

Understanding Migrants' Remittances: Evidence from the U.S.-Nigeria Migration Survey

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1. OVERVIEW

Remittances, or transfers between international migrants and their origin families, are an important outcome of the migration process. According to official estimates, in 2006 remittances from overseas residents and non-resident workers to households in developing countries amounted to about \$200 billion. Based on these estimates, migrants' remittances have outpaced official development assistance and may be at levels comparable to foreign direct investment in many parts of the developing world. (World Bank, 2006)

International remittances are increasingly attracting the attention of policymakers not only because of their sheer volume but also because they tend to be less volatile than foreign direct investment and portfolio flows. Moreover, for a growing number of households in Latin America and the Caribbean, sub-Saharan Africa and Asia, remittances from migration may significantly impact household welfare by expanding the resources available to the origin household and by providing the household of origin with insurance against shocks.

It is important to emphasize that remittances are not a new feature of the migration experience. The New York Post Office estimates that between 1901 and 1906, approximately 12.3 million individual money orders were sent to foreign countries, with 50 percent of the dollar amounts going to Italy, Hungary, and Slavic countries.¹ According to the Immigration Commission, the sum of remittances to Italy totaled \$85 million in 1907.² Mirroring patterns at the turn of the 20th century, current U.S. migrants often maintain economic linkages with their origin communities, sending transfers to pay for the living expenses of family members back home and/or to provide support during emergencies and natural disasters. Migrants may also send transfers to purchase land, a business, or to build a home that could be occupied by the family or by the migrant in the event of return migration.

Despite the long history of international remittances and their increasing relevance in recent years, economic linkages between migrant and origin families are not well understood. One of the main challenges ahead is to uncover how and why transnational economic ties between migrants and their origin families are maintained, particularly in an era of rapid technological innovation, improved global communication, and enhanced transportation.

¹ Wyman, Mark (1993). Round Trip To America (Ithaca: Cornell University Press) , p.61

² Foerster, Robert (1919). The Italian Emigration of Our Times (New York: Russell & Russell), p.374.

My interest in international migration and remittance flows is partly academic, partly shaped by personal experience. I have witnessed first-hand the effects of international migration on families and communities in Nigeria and other parts of sub-Saharan Africa. For some origin families, remittances induced an expansion in economic and social opportunities. In some cases, migrants provided initial capital for family businesses and covered health and education expenses for origin family members; they also built houses in their communities of origin and contributed to community-development initiatives. Other international migrants, however, left no imprints of a sojourn abroad on their families or their communities in Nigeria.

I undertook the U.S.-Nigeria Migration survey to further develop existing theory and to provide new household-level evidence on how and why economic ties between international migrants and their families in origin countries are maintained over time and across large geographical distances. I was also interested in the extent to which migrants invest their savings in their country of origin and contribute to community-development projects in their origin communities. Many existing data sources provide a limited view of these research questions because they treat remittances in an aggregate fashion or assume that remittances are sent solely to support the consumption needs of the origin household. To my knowledge, the U.S.-Nigeria Migration Study is the first data set to provide a comprehensive picture of both international migrants and their home families; this study therefore represents an important contribution to the literature. Furthermore, this study provides household-level evidence on remittances that is often unavailable for many sending and receiving countries.

2. RESEARCH QUESTIONS

The research questions central to the U.S.-Nigeria Migration Surveys concern both people and locations. First, the flow of remittances across international borders suggests an enhanced notion of “household,” encompassing more than simply a group of people who share the same roof, or eat from the same pot. Although migrants reside in different and distant geographical locations, they continue to participate in family decision-making and the familial pooling of resources with far-away relatives. In this way, the study of remittances is related to a larger body of literature within economics and the social sciences that deals with private transfers within and outside of the family.

Second, international migration challenges the notion of space. Migrants often maintain strong economic and social linkages to their origin communities. Through both formal and less-structured methods, field research provided a unique opportunity to study the ties that tend to persist across transnational locations and the related process of sending transfers to family members in the country of origin. The costs of remitting are likely to be higher within the context of international migration. A central issue surrounding remittance behavior is the need to ensure the safe transfer of resources from the host country to the origin country. In low-income countries where financial systems are less-developed, immigrants have confronted the challenges of transferring resources between host and home countries by relying on a combination of formal (postal orders and wired transfers) and informal methods (pocket transfers and hometown institutions).³

A central research goal of the U.S.-Nigeria Migration Survey was to illuminate the motivations for migrants' remittances using a matched sample of migrant and origin households. Previous empirical work has dealt with the transfer of resources between the migrant and the origin family, using data on the migrant or using data obtained solely from the household of origin. However, economic theory suggests that a complete understanding of remittances and other intra-family transfers requires data on both sending and receiving households.

A second set of questions involved the impact of the migrant remittances in the home environment. Understanding how migrant remittances are used in the home environment is arguably complex because resource flows may be directed towards multiple recipients and end uses. In recent debates, policy makers and researchers increasingly have argued that the long-term impact of migrant remittances on economic development will depend on the end use of the remittances in the country of origin. A number of studies have emphasized that migrants' remittances can function as investment capital in the origin country (Woodruff and Zentino, 2001; Dustmann and Kirchamp, 2001; Mesnard, 2004).

Beyond the motivation for migrant's remittances, a third set of questions were also posed at the onset of the project. I was particularly interested in understanding the extent to which migrants' remittances were targeted towards development projects in the community of origin.

³ Cinel (1991) describes the problems associated with sending remittances among Italian emigrants to the United States. There were three methods of remitting to Italy: through the postal system, through returning migrants (friends or family members), or through a *banchista*. A *banchista* was an experienced immigrant who enjoyed a position of some stature in the host-community environment and typically channeled savings through Italian banks.

Migrants' hometown associations have assumed a highly visible role in the context of international migration. In addition to providing information about the social and political issues that affect their communities of origin, hometown associations can also play an instrumental role in mobilization of remittances from international migrants towards various community-development initiatives.

Nigerian immigration to the United States represents an interesting case environment in which to study these research questions. Nigerian migrants represent a new immigrant group in the U.S. The study of remittances and other transnational in the Nigerian environment provides a better understanding of immigrant settlement in the host country and enhances comprehension of the process of maintaining ties with communities of origin.

3. DATA COLLECTION

My research methodology involved the development of theory, data collection, and empirical analysis. My goal was to gather a unique data set that would provide information on both sides of the migrant-home family transaction. I recognized that high costs would be associated with collecting data on both migrants and their home families. Networks and contacts in both the origin country (Nigeria) and host country (U.S.) facilitated this type of data collection. Beginning in March 1997, I initiated field research designed to broadly investigate the economic ties that exist between migrants and their communities of origin. The U.S.-Nigeria Migration Survey consists of the following three components: (1) the migrant sample (2) the origin household sample, and (3) the hometown sample.

I collected the U.S.-Nigeria Migration Survey in two stages. In the first stage, I conducted surveys among the migrant sample in the United States. The migrant sample (or U.S. sample) is composed of 112 Nigerian migrant households in Chicago, Illinois. The second stage of fieldwork took place in Nigeria. During this stage, I surveyed 61 home families in Nigeria using the names and addresses supplied by the initial U.S. sample.

To provide a complete picture of the environment in which migrants' housing investment decisions are made, I also collected data on migrants' hometowns in southeastern Nigeria. Seventy-one hometowns, varying in terms of land area, population, urbanization, and level of development are included in this hometown sample.

3.1 The Migrant Sample

The scale of migration from sub-Saharan Africa to the United States has increased in the past two decades.⁴ Little is known about recent migration out of sub-Saharan Africa, and even less information exists about the economic ties maintained by these migrants in their origin countries. Nigeria's out-migrant population appears to preserve strong economic and social linkages to their respective home communities. However, a large share of transfers from Nigerians abroad take place through informal channels, and few accurate statistics on migrants' remittances and other economic linkages exist.

The first part of my field research involved the selection of a random sample of immigrant households. To obtain a random sample of Nigerian emigrants, I searched Chicago-area telephone listings by surnames and first names, selecting distinctly Ibo names.⁵ Each respondent in the U.S. sample completed a required information sheet identifying the head of their origin household and two other adult family members who would be available for interviews in Nigeria. To facilitate eventual location of and interviews with the home families of the initial survey respondents, I restricted my U.S. sample to the Ibo of southeastern Nigeria.⁶

3.1.2 The Migrant Survey Instrument

During the summer of 1996, I conducted preliminary field research among Nigerian emigrants in Chicago. This preliminary work involved the survey of remittance patterns and the construction of formal models of observed behavior. The goal of the migrant survey instrument was to provide a comprehensive data set on the economic linkages between migrants, their families, and their home communities. The formal models of observed behavior enabled me to develop a comprehensive questionnaire, which formed the basis for my research. The final U.S. sample questionnaire was developed after several iterations; poorly devised questions were

⁴ Some of the growth in African migration to the U.S. may be due to changes in U.S. immigration policy that increased the number of employment visas for skilled workers; another cause may be the introduction of the U.S. diversity visa program.

⁵ To draw a simple random sample from a telephone book, I identified 500 Nigerian family names from the Chicago telephone phonebook. These family names were numbered sequentially. A computer generated 120 numbers randomly from 1 to 500..

⁶ The Ibo are the third largest ethnic group in Nigeria.

revised or eliminated.⁷

The unit of analysis used throughout the study was the household. However, basic demographic data on age, sex, education, employment, U.S. migration experience, and networks were collected at the individual level. A household was defined as all family and non-family members who lived and ate in a particular household for at least six months out of the past year. This definition was expanded to include children of the head who were away at school but continued to receive financial support from the household being interviewed.

I maintained a relatively small U.S. sample size to ensure the collection of high-quality data. The small sample size allowed me to conduct personal interviews with each survey respondent and to develop the more qualitative aspects of the study.

Using the migrant survey instrument, I obtained information on the various methods that migrants use to transfer income to their home families and the types of remittances that were sent during the survey period.⁸ I also collected detailed information on the migrant's asset holdings in the country of origin and in the host country.

3.1.3 Representativeness of the Sample

The migrant sample contains detailed information on demographic variables, migration experience, remittances, and information flows.⁹ Table 1 summarizes the data on migrants' characteristics and also contains information, drawn from the microdata census sample of Nigerians in the United States, on the Nigerian population in the U.S. I have analyzed the 5% Integrated Public Use Microdata Sample (IPUMS) of Nigerians in the 1990 U.S. census and compare my sub-sample to the census sample, enabling me to identify any biases that may result from my sampling methods.

From Table 1, it is possible to determine the degree to which the Chicago sample is representative of the Nigerian population in the U.S. There are more than one million Nigerians

⁷ During the questionnaire revision stages, I received assistance from the Survey Design Laboratory at the University of Illinois at Chicago and Professor Greg Duncan at the Institute for Policy Research at Northwestern University.

⁸ The questionnaire also attempts to gather information about the amount of money remitted during a migrant's most recent trip to Nigeria. Trips "back home" constitute an important part of the experience.

⁹ The survey instrument on intra-family transfers was developed using the 1988 Panel Study of Income Dynamics of American Families (PSID) module on family transfers.

residing in the United States.¹⁰ Nigerians are a relatively new immigrant group to the United States: according to the 1990 U.S. census, about 68.6 percent of Nigerian emigrants entered the U.S. after 1979; only 2 percent of the sample immigrated prior to 1965.¹¹

Across basic demographic categories, the Chicago sample appears comparable to the microdata census sample of Nigerians in the United States. High rates of educational and occupational attainment are found in both samples. It is also important to note that migration experience variables in the Chicago sample closely mirror those of the national sample. The income and wealth data reveal the main differences. The mean household income in the Chicago sample is twice as high as the national microdata sample. Because income may be subject to measurement error, the migrant questionnaire includes detailed information on household expenditure, number of checks, and asset holdings. These alternate measures are also used to measure the migrant household's economic position.

3.2 The Origin Household Sample

The second component of my field research took place in Nigeria, during the summer of 1997. During this time, I conducted interviews among migrants' home families in Nigeria. The process of sample selection in Nigeria used the information provided by the initial U.S. respondents. Each U.S. migrant household specified the head of their origin household or a family member who would be available for interviews in Nigeria. The origin household sample consists of 61 families. The Nigerian component of the field research provides a unique opportunity to investigate the impact of origin household characteristics on the migrants' transfers and investment decisions.

3.3 The Matched Sample: Migrants and their Origin Households

In general, I encountered a high response rate on all parts of the questionnaire while conducting field work in Nigeria. The survey design was advantageous in eliminating the need for extensive personal introduction in most interviews. In many cases, the migrant in Chicago had already informed the origin family in advance that I would be contacting them upon my

¹⁰ This is a conservative estimate based on statistics provided in the 1996 *Statistical Yearbook of the U.S. Immigration and Naturalization Service*.

¹¹ Some obvious selection issues may exist. If earlier migrants (i.e., migrants prior to 1970) are more likely to have undertaken return migration, then earlier migrants would be underrepresented in the U.S. census.

arrival in Nigeria.

However, from the onset, it must be noted that the origin household sample offers only a subsample of the larger sample. A complete set of origin households would include all the home families of the initial U.S. migrant sample (N=112). One important question is whether this matched sample can be considered representative of the initial U.S. sample. In order to address this issue, I discuss the yield rate from the initial U.S. sample.

The relatively low yield from the initial U.S. sample can be explained by the difficulties associated with locating addresses and interviewing origin households. The yield rate varied considerably, depending on whether the origin family resided in an urban or rural area. In rural areas, where it was easier to find the respondents at home at the time of the interview and to locate the origin household identified by the migrant household, the yield rate was higher.¹²

In urban areas, it was often more difficult to establish contact with the origin household. In most cases, it was impossible to schedule an interview in advance, and, because in many urban areas in Nigeria, streets are unmarked, locating the origin household identified by the migrant household was less straightforward in urban areas than in rural areas. However, inquiries within the general vicinity proved useful in locating the residence of the origin household to be interviewed.

3.3.2 The Origin Household Survey Instrument

As in the U.S. component of the field research, the unit of analysis used in the Nigeria component of the fieldwork is the household. A household is defined as all family and non-family members who lived and ate in a particular household for at least six months out of the past year. This definition was expanded to include children of the head who were away at school but continue to receive financial support from the household being interviewed. The Chicago migrant typically designated the head of the origin household in Nigeria.

The questionnaire in Nigeria was finalized after a few iterations. The survey instrument design was guided by theory on transfer behavior as well as by insights obtained from household surveys in developing countries that included survey instruments on migration. Due to time constraints, it was not feasible to conduct an extensive pre-testing of the questionnaire.

¹² Villages in southeastern Nigeria usually lack street numbers or other identifiers; to locate families one must rely on inquiries within the village to identify the residence of a particular origin family.

However, steps were taken to verify that questions were appropriately worded and revised to ensure accuracy of the responses. The set of survey instruments included basic demographic and socio-economic data. From this section, I obtained information on the age, education, and occupational history of the origin household head and spouse. The origin household survey instrument also included measures of the origin household's assets and wealth. This survey instrument includes a detailed description of buildings (residential and non-residential) and land holdings owned by the household. In addition to describing asset holdings, this section collects information on the market value of the asset, year acquired, and the most important source of financing in order to provide a more complete view of the origin household's economic position.

From the origin household survey, I obtained an independent report on the total number of remittances received and also the types of remittances obtained in the survey period. The amount received by the origin household could be compared to the migrant's report on remittances sent to the origin family in the survey period. Fieldwork revealed that these reports were often similar. Since migrants frequently send remittances to multiple recipients or family members, it is important to note that transfers sent by the migrant may not be identical to the transfer received by a given origin respondent. A given origin respondent may receive only a portion of the total transfer sent by the family migrant in Chicago during the past year.¹³

3.4 The Hometown Sample

The hometown sample is drawn from the initial U.S. migrant sample. In addition to being asked to supply basic demographic data, migrants were requested to identify their town or village of origin, the local government area, and the state in which the hometown was located. The hometown refers to the migrant's community of origin which may or may not correspond to the place of birth. The hometowns in my sample are located in southeastern Nigeria. The dominant ethnic (and linguistic) group in this region of Nigeria is the Ibo (or Igbo).¹⁴

Furthermore, each of the hometowns in my sample lie within the tropical rain forest and savanna belt of Nigeria. Some of the hometowns are best described as rural areas, while others

¹³ Notably, the survey design does not allow us to control for the selectivity of migration decision. An alternative survey design that would involve selecting a random sample of origin family respondents and then tracking their family migrants would be very costly and difficult to implement within the context of international migration.

¹⁴ For an overview of the history of this region of Nigeria, see Isichei, Elizabeth 1976. A History of the Igbo People (London: Macmillan).

can be classified as semi-urban or, occasionally, urban areas. Since the 1940s, the number of urban centers in southeastern Nigeria has expanded rapidly. However, most migrants refer to their hometowns as “villages,” irrespective of the levels (or rates) of urbanization of the town. According to Okonjo (1970:86), “what amounts to a village varies from a few solitary huts or cluster of huts each with a fence around it to a teeming village with a fairly large number of houses.” Members of the village community often claim common ancestral descent.

Migrants’ transfers and investments occur in diverse environments. The hometown sample attempts to capture some of this variation. It includes population estimates and distances from the state capital and urban centers, as well as measures that capture development levels . Population estimates are based on the most recent census in Nigeria, conducted in 1991. The only other source of reliable information on population in Nigeria is the 1963 census. However, since the 1963 census was conducted, some town boundaries have changed, rendering the 1963 estimates less relevant.

The hometown sample also provides the road distance between the hometown and the state capital (measured in kilometers) and the distance between the hometown and a major urban area (measured in kilometers). These variables reflect variations in the level of urbanization across hometowns. Hometowns also differ in some important dimensions. Social amenities and infrastructure (such as schools, hospitals, paved roads, and electricity) are widely available in some hometowns but not in others. By including hometown development indicators, it is possible to investigate the role of the hometown attributes in the migrant’s transfer and investment decision.

4. DATA ANALYSIS

About 90 percent of migrant households in the U.S.-Nigeria Migration Survey report sending remittances in the survey year. From Table 2, the average amount remitted was about \$6000 in the survey year. Field research and data collection from the U.S.-Nigeria Migration Survey suggests that the migrants target their remittances towards various end uses. Three main categories of migrants’ remittances emerge: (1) transfers that are sent to the family of origin towards various ends (2) investment-related transfers or remittances that are sent to finance the migrant’s own investments in the country of origin, and (3) community transfers or remittances that are sent to support community-development projects in the migrant’s origin community.

The theoretical models suggest that all three classes of migrants' remittances can be modeled as a function of migrant and origin family characteristics, as well as hometown variables. In particular, I construct an indicator variable that captures whether a migrant sent a given type of remittance in the survey period. I also define continuous variables to measure total transfers to family members in the country of origin, investment-related transfers, and community-related transfers in the survey period. For example, family transfers are defined as the total remittances sent to the origin family. Similarly, investment transfers are defined as the sum of all investment-related remittances sent by the migrant to finance personal investments in origin country assets in the survey year. Finally, community transfers refer to the total remittances that are sent towards community development projects in the origin community.

In the empirical analysis, I examine the likelihood that a migrant has initiated a given type of transfer as well as the total transfer amount. The key variables used in the empirical analysis include migrant characteristics (age of household head, years of schooling, cumulative U.S. experience in months, number of Nigerian trips, per capita household annual income, and ownership of inherited land in hometown, origin family variables, and community of origin attributes.

In studying all three types of remittances – namely, family, community, and investment-related transfers – I examine whether the economic position of the origin household affects the migrants' decision to send a given type of transfer as well as the total amount transferred.¹⁵ Additionally, I investigate the relationship between the type of remittance and the migrant's economic position in the U.S. For example, I investigate whether higher income migrants are more likely to invest in the origin country and contribute to community development initiatives, other things being equal. Finally, I study the effect of hometown attributes on all three types of remittances..

Measurement Issues

A unique strength of the data used is that a matched sample of migrants and origin families is used, thereby overcoming problems that arise in existing empirical work. First, it is

¹⁵ Ravallion and Dearden (1988), Cox and Jimenez (1990) and Hoddinott (1994) report a positive coefficient on recipient's income. Other studies report a negative relationship between remittances and the income of the recipient (Kauffman and Lindauer, 1986; Ravallion and Dearden, 1988).

possible to control for both the characteristics of the migrant and the origin household, which reduces concerns about omitted variable bias.¹⁶ Second, it is possible to deal with the concern that current origin household income may be affected by past migrant transfers using detailed information on wealth and the timing of asset acquisition.

Third, the matched sample makes it possible to identify assets owned by the origin family as distinct from assets belonging to family migrants. Measures of origin family wealth may be contaminated if they include assets that are wholly or jointly owned by the migrant. Wealth data based solely on the migrant or the origin family report may lead to the inaccurate measurement of assets because the origin family may be responsible for managing migrants' assets (land, farm, or housing assets) while migrants reside abroad.

5. RESULTS AND INSIGHTS

The research findings presented in this section are based on original data collected by the author. The results and insights are based on fieldwork observation during a year-long period of field research in 1997 combined with more formal empirical analysis.

(i) *Migrants' Transfers to the Families and Savings*

A central question is how remittance flows will impact origin households in sending regions. The impact of remittances on economic development will depend largely on their use in the home country, particularly as investment capital. The economic potential of remittances are likely to be more significant when they are invested in the origin country environment.¹⁷ Distinguishing between migrants' savings and their family transfers, then, is crucial because both types of remittances have different implications for economic development in the origin country.

¹⁶ Recent studies on parent-child transfers have used matched panel data that contain data on both donor and recipient income (Altonji, Hayashi and Kotlikoff, 1997; Rosenzweig and Wolpin, 1993).

¹⁷ Lucas and Stark (1985) discuss the investment motive for remittance behavior using data from Botswana. The origin family may play a role in maintaining the migrant's home assets. Woodruff and Zenteno (2002) show that remittances sent by migrants are invested into microenterprises in Mexico. Adams (1991) finds that international remittances finance investments in the home environment using data on home families in rural Egypt. De la Brière et al (2003) find that male and female migrants in the Sierra region of the Dominican Republic have preferences for investing in specific types of assets. Mesnard (2004) using data from Tunisia finds that a large number of return migrants establish their own enterprises using savings accumulated during their stay abroad.

Investment-related transfers are important in the U.S.-Nigeria migration survey. About 40 percent of the migrant sample sent an investment-related transfer in the survey year. Migrants' motives for family transfers may differ from the motives for investment-related transfers. I develop a theoretical model that distinguishes between these two types of remittances – (1) remittances that support living expenses of home families or provide economic support during income shocks and (2) remittances that finance migrants' investments in the home country, or origin savings. The theoretical model also examines the migrant's decision to save across locations – in the origin and host country. The model provides insights into how migrant and origin household characteristics will impact both transfer and savings decisions.¹⁸

Empirical results in this paper provide support for the theoretical model. In particular, I find that the migrants' motives for sending transfers to the origin family differ significantly from their motives for saving in the origin environment. Migrants' transfers to the origin family are consistent with altruistic motives, in that poorer origin families tend to receive larger transfers, other things being equal. However, remittances sent to finance investments in the country of origin (origin savings) tend to be more prevalent among wealthier origin households. Furthermore, origin savings are also more likely to flow to rural areas, perhaps reflecting the lower costs of investing in rural areas and areas where the number of non-migrants in the origin family is smaller, other things being equal. Results also suggest that location-specific human capital (captured by variables such as age at migration to the U.S., years of schooling in Nigeria, and inherited assets in Nigeria) affect host- and origin-country investment decisions. Finally, macroeconomic conditions may affect the timing of migrants' investment-related transfers. For example, the devaluation of the origin country currency may provide new incentives for migrants to invest in the origin country.

(ii) Migrants and Housing Investments

Nearly half of a sample of Nigerian immigrants (N=112) in the U.S.-Nigeria Migration Survey has initiated substantial housing investments in their communities of origin in southeastern Nigeria. The empirical importance of housing investments within this sample suggests that this class of investments deserves close attention. About half of the houses that comprise migrants' residential housing investments in home villages are occupied by the

migrants' origin family in Nigeria in the absence of rental payments. There are only two residential houses within the home village that are currently being rented out for cash payments. Incomplete housing markets in southeastern Nigeria limit rental and resale transactions involving housing assets. Within the sample of Nigerian emigrants, nearly thirty percent of these community of origin residences (12 houses) are reported to be vacant.

Home ownership is a near-universal symbol of economic achievement. Historians and other social scientists have documented the importance of migrants' housing investments in their origin communities. However there have been few attempts to formally examine this pattern of investment behavior. Why do migrants invest in housing in their communities of origin while they live and work in the host country? The study of migrants' housing investments can also inform a broader literature that seeks to understand the economic ties that migrants maintain with their origin communities.

Under the standard investment explanation, migrants invest in housing assets in the origin community because these investments yield high rates of return relative to the return on other assets. It can also be argued that migrants' investment decisions are closely related to their return migration plans (Galor and Stark, 1990, 1991).³ However, it is important to note that if there were no immediate benefits to offset the costs associated with investments, the migrant could postpone investing in housing until return to the origin community.

In addition to the standard investment explanation, I also consider three alternative explanations for migrants' housing-investment decisions. First, there may be family-related motives for migrants' housing investments. In the family investment model, migrants' housing investments may provide *direct* benefits to their home families through housing services, as well as *indirect* benefits. In particular, a migrant's housing investment can supply information about the migrant's resources and commitment to the origin family, which can improve the home family's access to formal and informal markets in the hometown environment. Second, migrants' investment decisions may be motivated by the need to secure membership rights in the community of origin. By investing in housing during their period of residence abroad, migrants strengthen their membership rights in their communities of origin for the event of return. The third motivation for housing investments, which I term the community-investment model, centers on altruism. Migrants care about the communities they left behind and invest in order to contribute directly to the development of the housing stock in their hometowns. Residents of the

hometown can benefit from the employment opportunities and increased demand for local construction materials created by migrants' housing investments.

The evidence from the U.S.-Nigeria Migration Survey provides support for two explanations for migrants' housing investments. Migrants' housing investments are consistent with a model in which migrants invest in order to preserve and maintain membership rights in the home community. There is also evidence that these housing investments play an important role in signaling migrants' resources and support of their origin family. There is less support for the community-investment explanation. The empirical results do not support the conclusion that migrants tend to invest in *less-developed* communities, as predicted by the community-investment model.

The dominance of housing may also reflect limitations in the menu of investment choices available to migrants in the country of origin. However, there is evidence that migrants' housing investments are responsive to hometown amenities and changes in the macroeconomic and political environment in Nigeria, which may be suggestive of future returns to housing investments. Migrants may be especially well placed to take advantage of an improvement in origin-country investment conditions. Unlike foreign investors, migrants have developed institutions, notably family networks and hometown associations, which serve as risk-reducing mechanisms.

(ii) *Migrants and Community Transfers*

Descriptive evidence reveals that migrants maintain direct economic ties with their communities of origin. Historians have documented the flow of resources towards community development and disaster relief efforts in the migrant's community of origin. (see Soyer, 1997; Smith, 1939). More recently, the popular press has emphasized that migrants' contributions are responsive to the needs of their home communities.¹⁹ Within the African setting, hometown associations formed by migrants play a prominent role (Attah-Poku, 1996; Egboh, 1987; Smock, 1971). These hometown associations are of considerable importance in mobilizing migrants' contributions towards the construction of schools, hospitals, and roads, and the provision of other amenities in the community of origin.

¹⁹ For some recent articles, see *The New York Times*, September 26, 1998, page 3, and the *Los Angeles Times*, November 14, 1998, page 1.

The unique data used in the U.S.-Nigeria Migration Survey enables an investigation of the total amount sent towards community-development projects in the hometown, as well as the likelihood that the migrant has initiated a community transfer. The main prediction of an altruistic model of community transfers is that less-developed hometowns should receive more community-related transfers, other things being equal.

The findings from the U.S. Nigeria Migration Survey suggest that hometown characteristics play an important role in the migrant's decision to send a community-transfer. However, hometown characteristics often have pointed to an alternative to the altruistic model of community transfers. The results suggest that migrants tend to send community-related transfers in *more* developed hometowns, and not in *less* developed communities.²⁰ First, hometowns with larger populations are positively associated with both the incidence and the magnitude of community transfers. Second, hometowns located in more remote locations (defined as the road distance between the migrant's hometown and the state capital in kilometers) are less likely to receive community transfers and, when they do, receive lower levels of community transfers. One could argue that population and the distance from the capital do not capture important aspects of hometown development. To deal with this concern, I also examine the impact of additional indicators of hometown development, including the number of higher education institutions, access to a major road, electrification, and access to potable water. These results likewise do not provide support for the altruism model of community transfers in that migrants appear *less* likely to send community transfers in less-developed villages.²⁰

In summary, the above results on hometown characteristics do not support the predictions of the community-investment model. However, more conclusive evidence against the altruism model of community transfers would require efforts to deal with concerns about unobserved heterogeneity across hometowns in my sample. Unobserved heterogeneity across hometowns (such as the size and strength of migrant networks, investment technology, and construction costs) may also influence the migrant's community-transfer decision. For example, construction costs for building hospitals, schools, and other development projects may be higher in more

²⁰ Other measures of village development deliver similar results. For example, empirical results using a dummy variable that takes on the value of one if the hometown is an urban or semi-urban community, and zero otherwise, also contradict the predictions of the community-investment model, since more urbanized hometowns had a higher likelihood of receiving migrants' community-related transfers, other things being equal.

developed communities since the prices of land and labor inputs may be higher in these communities.

6. CONCLUSIONS

Policy makers in developed and developing countries have shown a growing interest in understanding the impact of remittances on migrants, their origin households, and origin communities. The U.S.-Nigeria Migration Survey provides an opportunity to investigate remittances using a matched sample of migrants and their origin families.

Field research and data collection from the U.S-Nigeria Migration Study suggest the following three main classes of migrant remittances: family transfers, investment-related transfers, and community transfers. By disaggregating remittances, new insights emerge: Transfers to the origin family are motivated by altruistic considerations, with poorer origin family members in Nigeria receiving larger transfers, other things being equal. However, unlike transfers to the origin family, savings in the country of origin flow towards wealthier origin households. Finally, migrants' community transfers tend to increase with higher levels of economic development in the origin community. Overall, the eventual impact of remittances of development in the origin country will depend on the end use of remittance flows, as well as the size of the out-migrant population and the position of origin households within the origin-country income distribution.

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TABLE 1

NIGERIANS IN THE UNITED STATES, 1990 CENSUS

Comparing the U.S. Census microdata sample to the Chicago Field research sample

VARIABLE	Chicago Sample Field Research 1997 N=112		Microdata Sample 1990 Census: Nigerians in US N=2262	
	Mean	Std Deviation	Mean	Std Deviation
<i>Head of Household Characteristics</i>				
Head's Age	38.94	7.32	34.41	6.68
Male=1	0.92		0.88	
Citizenship (citizen=1)	0.44		0.22	
Marital Status (married=1)	0.60		0.61	
Years of Schooling	14.70	4.96	13.64	2.02
Bachelor's degree	0.85		0.70	
<u>Year of Immigration</u>	<u>Percent</u>		<u>Percent</u>	
>=1990	22.30			
1985-1990	10.70		15.70	
1980-1984	36.60		44.60	
1975-1979	22.10		22.70	
<=1974	0.90		17.00	
<u>Occupational Categories (using census categories)</u>				
<u>Variable</u>	<u>Percent</u>		<u>Mean</u>	
Managerial & Professional	0.46		0.39	
Technical, Sales & Admin. Support		0.22		0.24
Service	0.06		0.16	
Farming, Forestry and Fishing	0.04		0.00	
Precision Product, Craft&Repair		0.02		0.03
Operators, Fabricators & Laborers		0.19		0.14
<hr/>				
<i>Household Characteristics</i>				
Household Size	3.42	2.03	3.60	1.97
Own at least one car	0.84		0.87	
Owner-occupied US house	0.36		0.24	
Rented for cash	0.63		0.74	
HH resides in a house	0.35		0.31	
HH resides in apartment	0.63		0.65	
HH resides in other residence	0.02		0.04	

Remittances from International Migration

US-Nigeria Migration Survey 1997

Variable	U.S. Migrants (<i>Migrant Sample</i>)		U.S. Migrants & Origin Households (<i>Matched Sample</i>)	
	Mean	Standard Deviation	Mean	Standard Deviation
Migrant sent remittance in the past year	0.93		0.93	
Origin Household received remittance in the past year			0.87	
Migrant Sent Transfer to Origin Family	0.85		0.86	
Migrant Sent Transfer towards Savings in Origin	0.35		0.40	
Total amount sent in past year (in U.S. \$)	5807.43	10653.92	6018.52	7961.14
Transfers Sent to Origin Family	3018.60	3797.58	3489.72	4317.56
Transfers received by Origin Family			2220.25	3970.48
Savings-related Transfers	2706.95	8737.84	2400.07	5352.08
Other transfers	277.69	1216.65	128.73	467.28

Note: For the survey period \$1=86 naira

Transfers sent refer to total remittances sent by a migrant to ALL family members in the origin country and is based on the migrant's report.

Transfers received by the origin family refer to remittances received by a specific origin family member from a given U.S. migrant and is based on the origin family's report.

Savings-related transfers refer to migrant transfers sent towards investment and asset acquisition in the origin country.

Other transfers refer to other transfers including transfers to origin community institutions.