginal spending, Rural Nigeria*

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Introduction

As globalization has eased labour and capital mobility, remittance flows have increased immensely to become the second source after Foreign Direct Investment (FDI) of external funding for developing countries. Remittances are defined as the portion of

foreign migrant workers' earnings sent back from the country of employment to the country of origin. The growing importance of remittances as a source of foreign exchange is reflected in the fact that remittance growth has outpaced private capital flows and Official Development Aid (ODA) over the last decade going up from 31.2 billion USD in 1990 to

166.9 billion USD in 2005. This phenomenon has turned great attention to the causes and effects of foreign migration and remittances, both in the migrant source and destination country. Earlier literature on remittances has emphasized their negative impacts and cautioned against the possible damaging effects of labour migration and remittance sending, arguing that remittances, being compensatory, are mainly spent on consumer goods instead of productive investment and thus create a culture of dependency which undermines the prospects for development. According to Adams (2005), several interrelated factors seem to be responsible for this dim view of the impact of remittances on economic development. On a most basic level, since decisions on how to spend remittances are made by thousands (if not millions) of individual households, it is difficult to establish exactly how these monies are used. Much of the literature in this area thus tends to be anecdotal, rather than empirical. At the same time, household budget surveys, which represent the best possible source of information about how remittances are spent, are often poorly designed. Oftentimes, these household surveys do not even include questions about remittances. Moreover, the limited numbers of surveys that do ask questions about remittances typically ask “naïve” questions about how these monies were spent or used. Since remittances are fungible like any other source of income, simply asking respondents about how remittances were spent is not enough. Remittances that are not being spent directly on investment may well have freed other resources for expenditures on investment. Third, the small handful of empirically-based studies that do exist on remittances and economic development are often based on small, unrepresentative household samples (Ratha, 2004).

Nigeria is the single largest recipient of remittance in sub-Saharan Africa (Maimbo and Ratha, 2005). Nigeria receives between 30% and 65% of remittance to the region and 2% of global flow (Orozco, 2003). Recently, development practitioners have viewed remittances as having an important role to play in the development efforts of Nigeria. This opens up a debate about possible mechanisms that could be developed or improved to maximize the positive development impacts from remittances.

Studies on Impact of remittances on household expenditure in Nigeria have focused more on household housing investments in eastern part of Nigeria (e.g Osili, 2004) but did not address the other categories of expenditure and the peculiarities of rural sector. It may be interesting to see as well whether households receiving remittances make unnecessary spending such as vices and luxuries, more or invest them in education, housing and health. None of the recent studies in this area has included these expenditure categories in their research. The essence of looking into these is that if households tend to allocate more on luxuries, then remittances may produce dependency and efforts to make long-term improvements by the households may not be achieved.

The purpose of this paper is to extend the debate concerning how remittances are spent or used and their impact on economic development by using the Nigeria Living standard Survey 2004 datasets. The results of this survey are used to compare the marginal spending behaviour of three groups of households: those receiving no remittances, those receiving domestic remittances (from Nigeria) and those receiving foreign remittances (from the other countries). Since all survey households are separated into one of these three groups, it becomes possible to compare the marginal budget shares of

remittance- and non-remittance receiving households to various categories of consumption and investment goods.

2. Literature review

There are evidence showing that remittance incomes are expended largely on the purchase of household's basic necessities and consumer goods (Lipton, 1980; Reichart, 1981; Rubenstein 1983; Weist, 1984). Recent research, on the other hand, shows that remittance incomes are treated as a transitory income that prompts receiving households to invest such incomes to productive activities. Conway and Cohen (1998) have distinguished expenditures into consumptive and productive expenses. Consumptive expenses include family maintenance of food, clothing, and medicines, fixed capital stock like building homes, and property improvement, and precautionary savings to avert effects of shocks. Fixed capital expenditure reinforces the return commitment of migrants. Productive investments include flexible human capital stock such as education and health, business enterprises, and savings for future and interest accumulation.

Adams (1998), have analysed the effect of remittances on rural asset accumulation in Pakistan. The author argued that with transitory income streams like remittances, the marginal propensity to invest of remittance-receiving households increase. The model, using a five-year longitudinal data from rural Pakistan, indicates that foreign remittances have become a reliable source of capital. Recipients invested their remittances in land purchase and/or development of small-scale enterprises or farming operations (Conway and Cohen, 1998). Edwards and Ureta (2003) show that remittances lessen school dropout rates in El Salvador. The study by De and Ratha (2005) finds that remittance

flows improves the weight of Sri Lankan children below five belonging to female-headed household. Yang (2005) found that positive migrant shocks in the Philippines result in greater child education, a reduction in the incidence of child labour, higher educational expenditures in the migrant's household, and increased participation in entrepreneurial activities. stronger statistical effect on asset accumulation than total labour income. This is because households tend to treat foreign remittances as transitory income. The paper also finds that external remittances have a positive and significant effect on accumulation of rain-fed and irrigated land, while domestic remittances do not have significant impact on the accumulation of any rural asset. In rural Egypt, migrant households have higher propensity to spend on housing, considered as a durable goods and most of the migrant investment goes to the purchase of land. Land is regarded as an investment since its value is not eroded by inflation and valuable investment for peasant migrants (Adams, 1991). Guatemala experience demonstrates that migrant households spend less on consumption expenditure than non-migrant households. Again, households view remittances as a temporary stream of income and are spent more on children's secondary schooling. A higher spending on household by the Guatemalans was also observed (Adams, 2005). Taylor and Mora (2006) supports the findings of Adams that remittance incomes are not disproportionately used up on consumption goods. The rural Mexican experience reveals that as total expenditure in households with migrants increase, the share of income used for investments also increase, while the share spent on consumption falls.

The relationship between remittance and household expenditures can be explained

theoretically by treating remittances as a source of income of the households receiving them. Traditional consumption models such as the lifecycle and permanent income theories of consumption state that the source of income doesn't matter in consumption behavior, as households tend to smooth consumption. Thus, we should expect that households receiving remittances behave like any other households with all other things the same. However, a number of recent studies discussed earlier have shown that household receiving remittances exhibited varying tendency to consume and invest compared to those that do not. Some of these studies that adopted behavioral approach also show that sources and amount of income both play roles in placing them in certain accounts. Since remittance is one source of income, then this study is quite similar to examining any difference on how households with various income sources spend them in certain commodities. However, since the survey does not ask how households spend income according to the sources, we could not put it this way. Moreover, since remittance income is fungible, it doesn't make sense to separate it and see how it is being spent because families spending remittances on consumption goods can devote other income to investments or vice versa. In understanding the household expenditure behaviour of remittance receiving households, it is important as well to look at the reason behind sending remittances. Remittances are one of the direct effects of labour migration. The new economics of labour migration views migration as a risk-minimization strategy of the family by diversifying sources of income saying that remittances are motivated by altruism or concern of the remitter for their families receiving the remittances (Lucas & Stark, 1985). The social network theory on the other hand suggests that there is a social role that

remittances play since the exchange happens between members of a social network (Portes, 1995). It may be that the senders are accumulating social obligations from the receivers or that those receiving them may reciprocate remittances through say, services to their family members. Remitters may be conforming to some social norms where they are made to believe sending remittance is what they are supposed to do. There is also the view that remittances are a repayment to non-migrant members for their support in the migrant's education (Lucas & Stark, 1985). Understanding such motivations to remit is important in studying the way households receiving remittances actually spend their income. If the remitter does expect something in return like enjoying the investments made out of the remittance when he gets back to his place of origin, then the motivation is economic in nature. When the motivation is economic, then there is more reason to believe that this may be spent in more productive consumption like investing in entrepreneurial activities or education. On the other hand, if the reason for remitting is part of a social norm, then there is likely to be more conspicuous consumption than productive investment.

3. Methodology

3.1 Data

The data used in the study was basically secondary sources, mainly from the Nigeria Living Standards Survey (NLSS) conducted by Nigeria Bureau of Statistics (NBS) across the country (NBS, 2005). For the purpose of this study, the secondary data were stratified into rural and urban sectors, while data for the rural household only was used for analysis. The dataset provides detailed records on household expenditure, household income

profile, demography, education, health, employment and time use, housing, social capital and community participation, agriculture, non-farm enterprise, credit, assets and saving, remittances and household income schedule and household characteristics. The files containing the remittance variables were merged with the files containing the household roster variables and other socioeconomic variables used for the analysis. All the 14,512 rural households included in the NLSS were used for this study.

3.2 Method of analysis

To analyze the marginal expenditure patterns of remittance-receiving and non-receiving households, Proper functional form for the econometric model following Adams (2005) was adopted. In adopting the functional form, we ensured that, one, it provided a good statistical fit to a wide range of goods, including food, housing and education; second, it has a slope that is free to change with expenditure due to the focus on expenditure – consumption relationship; third, it does not impose the same slope (or marginal Budget share) for all levels of expenditure. Thus, the functional form mathematically allows for rising, falling or constant marginal propensities to spend over a broad range of goods and expenditure levels. Lastly, it conforms to the criterion of additivity such that sum of the marginal propensities for all goods equal unity. The model can be expressed by :

$$C_i = \alpha_i + \beta_i EXP + \gamma_i (EXP)(\log EXP) + \sum_j j(C\mu_{ij})(Z_j) + \lambda_{ij} (EXP)(Z_j) \quad (1)$$

In semi-log ratio form, this is equivalent to:

$$C_i / EXP = \beta_i + \alpha_i / EXP + \gamma_i (\log EXP) + \sum_j j[(\mu_{ij})Z_j / EXP + \lambda_{ij}(Z_j)] \quad (2)$$

The inclusion of various household characteristics variables in equation (2) is important, because it introduces more flexibility in the way that marginal budget shares can vary by household type. From equation (2) the marginal and average budget shares for the *i*th good (the MBS_i and ABS_i , respectively) and the expenditure elasticity (ξ_i) can be derived as follows:

$$MBS_i = \frac{\partial C / \partial EXP}{C} = \beta_i + \gamma_i (1 + \log EXP) + \xi_i [(\gamma_{ij})(Z_j)] \quad \dots (3)$$

$$ABS_i = C_i / EXP_i \quad \dots \dots \dots (4)$$

$$\xi_i = MBS_i / ABS_i \quad \dots \dots \dots (5)$$

To Estimate equation (2), the various household characteristics variables need to be specified and identified. Therefore, let *Hs* be the variable for family size, *AGEGD* be the variable for age of household head, *CHID 5* (Number of children below age 5) the variable for number of children, *PRYED* is number of household members over age 15 with primary education, *SECED* is number of household member over age 15 with secondary education, *UNIVED* is number of household members over age 15 with higher (University) education. In addition, since geographic region may affect expenditure pattern, let *REG* (region) represent a set of six regional dummy variables. Also let *DOREM* be the dummy variable for the receipt of domestic remittances and *FOREM* be the dummy variable for the receipt of foreign remittances. The complete model to be estimated is then:

$$\begin{aligned} \frac{C_i}{Exp} = & \beta_i + \frac{\alpha_i}{(Exp)} + Y_1(\log Exp) + Y_2 DOREM \\ & + Y_3 (DOREM)(\log EXP) + Y_4 FOREM \\ & + Y_5 (FOREM)(\log EXP) \\ & + \mu_1 HS / EXP + \lambda_1 HS + \mu_2 AGEHD EXP \\ & + \lambda_2 AGEHD + \mu_3 CHID_3 / EXP + \lambda_3 CHID_3 \\ & + \mu_4 PRYED EXP + \lambda_4 PRYED + \mu_5 SECED EXP \\ & + \lambda_5 SECED + \mu_6 UNIVED EXP \\ & + \lambda_6 UNIVED + \delta_1 AR + \delta_2 \sum_{j=1}^6 \lambda_j REG_{j+ai} \quad \dots \dots \dots (6) \end{aligned}$$

share for the i th good (MBS_i) can be derived by:

$$\text{(When DOREM, FOREM} = 0) MBS_i = \text{equation (2)} \dots\dots\dots (7)$$

$$\text{When DOREM} = 1) MBS_i = \beta_1 + Y_2 + (Y_1 + Y_3)$$

$$[(1 + (\text{DOREM}) (\log \text{EXP}))]$$

$$+ \sum_j [(Y_{ij}) (Z_j)]. \quad (8)$$

$$\text{(When FOREM} = 1) MBS_i = \beta_1 + Y_4 + (Y_1 + Y_5)$$

$$[1 + (\text{FOREM}) (\log \text{EXP})]$$

$$+ \sum_j [(Y_{ij}) (Z_j)] \dots\dots\dots (9)$$

where

EXP = total annual per Capita household expenditure.

C_i = annual Per Capita household expenditure on one of i th expenditure categories.

DOREM = Domestic remittances dummy variable (1 if household receives Domestic remittance, 0 otherwise).

FOREM = Foreign remittances dummy variable (1 if household receives Foreign remittances, 0 otherwise).

In equation (6), we enter the dummy variables for the receipt of Domestic and Foreign remittances (DOREM and FOREM) separately, which linearly interact with (log EXP) affecting the Intercept and the slope of Engel functions.

Marginal budget share estimates were computed from equation (3) to obtain budget share of households- receiving domestic remittances, receiving foreign remittances and receiving no remittances for different categories of goods. The marginal Budget

4. Results and discussion

4.1 Rural households expenditure and budgeting pattern

Table 1 presents a summary of expenditure category as contained in the NLSS 2004 survey dataset. The table shows six categories of items households expend income on. These include food, health, education, consumer goods/durables, housing and others for which description and example of commodities consumed by the household were also shown. For example, under food expenditures category, there were purchased and non-purchased foods items. Whereas the purchased foods items included bread, milk, butter, fruits and egg that of non-purchased items included own production, gifts and social programme.

Table 1: Expenditure categories and description of items consumed by households in Nigeria

Category	Description	Examples
Food	Purchased food	Bread, milk, butter, sugar, g/nut oil, fruits and egg.
	Non- purchased food	Food from: own production, gifts, social program and donations.
Health	Health expenses	Hospitalization, Doctor's fees, test, medicine, x-ray, contraceptives
Education	Educational expenses	School fees, shoes, bags, uniform, transportation, books.
Consumer goods/durables	Consumer goods	Fabric, shoes, Clothing, furniture, car, annual use value of stove, refrigerator, phone bill, cigarette
	Household durables	
Housing	Housing value	annual use value of housing (calculated from rental payments or imputed values)
Others	Household services	Water, gas, electricity, maids
	Transport, communication	Bus and taxi fees, internet, postage, gasoline. Waste Disposing Charges, Land use charge, Permits, legal fees, jangali.
	Taxes and professional fees	

The average budget shares computed from equation (4) to assess the budgeting pattern of households are presented in Table 2. The table show that on average, there was no significant difference in the the budget pattern of the households on all the expenditure

categories except on housing where household receiving domestic remittances was about 23% higher in budget allocation to this item than other households.

Table 2: Average budget shares on expenditure for non-remittance and remittance-

receiving households			
Expenditure Category	Households receiving no remittances (N=12808)	Households receiving domestic remittances (N=1608)	Households receiving foreign remittances (N=96)
Food	0.381	0.370	0.376
Health	0.173	0.168	0.181
Education	0.046	0.051	0.052
Consumer goods/durables	0.042	0.043	0.047
Housing	0.161	0.201	0.174
Others	0.184	0.168	0.178
	1.000	1.000	1.000

4.2 *Marginal expenditure pattern of rural households*

Equation (6) was estimated in two ways: first, with both remittance variables for the receipt of domestic or foreign remittances; and second, with no dummy variables. For the two ways the model was estimated for each of the six categories of expenditures: food, consumer goods/durables, housing, education, health and other using the ordinary least squares regression method. Tables 3 and 4 show the results with both remittance variables and without remittance variables respectively. Since the focus here is on understanding how remittances affect household expenditure, we will concentrate on the results in Table 3 for the interactive term: domestic (or foreign) remittances times (or multiplied by) log of total annual per capita household expenditures.

From Table 3 the interactive term for both remittance variables – (DOREM)(log EXP) and (FOREM)(log EXP) was statistically significant in 4 of 12 cases. With respect to Domestic remittances, when the relevant

coefficients [(logEXP) and(DOREM)(logEXP)] were summed up to arrive at the full expenditure relationship, the results show that households receiving Domestic remittances spend less on food, and more on consumer goods/durables, housing, health and other. With respect to foreign remittances, when the relevant coefficients [(logEXP) and (FOREM)(logEXP)] were added up, the results were identical to those for domestic remittances.

While trying to compare the expenditure behaviour of three groups of households namely those receiving no remittances, those receiving domestic remittances and those receiving foreign remittances, results obtained equation (6) was used to calculate marginal budget shares for these groups of households for each of the six categories of expenditure. Seven households that were reported to have received both domestic and foreign remittances were however, counted on both sides. Thus it becomes possible to identify at the margin

how the receipt of domestic or foreign remittances affects the expenditure patterns of households in Rural Nigeria. The results are shown on Table 5.

The marginal budget shares for the households on the various categories of expenditure (Table 5), shows that first, households receiving remittances spend less at the margin on food than non-remittance receiving households. At the margin, households receiving domestic and foreign remittances spend 11.9 and 14.8 per cent less, respectively, on food than do non-remittance receiving households. Second, households receiving remittances spend more of their increments to expenditure on housing than do non-remittance receiving households. The percentage increases for marginal spending on housing are 15.3 and 2.2 per cent respectively for households receiving domestic remittances and foreign remittances. Like other studies, this suggests that remittance-receiving households are devoting much of their increments to expenditure on housing (Osili, 2004 and Adam, 2005). From the standpoint of the economy as a whole, these expenditures on housing represent consumption expenditure. However, from the standpoint of the individual migrant, these expenditures on

housing represent investment to the extent that they provide some expected future rate of financial return. Third, while the absolute levels of expenditure are quite small, remittance-receiving households are spending considerably more at the margin on education. The percentage increases for marginal spending on education, which are the largest in the table, are 45.2 per cent for households receiving domestic remittances and 58.1 percent for households receiving foreign remittances. These large marginal increases in spending on education are important because increased expenditure on education can raise the level of human capital in the country as a whole. Since the level of human capital is an important component of economic growth, increased expenditure on education by remittance-receiving households may provide the means for raising the rate of economic growth in a country. On health, households receiving domestic remittances spent more at the margin when compared to other categories of households. The percentage increase for marginal spending on health for households receiving domestic remittances is 21.7 per cent. No explanation could be found in literature to corroborate this.

Table 3: OLS estimates of household expenditure in rural Nigeria, with remittance variables

Variables	Food	Consumer goods, Durables	Housing	Education	Health	Other
Reciprocal of Total per capita Expenditure(α_i /EXP)	-386.434 (-9.89)**	-1.786 (-0.09)	151.211 (5.57)**	28.312 (1.67)	49.324 (3.87)**	214.675 (9.546)
Log total annual per capita household expenditure (log EXP)	-0.114 (-18.89)**	0.059 (13.65)**	0.011 (3.34)**	-0.013 (-0.53)	0.008 (8.56)**	0.041 (11.86)**
Domestic Remittances dummy (DOREM)	0.001 (0.23)	0.008 (2.34)*	-0.090 (-2.88)**	-0.011 (-0.58)	-0.011 (-0.89)	0.047 (-1.45)
Domestic Remittances dummy x total household expenditure (DOREM)(log EXP)	-0.003 (-0.42)	-0.091 (2.27)*	0.101 (3.15)**	0.001 (0.88)	0.002 (1.06)	-0.006 (-1.51)
Foreign Remittances dummy (FOREM)	-0.0432 (-2.23)*	0.005 (0.18)	0.061 (1.33)	-0.140 (0.78)	0.007 (0.53)	0.087 (1.97)*
Foreign Remittances dummy x total household expenditure (FOREM)(log EXP)	0.032 (1.68)	0.007 (0.01)	0.057 (1.10)	0.003 (1.01)	0.004 (0.89)	-0.009 (-1.97)*
Household size (HS)	0.002 (0.32)	0.007 (5.89)**	-0.016 (-13.87)**	0.110 (18.67)**	-0.001 (-1.98)*	-0.003 (-4.13)**
Household size/total expenditure	17.211 (4.56)**	-4.448 (-1.24)	11.106 (3.39)**	-15.544 (-9.66)**	-0.086 (-0.08)	-8.111 (-3.77)**
Age of household head(AGEHD)	-0.002 (-0.81)	-0.002 (-13.05)**	0.001 (14.53)**	-0.001 (-8.67)**	0.001 (3.18)**	0.001 (3.12)**
Age householdhead/total expenditure	0.651 (1.12)	0.679 (5.06)**	-1.904 (-8.32)**	2.765 (3.78)**	-0.762 (-0.99)	-0.356 (-0.77)
Number of children in household less than 5 years (CHILD5)	-0.001 (-0.28)	0.007 (2.47)*	0.012 (4.67)**	-0.009 (-20.86)**	0.008 (7.65)**	0.007 (2.78)**
Number children/total expenditure	3.223 (1.12)	-13.811 (-2.10)*	-13.081 (-1.91)	43.445 (11.89)**	-14.550 (-4.88)**	-10.315 (-1.36)
Number of children with primary education (PRYED)	-0.007 (-2.57)*	0.009 (4.86)**	-0.001 (-0.58)	0.006 (-5.55)**	0.013 (2.54)*	0.013 (1.21)
Number primary education/total expenditure	-8.767 (-1.24)	-12.562 (-2.53)*	8.233 (2.23)*	9.266 (2.98)**	-0.723 (-0.65)	3.546 (0.71)
Number of household members with secondary education (SECED)	-0.015 (-8.21)**	0.006 (3.91)**	0.001 (0.05)	0.011 (9.85)**	0.003 (3.89)**	0.001 (1.12)
Number household members with secondary education/total expenditure	-47.678 (-3.78)**	-17.634 (-1.56)	20.640 (1.99)*	36.543 (6.37)**	-3.324 (-0.68)	11.666 (1.22)
Number of household members with university education (UNIVED)	-0.047 (-6.66)**	0.008 (2.12)*	-0.002 (-0.89)	0.098 (8.67)**	0.007 (3.61)**	0.006 (1.56)
Number university education/total expenditure	-43.233 (-29.23)**	-49.325 (-1.51)	57.444 (1.55)	8.111 (0.43)	8.112 (0.05)	-0.324 (-5.45)**
Constant	1.548 (24.15)**	-0.365 (-6.61)**	0.097 (2.35)*	0.056 (1.98)*	-0.138 (-0.78)	-0.324 (-6.62)**
Adjusted R ²	0.436	0.167	0.342	0.444	0.095	0.091
F-statistic	184.2	56.3	78.1	165.2	39.4	25.9

*Significant at the 0.05 level.

**Significant at the 0.01 level. N=14,512 households

Table 4: OLS estimates of household expenditure in rural Nigeria, without remittance variables

Variables	Food	Consumer goods, Durables	Housing	Education	Health	Other
Reciprocal of Total per capita Expenditure(α_i/EXP)	356.078 (-7.49)**	2.341 (-0.06)	152.513 (5.75)**	-23.423 (-1.71)	53.765 (4.67)**	200.567 (7.89)**
Log total annual per capita household expenditure (log EXP)	-0.211 (-21.22)**	0.056 (11.67)**	0.032 (3.11)**	-0.001 (-0.09)	0.016 (8.67)**	0.014 (12.11)**
Household size (HS)	0.000 (0.05)	0.009 (8.43)**	-0.016 (-17.44)**	0.013 (-22.67)**	-0.001 (-3.24)**	-0.005 (-2.89)**
Household size/total expenditure	18.343 (4.88)**	-3.333 (-1.35)	12.642 (4.13)**	14.100 (-8.07)**	0.046 (0.02)	-9.476 (-3.35)**
Age of household head(AGEHD)	-0.003 (-1.21)	0.002 (-13.39)**	0.001 (14.14)**	-0.002 (-7.08)**	0.001 (3.61)**	0.002 (2.35)*
Age householdhead/total expenditure	0.555 (1.25)	2.057 (6.03)**	-2.051 (-7.64)**	0.621 (4.08)**	-0.046 (-0.38)	-0.713 (-0.62)
Number of children in household less than 5 years (CHILDS)	-0.001 (-0.13)	0.007 (2.32)*	0.010 (4.54)**	-0.029 (-23.79)**	0.008 (9.01)**	0.009 (2.73)**
Number children/total expenditure	1.377 (0.13)	-13.981 (-1.93)	12.201 (-1.92)	45.879 (12.33)**	-15.003 (-4.72)**	-8.222 (-1.56)
Number of children with primary education (PRYED)	-0.017 (-2.83)**	0.011 (4.30)**	0.001 (-0.02)	-0.003 (6.22)**	0.006 (2.78)**	0.004 (0.33)
Number of children with primary education/total expenditure	22.152 (0.68)	-7.422 (-2.55)*	13.404 (2..17)*	22.809 (2.86)**	0.655 (-0.36)	3.584 (0.47)
Number of household members with secondary education (SECED)	-0.025 (-9.17)**	0.008 (3.98)**	0.001 (0.18)	0.022 (9.34)**	0.004 (2.98)**	0.001 (0.66)
Number secondary education/total expenditure	-47.561 (-3.77)**	-16.263 (-1.33)	18.333 (1.57)	37.276 (7.21)**	-3.544 (-1.03)	10.510 (1.67)
Number of household members with university education (UNIVED)	-0.015 (-5.87)**	0.007 (2.02)*	-0.004 (-1.61)	0.031 (8.53)**	0.008 (4.01)**	0.008 (0.768)
Number household members with university education/total expenditure	-35.685 (-0.86)	-39.506 (-1.56)	49.178 (1.77)	9.277 (0.45)	-0.203 (-0.01)	27.999 (0.96)
Constant	1.568 (26.27)**	-0.364 (-6.64)**	0.079 (2.01)*	0.127 (1.11)	-0.152 (-5.71)**	0.304 (-5.34)**
Adjusted R ²	0.512	0.226	0.301	0.367	0.099	0.088
F-statistic	256.4	98.3	78.5	37.7	35.8	29.7

N=14,512 households *Significant at the 0.05 level. **Significant at the 0.01 level.

Table 5: Marginal budget shares on expenditure for non-remittance and remittance-receiving households, rural Nigeria

Expenditure Category	Households receiving no remittances (N=12808)	Households receiving domestic remittances (N=1608)	Households receiving foreign remittances (N=96)	Percentage Change (No Remittances vs. Domestic Remittances)	Percentage Change (No Remittances vs. Foreign Remittances)
Food	0.388	0.342	0.332	(-11.92)	(- 14.77)
Health	0.205	0.202	0.231	(-0.50)	+ 12.81
Education	0.185	0.213	0.189	+15.30	+ 2.18
Consumer goods/durables	0.033	0.047	0.051	+45.16	+58.06
Housing	0.025	0.028	0.025	+21.74	--
Others	0.175	0.188	0.179	+ 8.67	+ 2.31
	1.000	1.000	1.000		

Notes: Some figures do not sum to unity because of rounding. All expenditure categories defined in Table1.

5. Conclusion

This paper has used a large, nationally representative household survey from Rural Nigeria to analyse how the receipt of domestic remittances (from within Nigeria) and foreign remittances affects the marginal spending behaviour of households on various consumption and investment goods. Three key findings emerge.

First, contrary to other studies, this analysis finds that the majority of remittance earnings are not spent on consumption goods. In fact, at the mean level of expenditure, this study finds that while households without remittances spend 58.9 per cent of their increments to expenditure on consumption goods – food and consumer goods, durables – households receiving domestic and foreign remittances spend 54.2 and 55.9 per cent, respectively, on consumption goods.

In other words, at the margin, households receiving remittances actually

spend less – not more – on consumption than do households without remittances. There is no evidence here that households receiving remittances tend to “waste” their remittance earnings on “conspicuous” consumption.

The second finding follows closely from the first. This study finds that the marginal spending behaviour of households receiving remittances is qualitatively different from that of households which do not receive remittances. Instead of spending more on consumption, households receiving remittances tend to view their remittance earnings as a temporary (and possibly uncertain) stream of income, one to be spent more on investment than consumption goods. For example, while the absolute levels of expenditure are small, households receiving remittances in this study spend considerably more on education. At the margin, households receiving domestic and foreign remittances spend 45.2 and 58.1 per cent more,

respectively, on education than households which do not receive remittances. Not only does this increased marginal spending on education underscore the way that households prefer to invest – rather than to spend – their remittance earnings, but it also shows how remittance expenditures can be productive for the economy as a whole. Increased expenditure on education by remittance-receiving households can help raise the level of human capital in the country as whole, thereby boosting the rate of overall economic growth.

Third, this analysis confirms other studies' findings concerning the amount of remittance money that goes into housing. At the margin, households receiving domestic and foreign remittances are spending 15.3 and 2.2 per cent more, respectively, on housing

than those households which do not receive remittance. From the standpoint of the economy as a whole, these increased expenditures on housing represent consumption expenditure. However, from the standpoint of the individual migrant, these increased expenditures on housing represent investment when they provide some expected future rate of financial return. Moreover, increased expenditures on housing are productive for the economy as a whole because they have important second- and third-round effects on wages, employment and business opportunities. As households receiving remittances spend more at the margin on housing, this creates new income and employment opportunities for labourers, and new business opportunities for merchants selling building supplies.

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