

**The Depth of Ties in Africa:**  
**Remittances across Migrant Generations in Urban Kenya**

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## Abstract

This paper poses two questions regarding remittance behavior in contemporary sub-Saharan Africa. First, what are the levels and determinants of remittances to the family? Second, do these measures differ by migrant generation? Past research assumes that remitting is a first-generation phenomenon. We draw on the assimilation and transnationalism literatures to formulate predictions regarding the levels and determinants of remittances across three migrant generations. Using survey data from 2400 urban males in Kisumu, Western Kenya, we find that the likelihood of remitting to the origin family and level of support provided decline with each successive generation. In addition, we find that the strategies behind maintaining these ongoing ties to the origin differ across generations. While first- and 1.5-generation migrants remit to the rural family primarily out of economic concerns, second-generation migrants behave more altruistically.

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Urban migrants in sub-Saharan Africa have been described as living in a “dual system”: embedded in the new urban environment, while maintaining strong ties to their rural families of origin (Luke 2010; Cliggett 2003; Gugler 1991). Migrants sustain these important relationships not only out of altruistic motivations, but because in the city, they receive valued forms of social and economic support from these established ties. In exchange for this continuing support, the primary obligation for urban migrants is the provision of financial and material remittances. Indeed, large proportions of African migrants’ incomes are devoted to remittances—frequently amounting to six to 30 percent of earnings (Findley 1997, Stark and Lucas 1988; Hoddinott 1994; Johnson and Whitelaw 1974)—and these resources are often critical to reducing economic vulnerability of the family (Azam and Gubert 2006; Rempel and Lobdell 1978). Much of the theoretical and empirical work on remittances behavior globally and through earlier research in sub-Saharan Africa has sought to examine how the nature and strength of ongoing ties to the family determine the propensity to remit and the level of pecuniary assistance migrants provide. Remittances have increased in importance across Africa in the last several decades, as rural regions suffer from declining agricultural output, increasing costs of education and health services, and the burden of caretaking for ill relatives and orphans in light of the HIV/AIDS epidemic. Surprisingly, there are no recent studies of remittance behavior in this current context of social and economic instability in Africa.

While the new urban environment can alienate migrants from traditional community beliefs and institutions, this alienation appears to be rather weak in Africa. Migrants’ ties to the origin run deep. For example, studies find that urban migrants commonly desire to return to their rural communities to retire and be buried, and even second-generation migrants expect to return despite a lifetime of urban residence (Owusu 2003, Gugler 2002; Hoddinott 1994). The literature on remittance behavior assumes that remitting is merely a first-generation phenomenon, however, and offers no predictions as to how this behavior may change for subsequent generations.

In this paper, we aim to answer two questions regarding remittances in contemporary sub-Saharan Africa. First, what are the levels and determinants of remittances to rural families in the contemporary era? Second, do these measures differ by generation, especially among the second generation born in the city? To answer these questions, we use existing theories of remittance behavior and draw further insights from the research on assimilation and transnationalism to formulate predictions regarding the levels and determinants of remittances and how these associations vary across three migrant generations.

The empirical investigation relies on survey data collected from a sample of Luo males in Kisumu, Kenya, the capital of Nyanza Province in Western Kenya. Kisumu is the epicenter of a mature HIV/AIDS epidemic in the region and the site of continued political and economic insecurity (Glynn, Caraël, Avert, Kahindo, Chege, Musonda, Kaona, and Buvé 2001; NASCOP 2005). Kisumu represents one of a multitude of smaller African cities that serve as important

interim or final destinations for large streams of internal migrants. The survey gathered detailed information on respondents' remittances to their families in the last year as well as age at migration. These unique data allow us to investigate the strength of urban migrants' ties to the origin family and the determinants of resource flows over three successive generations: first-, 1.5-, and second-generation migrants. The pattern and strategies of remitting that we uncover have implications for the future distribution of support and the stability of rural families and communities throughout sub-Saharan Africa.

## **Background Literature**

### *Remittances to the Origin Household*

One of the major theoretical explanations for remittance behavior in the literature is altruism. Migrants send remittances to their rural households<sup>1</sup> of origin because they are concerned for the welfare of their family members, without an expectation of reciprocal support. In the African context, and among the patrilineal Luo, the rural extended family and its residential compound include parents, spouses, and children as well as male siblings and their families (Nyambedha, Wandibba, and Aagaard-Hansen 2003; Ocholla-Ayayo 1976). In the case of altruism, the presence of people whom migrants care about in the origin household, such as parents, wives, and children, encourage them to send larger remittances, while cohabitation with a spouse in the destination would curtail remittances (van Dalen et al. 2005, Vanwey 2004, Menjivar et al. 1998). Further expectations are that migrants' resources (including their education and income) increase remittances, while the rural household's wealth should be negatively associated with remittance flows (Vanwey 2004). In addition, the greater number of individuals who migrate from the rural household, the less each would need to send to the rural family on average (Agarwal and Horowitz 2002).

In contrast to altruistic motivations, contractual arrangements between migrants and their origin families entail mutual benefits. This work views migration as a household strategy (as opposed to an individual one), where both parties obtain valued resources from their ongoing connections (Lucas and Stark 1985; Stark and Lucas 1988). Contractual arrangements are divided into two main forms: coinsurance and investment strategies. The coinsurance strategy is aimed at diversifying risk for migrants and their rural households in the shorter-term (Azam and Gubert 2006, de la Brière et al. 2002, Lucas and Stark 1985). Because insurance and credit markets are incomplete in many developing country settings, migrants and rural households rely on each other for material support in times of unforeseen "shocks" or hardships, such as periodic drought or crop failures in the origin and bouts of unemployment or temporary illness for migrants in the destination (Lucas and Stark 1985). In contrast, the investment strategy represents attempts to smooth longer-term consumption patterns through intertemporal, intergenerational arrangements. Here, the direction of resource flow depends on migrants' stage in the life cycle. Migrants send remittances during their productive years in the city to re-pay families for investing in their education and to secure a portion of their inheritance, which will support the migrants in old age

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<sup>1</sup> Most studies conceive of remittances as resource flows to *households* of origin, although the theoretical literature commonly refers to migrants' relationships with *families* of origin as well. Although I recognize that families and households are not synonymous within the social science literature, I use these terms interchangeably in this paper.

(van Dalen et al. 2005, de la Brière et al. 2002, Hoddinott 1994, Lucas and Stark 1985). This strategy is most likely employed in contexts where migrants expect to return home and therefore have incentives to remain connected to their rural households. Such is the situation among the Luo, where most migrants hold claim to and maintain a portion of the family farm and expect to return to their rural homes to retire and to be buried (Hoddinott 1994, Hoddinott and Francis 1993, Parkin 1978, Ocholla-Ayayo 1976).

These theories lead to testable hypotheses about the characteristics of migrants and their rural households that would predictably increase remittances. Investment strategies are evidence by a positive correlation between remittances and the wealth of the rural household, which signifies the extent of potential bequests (van Dalen et al. 2005, Vanwey 2004). Hoddinott's (1994) study supports this hypothesis, where household wealth is measured by land, the main form of inheritable asset in western Kenya, as well as Lucas and Stark's (1985) study in Botswana, with wealth measured by ownership of cattle. Furthermore, Hoddinott (1994) finds that remittances increase with migrants' education and income, which signal earlier parental investment in sons' human capital, as well as the number of sons (brothers of a migrant), as they are the competitors for a share of the parents' inheritance (de le Brière et al. 2002, Hoddinott 1994).

The traditional system of exogamous marriage that is prevalent in much of sub-Saharan Africa (and among the Luo) has been conceptualized as a type of contractual arrangement between individuals and their families and kinship groups as well (Parkin 1978; Luke and Munshi 2006; Shipton 2007). Marriage increases the strength of ties to the patrilineage as well as the breadth of ties through the acquisition of a new affine network drawn from the kinship group of one's spouse (Ndisi 1974; Shipton 1989; Smith 2001). The benefits of marriage bring associated costs, including increased remittances to the origin family. Viewing marriage in this way, we would expect to find that currently married migrants send larger remittances than those who are single or formerly married, regardless of whether migrants cohabit with their spouses in the destination or not.

In order to identify coinsurance arrangements, researchers typically must measure short-term shocks to the rural household or urban migrant. Several econometric analyses have done so, including Lucas and Stark (1985), who detected a positive relationship between the occurrence of periodic droughts and remittances in Botswana. Knowles and Anker (1981) find that remittances decrease as Kenyan migrants become established in the destination over time, measured by the length of time they have resided away from home. They argue this is evidence of a short-term coinsurance arrangement, as migrants are less likely to need the family's temporary support or coinsurance. Many studies, including ours in Western Kenya, do not collect information on time-dependent shocks, and therefore we seek to identify contractual arrangements more generally.

Much of the work on remittance behavior in sub-Saharan Africa was undertaken in the 1960s and 1970s (Lucas and Stark 1985; Stark and Lucas 1988) and in Kenya in particular (Johnston and Whitelaw 1974; Rempel and Lobdell 1978; Knowles and Anker 1981). Overall, this research revealed the vast amounts of remittances that flow to rural families and evidence of both types of contractual arrangements with rural households (see also Hoddinott 1994). African migrants may have new incentives to maintain strong ties with their rural families in contexts of

ongoing HIV/AIDS epidemics across the continent. High urban HIV prevalence rates have produced a reverse flow of migrants who, in the absence of formal health insurance and services, depend on the rural family for physical, emotional, and financial support during their illness (Chimwaza and Watkins 2004; Clark et al. 2007; Schatz and Ogunmefun 2007). The extended family also assumes the primary support functions for widows and orphaned children migrants leave behind after death (Drimie 2003, Nyambetha et al. 2003).<sup>2</sup> Under these emerging circumstances, migrants have additional motivations to enter into investment arrangements with their rural households to secure lasting assistance in the event of premature illness, death, and a legacy of dependents. We would expect migrants who have greater numbers of dependents, including wives and children, to remit larger amounts, and remittances should not decrease over time or distance, as the future expectation of inheritance and caretaking persists.

### *Remittances by Migrant Generation*

The theoretical research on remittance behavior fails to consider how resource obligations and strategies for remitting to the origin may differ across successive generations of migrants. To develop predictions for how the nature and strength of ties to the origin and resultant remittances vary by generation, we draw on insights from two areas of research within the migration literature: assimilation and transnationalism. While both of these areas are primarily focused on the experiences of international immigrants, who integrate into sociocultural and political situations that are quite different from their origin communities, it is useful to adapt these theories to the circumstances of internal migrants as well.

The theoretical work on migrant assimilation is interested in the descendants of immigrants and the rate of their convergence toward the socioeconomic and cultural characteristics of the native population. This work is specifically focused on a generational transition, whereby each successive generation more closely reflects the characteristics of the majority native population, although some ethnic immigrant groups may follow a downward trajectory of assimilation to marginalized subpopulations (Alba and Nee 1997; Gans 1992; Gratton et al. 2007; Landale and Oropesa 2007).

The study of assimilation examines integration into the destination environment, which is accompanied by the loss of ethnic (origin) identity and old cultural and behavioral patterns (Landale and Oropesa 2007; Alba and Nee 2003, Alba 2005, Zhou 1997). These changes are often measured in terms of migrants' cultural and political practices, such as religion, citizenship, language, and intermarriage, or economic success, such as education, income, or occupational status (Alba 2004, van Niekerk 2007, Landale and Oropesa 2007). For our purposes, assimilation theories predict that individuals or groups in successive generations experience the loosening of economic and sociocultural ties to the origin, in which case remittances and their underlying economic and altruistic motivations would decline across generations as well. Some individuals or groups maintain parts of their origin culture over time, however, and those more integrated into the ethnic (origin) community in the destination are more likely to hold onto the values of that group (Alba 2005; Zhou 1997). In this case, we expect that ties to the origin

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<sup>2</sup> The area in and around Kisumu did not have free and easy access to anti-retroviral treatment at the time of the study in 2001 and continues to have limited access today.

community, and thus remittances, would continue for these types of individuals across generations.

The research on transnationalism focuses not only on integration into the destination community but how migrants simultaneously maintain linkages to their origins as well (Leichtman 2005; Boyd and Yiu 2007; Owusu 2003). Emerging questions within the study of transnationalism are the extent and nature of this phenomenon across generations (Boyd and Yiu 2007). Some have argued that economic and political ties shape dual connections to the origin and destination among first-generation immigrants. Second- and later generations, on the other hand, display less active engagement with the origin, such as communication, visits, remittances, and business linkages, and have greater sociocultural and emotional ties to the origin (Rusinovic 2008; Leichtman 2005, Boyd and Yiu 2007; Lee 2007). These insights help me make predictions about the nature of migrants' continuing connections with the origin across generations. We would expect that remittances to the family and economically-motivated reasons for maintaining ties with (and sending remittances to) the origin would wane across generation and be replaced by altruistic motivations and the maintenance of a community identity over time.

## **Data and Methods**

### *The Kisumu Survey*

The survey data used in the analyses were collected as part of a project co-directed by the first author in Kisumu, Kenya. Kisumu is the traditional home of the Luo ethnic group and a destination for many young migrants seeking educational and work opportunities as well as a central town on the highway from coastal Kenya into Uganda. The high mobility and young age structure of the population is believed to have contributed to the rapid spread of HIV as well as other sexually transmitted diseases in this region of Kenya (Buvé, Lagarde, Carael, Rutenberg, Ferry, Glynn, Laourou, Akam, Chege, and Sukwa 2001). HIV prevalence rates have reached 25 percent or more over the last decade (Glynn, Caraël, Avert, Kahindo, Chege, Musonda, Kaona, and Buvé 2001; NASCOP 2005). The researchers chose Kisumu as the site for a study of the effects of social organization on sexual behavior and labor market outcomes among a population of young adult men in an urban, high HIV/AIDS environment. Although Kisumu attracts migrants of both sexes (Lyons 2003), we also chose to focus the study on the patrilineal Luo, whose migrant sons continue to be particularly important sources of social and economic support for rural families and communities (Hoddinott 1994).

The data are based on a random sample of Luo males ages 21-45. Kenyan Census Bureau enumeration areas were used as primary sampling units within Kisumu town. Of these, 121 were randomly chosen for the survey, and all households in each enumeration area were selected. In each household, all males of eligible age were interviewed by trained field-workers. Data quality was of paramount importance to the project, and the research team took multiple steps to ensure the validity and reliability of reporting. These measures included conducting preliminary in-depth interviews to inform the survey instrument and carrying out numerous data checks in the field, such as re-interviewing four percent of the sample to confirm the reliability of responses with respect to marriage, migration, and sexual behavior. We believe that the careful attention placed on data quality resulted in a high response rate (96 percent) and very accurate reporting.

The sample consists of three generations of migrants. First- and 1.5-generation migrants include those who moved to Kisumu after birth and came to Kisumu at least 12 months prior to the survey, so they have had the opportunity to send remittances over the past year. The “first-generation” includes those who migrated in their adult years, age 18 and above, and we designate those who came to Kisumu after birth and before age 18 as “1.5-generation” migrants. Those born in Kisumu are designated “second-generation” migrants. Of these (N=318), approximately one-half had a father also born in Kisumu, and they are technically third-generation immigrants or higher. Because we cannot distinguish the actual generation of their residence in Kisumu, and the sample size is small, we collapse all second- and higher-generation migrants into one category.

The survey instrument also gathered demographic information on the respondent and his rural household of origin as well as on his migration experience and remittance behavior. With respect to remittances, each respondent was asked to estimate the total value of money and gifts in Kenyan shillings (Ksh) that he gave or sent to his family in the last year, which refers to his household or compound of origin.<sup>3</sup> Respondents estimated the monetary value of remittances; the survey did not discern the particular individuals or purposes for which these resources were sent.

The analysis includes explanatory variables pertaining to the migrants’ individual, family, and rural household characteristics. Individual characteristics include age, years of education, and the respondent’s self-reported income in the last year recorded in Kenyan shillings.<sup>4</sup> In addition to contractual and altruistic motivations, migrants’ education and income represent the migrants’ ability to remit. We include a quadratic term for income to test for the possibility that the relationship between income and remittances may be curvilinear. The variables for marital and cohabitation status stem from the full marital histories collected from respondents, including information on how many months of the last year they cohabited in Kisumu with their current wives.<sup>5</sup> We construct three dummy variables designating men as currently single/unmarried (single, divorced, separated, or widowed); currently married and cohabitated 8 or more months of the last year with a spouse in Kisumu (which we term “spouse in destination”); and currently married and cohabitated less than 8 months in the last year (“spouse in origin”). The great majority of married men cohabitated at least part of the year with a spouse in Kisumu; therefore, we attempt to distinguish between those whose cohabitation experience was essentially continuous from those who cohabitated intermittently.<sup>6</sup>

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<sup>3</sup> In rural villages, Luos live in extended family compounds that consist of a father, his male offspring, and their families. Upon marriage, sons continue to live in their fathers’ compounds, building a new house for each of their wives and their children.

<sup>4</sup> 70 Kenyan shillings was the equivalent of US\$ 1 at the time of the survey.

<sup>5</sup> As in many African societies, marriage among the Luo involves numerous events and negotiations, which may take place over a few months to two years (Southall 1973). On the survey, marriage was marked by the time a bride moves into her husband’s home (*ikendo*), which is generally regarded as the official marriage date (Ndisi 1974; Ocholla-Ayayo 1976).

<sup>6</sup> Of the married men, 6.2 percent are currently polygynous and may cohabitate in Kisumu with more than one wife at a time or consecutively. For the variable pertaining to the number of months of cohabitation, I add the number of months these respondents cohabitated with any wife; those who cohabitated more than 12 months (2 percent of respondents) are recoded as living with a spouse 12 months in the last year.



We include a variable indicating the number of months since the respondent migrated to Kisumu. In the sample, 86 percent of the migrants lived in Kisumu continuously since their first trip, and therefore this measure provides a good approximation of migrants' cumulative urban experience. Respondents' participation in clan association meetings in Kisumu is designated as ever attending versus never.

With respect to family characteristics, respondents were asked the number of surviving children they had and how many of these were currently living with them in Kisumu. The remaining number of children we designate as living in the origin. Each respondent was also asked the survival status of his mother and father. The data do not allow me to determine the precise household of residence for non-cohabitating wives, children, and parents; however, we assume they remain in the rural household. This assumption is quite credible for the Luo in this area of Kenya, where exogamous marriage and patrilocal residence rules oblige wives to relocate to their husbands' family compound upon marriage, and those not cohabitating with husbands in Kisumu are very likely to be overseeing the rural homestead (Parkin 1978; Francis and Hoddinott 1993). In addition, children often remain in the rural home with their mothers or are cared for by the extended family within the origin compound (Nyambedha et al. 2003), and parents are likely to retire in the origin as well. Respondents were also asked the number of individuals in their household in Kisumu.

The survey collected information on important characteristics of the migrant's rural household, including household wealth in the form of land, the main inheritable asset in Western Kenya (Hoddinott 1994). In the patrilineal system of the Luo, inheritance is passed down from fathers to sons. Therefore, in order to determine competition for bequests, we include a variable for the respondent's number of brothers. In addition, the survey asked each respondent to identify the place of his rural home community, which roughly corresponds with administrative locations today, and we include a measure of the Euclidean (straight-line) distance from the center of the home location to Kisumu (White and Lindstrom 2005).

### *Analytic Methods*

The analysis is divided into two parts. First, we provide summary statistics on the individual, family, and rural household characteristics for the three generations of urban migrants in the sample. We also present descriptive statistics on the prevalence and level of remittances to the family in the last year. Second, we examine the associations between the explanatory variables and the amount of remittances using regression analysis. Because a proportion of migrants do not remit to the family, the dependent variables for the amount of remittances are left censored. In this case, use of OLS regression results in biased estimates, and use of Tobit estimation is more appropriate. We include a separate regression specification for each generation of migrants. For each regression, the complete set of individual, family, and rural household explanatory variables are included. Finally, we run a fully interacted model to identify significant differences in coefficients across migrant generations. Results for this final model are discussed but not shown.

## Results

### *Descriptive Statistics*

We begin by describing the sample of Luo males in Kisumu in Table 1. All statistics are significantly different by migrant generation with the exception of education, number of brothers in the family, and land owned by the rural household.

Overall, the sample represents a young and relatively educated male migrant population that is likely to be found in many urban settings across sub-Saharan Africa. A great majority of the men were currently working, with mean incomes in the last year ranging from approximately US\$760 among second-generation men to \$930 for first-generation. The majority of men are married, and, in contrast to the historical pattern of male-only migration in Africa (Brockerhoff and Biddlecom 1999, Gugler 1991, Parkin 1978), many lived with a spouse in Kisumu for most of the last year. The first-generation migrants are most likely to be married and have spouses living in the origin. By construction, first-generation migrants came to Kisumu at later ages and therefore have resided for fewer years in the destination than 1.5-generation migrants. A large proportion of each generation attends clan association meetings in Kisumu, but interestingly, over one-half of second-generation migrants do, signaling their continuing commitment to remaining active in the economic and sociocultural fabric of their rural home community (Boyd and Yiu 2007).

Migrants were asked their reasons for coming to Kisumu, and the generations differ in their motivations for moving. Approximately 85 percent of first-generation migrants came to find work, whereas approximately one-third of 1.5-generation migrants came for work, schooling, or accompanying or moving to family members. The latter category includes the youngest migrants (not shown). These various strategies help explain differences in employment status and income above, with first-generation the most likely to work and earn the highest income on average compared with the 1.5-generation.

With respect to family characteristics, all three categories of migrants have children co-residing in Kisumu as well as outside the city. Households in the city are small, appearing to consist mostly of men, their spouses and children. Approximately one-half of all men have surviving father, and three-quarters have surviving mothers. Each category of migrants has 4 brothers on average, signally large family sizes (including many polygynous ones) in the previous generation (Luke and Munshi 2006). Migrants' rural households own about 7 acres each on average, and their home communities are located about 30 miles from the city, which can entail a lengthy journey over very poor roads in this area of the country. Second-generation migrants' rural communities are approximately 19 miles from Kisumu on average.

Statistics on migrants' remittance flows to the family are presented in Table 2. A large proportion of all three categories of migrants remitted to their rural extended families in the last year—91 percent of first-generation, 86 percent of 1.5 generation, and 84 percent of second-generation—suggesting that remitting is indeed normative behavior in Kisumu. Hoddinott's study (1994) from two rural Luo locations in Nyanza Province recorded a similar prevalence of

remitting in 1988.<sup>7</sup> Despite the high prevalence of remitting in each generation, the differences are statistically significant, indicating a decreased likelihood across generations. Of those who remitted in the last year, the average amount ranged from approximately US\$230 among the first-generation to \$180 among the second-generation. Although these mean amounts of remittances are statistically significantly different, the percentage of migrants' yearly income that was transferred to family remittances (23 percent) did not differ by migrant generation.

Thus, we find that an overwhelming proportion of migrants in each generation remit to the family, indicating strong, continuing ties to the rural origin. While this proportion declines slightly by generation, the proportion of income devoted to the rural family is steady across generations. The strategies behind these remittance behaviors may differ by generation, which we investigate in the regression analysis in next section.

### *Regression Analyses*

Table 3 presents the regression results of the determinants of remittances to the family of origin for each generation of migrant men in Kisumu. Looking at the results for the first-generation migrants in Column 1, the linear effect of income is positive and significant, and the coefficient on the quadratic term is negative (and significant), implying that the income effect is declining at the margin. First-generation migrants remit smaller amounts at low levels of income, possibly because they have yet to adjust to urban life and establish steady employment at that point in their careers (Cliggett 2003). Hoddinott (1994) argues the declining marginal effect reflects an investment arrangement, where migrants with higher earnings gain less from potential parental bequests.

Marital status is an important determinant of remittance behavior. Currently single men (the reference category) send significantly smaller amounts to their families than men with wives in the destination and men with wives in the origin. A separate analysis shows that there is no significant difference between the two categories of married men (not shown). Taken together, these results indicate that it is not the residence of the spouse that matters for family remittances among this generation of migrants, but the marriage institution more broadly. This supports the previous assertion that exogamous marriage—like migration—is a contractual arrangement between men and their families that is accompanied by increased financial obligations.

With respect to family characteristics, remittances increase significantly with each additional child residing outside of Kisumu, which we presume to be living in the origin location; however, there is no significant effect of the number of children in Kisumu. There are no significant associations between surviving parents, who are likely to be residing in the rural compound, and remittances to the rural family as well. Thus, while we may interpret the significant effect of children outside of Kisumu as altruism on the part of first-generation migrants, the finding that greater amounts of remittances are not associated with spouses and parents in the origin counters this explanation. Sending increased remittances for children outside of Kisumu suggests an

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<sup>7</sup> Interestingly, Owusu (2003) records a similar prevalence of remitting (92 percent) among migrants from Ghana in Canada in the mid-1990s.

investment strategy as well as compensation to rural families for the care they provide these dependents.

With respect to the rural household's characteristics, land owned displays a positive and marginally significant association with the level of material resources remitted, providing evidence of an investment arrangement. The distance the rural household lies from the destination shows a negative and significant association with remittances. It is important to note that years of residence in Kisumu displays an insignificant association. It appears that distance, but not time, weaken this generation of African migrants' ties to the origin.

The results for 1.5-generation migrants are shown in Column 2, and they are similar to first-generation migrants in several ways. The finding for income is comparable, and the effect is increasing but decreasing at the margin. We also see that marriage—and not the residence of the spouse—is significantly associated with sending remittances to the rural family. These findings suggest that investment arrangements with the rural family continue among this generation of migrants.

Distance has a negative and significant effect on family remittances among the 1.5-generation. There is also a negative and marginally significant effect of education. Both education and distance appear to weaken ties to the origin among these migrants, while, once again, time in the destination is not related to remittances. The results of the fully interacted model show that there are no statistically significant differences in the associations for first- and 1.5-generation migrants.

The results for second-generation migrants, shown in Column 3, contrast in many ways from the other two generations. The association with income is similar, however. With respect to marriage, married men with spouses in the origin send greater amounts remittances to the rural family than single men, and this association is marginally significant. Further analysis finds that these married men send significantly greater amounts than married men with wives in the destination (not shown). In addition, the effect for the amount sent by married men with spouses in the destination is significantly smaller than the effects for both first- and 1.5-generation migrants.

The association between having a mother still living—who is likely to be retired in the rural compound—and sending remittances to the family is positive and marginally significant. Second-generation migrants also send significantly smaller amounts of remittances the greater the rural household's landholdings. This latter effect for land is also statistically significantly greater (more negative) than the effects for first- and 1.5-generation migrants. The results with respect to surviving mothers and landholdings suggest that second-generation migrants send remittances based on altruistic motivations for the rural family.

We also see that family remittances decrease significantly with larger numbers of individuals in the urban household, suggesting that competing claims decrease the availability of resources they have to expend. Furthermore, remittances decrease significantly the more brothers these men have, perhaps because they can also help support the rural household. Finally, second-generation migrants who attend clan association meetings in Kisumu remit significantly larger amounts to

the family than those who do not. Clan organizations may pressure migrants to take care of their rural relations or facilitate the sending of money and goods. The effects for the number of brothers and attending clan association meetings are statistically significantly different than first-generation migrants.

Finally, there is a negative and significant association between distance and family remittances among second-generation migrants, and this effect is significantly larger (more negative) than for the 1.5-generation migrants.

On the whole, the results in Tables 2 and 3 reveal that the propensity to remit and the level of resources sent to rural families vary across migrant generations and the strategies behind these actions differ strikingly as well. The hypothesized relationships for a long-term investment arrangement with the rural household hold up most consistently for the first-generation migrants and to a lesser extent with the 1.5-generation, and there is weaker evidence of altruistic motivations for both generations as well. Long-term investment strategies were advantageous to migrants and rural families according to earlier studies in Kenya, however the motivations behind current connections may be linked to repercussions of the ongoing HIV/AIDS epidemic in the region. Second-generation migrants, who were born in Kisumu, display no investment strategy. Altruism appears to play a greater role for them, which is constrained by competing commitments of destination households. In addition, ties to the rural extended family are strengthened by involvement in clan association meetings and greatly weakened by distance from the destination for second-generation migrants.

## **Conclusion**

This paper contributes to the theory and evidence on migration and remittances in sub-Saharan Africa using data from a survey of male Luo migrants in Kisumu, Kenya. We are among the first to examine remittances to rural households across three successive generations of migrants.

We find that all three generations of migrants in Kisumu maintain strong ties with their rural families, demonstrating migrants' position in the "dual system" in urban Africa. They are all actively engaged in economic linkages to the rural family through remittances. However, we find that the likelihood of remitting to the family and the level of support provided decline with each generation. In addition, we find that the strategies behind maintaining these ongoing ties are quite different. While first- and 1.5-generation migrants remit to the rural family primarily out of economic concerns, second-generation migrants behave more altruistically. Of particular interest is the involvement in clan associations by large proportions in each generation, indicating migrants' active maintenance of a community identity in the destination. Furthermore, the positive effect of involvement in the clan association in predicting family remittances is largest for second-generation migrants, suggesting the depth of ties persists across generations in sub-Saharan Africa.

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Table 1. Summary statistics for migrant men in Kisumu

	Mean or %			Significance
	1st generation	1.5 generation	2nd generation	
<b>Individual migrant characteristics</b>				
Age (years)	31.2	26.3	27.8	***
Education (years)	9.9	9.9	10.0	
Currently working (%)	92.0	86.7	87.4	***
Income in the last year (Ksh)	65,004.3	55,264.1	53,034.4	**
Current marital status (%)				
Single (never married, div., sep., widowed)	28.3	45.3	49.4	***
Married and spouse in origin <sup>a</sup>	18.9	11.6	5.4	***
Married and spouse in destination <sup>b</sup>	54.9	43.1	45.3	***
Years since migrating to Kisumu	5.9	12.2	--	***
Attends clan association meetings (%)	47.0	38.4	52.2	***
Reasons for migrating (%)				
Work	84.8	36.8	--	***
Study	11.1	33.0	--	
With or to family members	3.8	29.8	--	
Other	0.3	0.2	--	
<b>Family characteristics</b>				
Number of children in HH in Kisumu	1.2	0.8	1.0	***
Number of children outside Kisumu	1.2	0.6	0.8	***
Number of individuals in HH in Kisumu	3.8	3.8	4.3	**
Father surviving (%)	48.7	57.4	56.0	***
Mother surviving (%)	72.9	78.0	75.8	*
Number of brothers	4.2	4.2	4.4	
<b>Rural household characteristics</b>				
Land owned (acres)	7.7	7.8	6.7	
Distance to Kisumu (miles)	29.3	27.8	18.7	***
N	1086	1016	318	

<sup>a</sup>cohabitated with spouse in Kisumu <8 months in last year

<sup>b</sup>cohabitated with spouse in Kisumu 8+ months in last year

\*\*\*p<0.001; \*\*p<0.01; \*p<0.05; +p<=0.10; oneway ANOVA and chi-square tests

Table 2. Remittances to the family in the last year

	Mean or %			Significance
	1st generation	1.5 generation	2nd generation	
Remitted to family (%)	91.2	86.0	84.3	**
Of those who remitted				
Amount remitted (Ksh)	16,051.8	14,216.6	12,654.6	*
Remittances as percent of income	23.1	23.2	23.1	
N	1086	1016	318	

\*\*\*p<0.001; \*\*p<0.01; \*p<0.05; +p<=0.10; oneway ANOVA

Table 3. Regression analysis of the determinants of remittances to the family

	1st generation		1.5 generation		2nd generation	
	Coef.	SE	Coef.	SE	Coef.	SE
<b>Individual migrant characteristics</b>						
Age	-73.5	137.6	125.1	189.5	157.5	238.5
Education	-227.7	232.6	-444.6	255.3 +	-229.6	442.7
Income/1000	262.8	17.9 ***	208.1	13.5 ***	197.8	32.5 ***
Income squared	-0.0004	0.00004 ***	-0.0001	0.00001 ***	-0.0002	0.0001 **
Current marital status						
Single (ref)	--	--	--	--	--	--
Married and spouse in origin <sup>a</sup>	4784.9	1978.9 *	7119.9	2114.1 **	7831.7	4648.9 +
Married and spouse in destination <sup>b</sup>	6006.4	1653.3 ***	8331.1	1605.9 ***	-75.0	2769.4
Years since migrating	34.3	144.2	-167.5	114.1	--	--
Attends clan association meetings	308.5	1187.8	1413.2	1242.2	4631.7	2282.2 *
<b>Family characteristics</b>						
Number of children in HH in Kisumu	308.0	655.9	602.3	696.1	650.4	1095.4
Number of children outside Kisumu	1146.8	390.8 **	791.9	515.7	756.6	666.8
Number of individuals in HH in Kisumu	121.8	358.9	-418.0	290.1	-737.7	418.4 +
Father surviving	1021.5	1189.0	364.3	1243.4	523.1	2345.4
Mother surviving	759.2	1296.4	1506.4	1448.6	4506.4	2587.2 +
Number of brothers	-20.0	194.7	-284.2	186.3	-484.8	288.0 +
<b>Rural household characteristics</b>						
Land owned	86.5	46.1 +	26.2	37.2	-202.5	94.4 *
Distance from Kisumu	-86.4	42.9 *	-94.5	45.3 *	-258.5	78.9 **
Constant	-2034.8	4470.6	384.0	5038.0	1098.7	7799.7
N	1083		1015		318	

<sup>a</sup>cohabitated with spouse in Kisumu <8 months in last year

<sup>b</sup>cohabitated with spouse in Kisumu 8+ months in last year

\*\*\*p<0.001; \*\*p<0.01; \*p<0.05; +p<=0.10