DOES CITIZENSHIP IN A HOST COUNTRY INFLUENCE REMITTANCE BEHAVIOR?
AN ANALYSIS OF GHANAIANS LIVING IN THE US, UK, GERMANY AND THE NETHERLANDS

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ABSTRACT

The World Bank estimates that in 2007, immigrants in developed countries sent
$240 billion back to developing countries. This money was an important source of
revenue for individual households and also for the economies of the receiving
countries. However, some observers contend that remittances are actually an
impediment to economic and social development. Small countries such as Ghana, they
argue, are disproportionally impacted by skilled migration. With remittances
accounting for nearly 14 percent of its GDP, by some estimates, the Ghanaian
government recently has articulated policies meant to encourage more remittances and
harness international migration, including encouraging Ghanaians living abroad to
apply for citizenship in their host country while maintaining their Ghanaian
citizenship. The following analysis evaluates the likely effect of this policy. Using
the results of surveys conducted of nearly 1200 Ghanaians living abroad who remit in
four countries—the US, UK, Germany and the Netherlands—the analysis examines
whether having citizenship in a host country has any relationship with the total amount
remitted back to Ghana. It finds that Ghanaians who are citizens in a host country
give, on average 9 percent less in annual remittances. Thus, the dual citizenship policy
by itself is not an effective tool to encourage more remittances; the government should
consider coupling this policy with other policies aimed at strengthening migrants’
perceived connections with Ghana.
With gratitude to my family.

Special thanks to Dr. Manuel Orozco of the Inter-American Dialogue who provided me with his data and encouragement.

Katelin Maher
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I. INTRODUCTION

Remittances have become a highly political issue, piquing the interest of governments, donor organizations and the international community. The World Bank estimates that in 2007 alone, remittances totaled $317 billion, $240 billion of which was sent to developing countries (Ratha and Xu 2008). This money is an important source of revenue for households and also for the economies of the receiving countries. However, some observers argue that remittances are actually an impediment to economic and social development. Small countries such as Ghana, they argue, are disproportionately impacted by skilled migration.
According to the World Bank, taking into account only officially recorded remittances, inward remittance flows to Ghana ballooned from $82 million in 2004 to $105 million in 2007 (Rathu and Xu 2008). With officially recorded remittances accounting for 1 percent of the GDP in 2006 according to the World Bank, and 14 percent of GDP, based on estimates of the Bank of Ghana, the Ghanaian government recently has articulated policies which have the potential to encourage more remittances and harness the effects of international migration (Anarfi et al. 2003). Once such policy encourages Ghanaians living abroad to seek out citizenship in their host country. This is based on the assumption that once they obtain the rights of citizens, which are often manifested in terms of political and economic rights, including greater access to the labor market, they will translate these economic gains into more remittances to send back to Ghana.

Looking at a sample of nearly 1200 Ghanaians emigrants residing in four countries who remit on average nine times a year, this paper seeks to assess the likely effects of the Ghanaian Government’s policy by determining if, in the sample, there is a difference in remittances between those who have citizenship in their host country and those who do not. Approximately 30 percent of those surveyed are citizens of their host country.
Generally speaking, Ghanaians abroad have maintained strong ties to their communities in Ghana, thanks to the recent proliferation of communication infrastructure in West Africa lowering the costs and increasing access to telephones and e-mail communication. Often these ties are further strengthened through participation in community associations in their host country. The Bank of Ghana estimates that there are nearly 3 million Ghanaians abroad, many living in developed countries. The US, UK, Germany and the Netherlands are among the top ten destination countries for Ghanaian emigrants (Ratha and Xu 2008). Ghanaians comprise one of the largest sub-Saharan populations in the European Union; there are over 100,000 Ghanaians residing in the United States.

The Bank of Ghana estimates that, in 2005, Ghanaians residing abroad remitted over 1 billion dollars (both through official and unofficial means), infusing the economy with a significant amount of money (Addison 2004). Much of the money remitted back to Ghana goes towards personal consumption, to cover the basic needs of family members, such as health and education expenses (Orozco 2005). The remittances are also used to start-up small businesses, which ultimately leads to employment, especially of youth (Addison 2004). Worldwide, countries that receive remittances have attempted to elaborate policies that increase the volume of
remittances to their country, so that they can harness some of their potential and use these funds for overall development of the country.

II. BACKGROUND AND LITERATURE REVIEW

Ghana has a population of 23 million and a surface area of 239,000 square km, slightly less land area than the state of Oregon. The 2007 estimates for per capita GDP are $1,400 with 28.5 percent of the population below the poverty line (CIA 2007). According to studies by Docquier and Marfouk (2006), small countries, such as Ghana, are disproportionately impacted by skilled migration. While there has been a lot of hype about “brain drain” in developed countries, however, was detrimental to developing countries, the magnitude of the impact on welfare and growth on developing countries is disputed. Maurice Schiff of the World Bank concludes that any positive impact is significantly smaller than originally posited (Schiff 2006). However, Anarfi and Jagare (2005) argue that sending countries benefit from international migration in terms of social and human capital gains, as well as from massive amounts of remittances which spur economic growth and investment in education.
The Bank of Ghana has found that the level of remittances sent to Ghana has increased significantly from $201.9 million in 1990 to over $1 billion in 2003. The magnitude of these remittances is bigger and more stable than Official Development Assistance (ODA) and Foreign Direct Investment (FDI) over the same time period (Addison 2004). Estimates of the value of remittance flows through formal and informal channels, as a percentage of Ghanaian GDP, rose from 3.3 percent in 1990 to 13.3 percent in 2003 (Higazi 2005). Using only officially recorded remittances which are easier to quantify and provide more conservative figures, the World Bank estimates that such remittances account for nearly one percent of Ghanaian GDP in 2006 (Ratha and Xu 2008). The discrepancy in these two figures illustrates the sheer magnitude of the amount of remittances being sent via informal channels, which the Bank of Ghana tries to capture in their estimates.

According to a recent study, at least one in five households has a member who emigrated within the last ten years (Anarfi et al. 2003). Nearly three million Ghanaians are estimated to live outside of Ghana, many in the European Union and North America, in cities such as Amsterdam, London, Hamburg and New York: As noted Ghanaians comprise the largest Sub-Saharan population in the EU (Higazi 2005; Akyeampong 2000). Based on findings by the Organization for the Economic Co-
operation and Development (OECD) in 2001, there were over 104,000 Ghanaians living in the US, and nearly 115,000 Ghanaians living in Canada (OECD 2001).

**Motivations for Migration**

According to the New Economics of Migration (NEM) model, migration is rarely permanent. Households use international migration as a means of diversifying risk among family members. It acts as a form of social self-insurance, providing a safety net for people who remain in sending countries, where formal institutions for managing risk are absent (Stark and Bloom 1985). Through remittances, which are defined as “funds transferred by a person staying in another region to a person in the region of the remittee’s region of origin without being directly compensated by a stream of goods or services” (Schrieder and Knerr 2000). Family members abroad supplement the household income and protect their families against extraneous shocks.

Initially, emigrants from Ghana left to pursue education and training opportunities abroad (Anarfi et al. 2003; Nuro 1999). However, by the mid-1980s due to political instability (during the Rawlings Era) and an economy that was shrinking, many Ghanaians chose to leave to avoid unemployment and seek economic asylum. Between 1982 and 1991, there were nearly 100,000 asylum applications from Ghana to
industrialized countries (UNHCR 2002). In 1994 the National Population Policy of Ghana officially acknowledged that beginning in the late 1970s, Ghana transformed itself from a receiving country to a sending country, with more people emigrating than immigrating (Anarfi et al. 2005). In addition, many skilled Ghanaians migrated to the north, contributing to the mass “brain drain.” One report estimates that there are more Ghanaian doctors practicing in host countries than in Ghana, and over half of all professional nurses have emigrated to the US and UK (PSI 2006). This mass emigration of health workers has contributed to a loss of over $60 million dollars of Ghana’s training investment in the health professions. The Ministry of Health has recently adopted measures to deal with this migration of Ghana-trained health professionals, including requiring a period of “housemanship” of doctors and dentists (Anarfi et al. 2003).

Orozco (2005), in his studies of various diasporas, has developed a system to gauge attachment to the home country, called the 5 Ts. These include: telecommunications, travel, nostalgic trade, tourism and transfer of funds. Through conducting surveys of migrants, he has shown that migrants who are more connected to their home country are more likely to frequently remit. When compared with other diasporas, the West African Diaspora, especially the Ghanaian Diaspora, tends to remit increasing amounts of money over time. Orozco found that Ghanaian migrants are
uniquely able to maintain a commitment to two different communities, one in the
sending country and the other in the host country. This reinforces their social capital
and strengthens ties to both communities (Anarfi and Jagare 2005).

By contrast, in the case of immigrants from much of Latin America and other
Sub Saharan countries, remittance amounts and frequency tend to decrease with time.
The Pew Hispanic Center and the Multilateral Investment Fund of the IDB funded a
study focusing on Latin American remittances, that found that only a quarter of the
people who have been in the host country for 20 to 30 years continue to send
remittances, and the amount drops over time (Aguinas 2006 citing PEW study).

Motivations for Remitting

Researchers tend to agree on the different reasons motivating immigrants to
send remittances, citing both macro-economic and micro-economic determinants.
Carling (2006) categorizes the microeconomic determinants as: altruism, self-interest,
and insurance. Initially, academics assumed that people remitted primarily for
altruistic reasons. However, upon further examination, it has been demonstrated that
the primary reason for remitting has more to do with self-interest. Azram and Gubert
(2004) in their study of the impact of remittances in Kayes, Mali, found that people
remitted because of “enlightened egoism” and “moderate altruism.” According to their findings, there is inherent social mobility as a consequence of migration; those who return to the community with more capital achieve a higher social status. In order to maintain the link with the community, to benefit from this social mobility, the migrants send remittances. In their study of Cameroon, Schrieder and Knerr (2000) drew similar conclusions about factors that motivate people to send remittances; young men who were abroad sent money back in order to be eligible to inherit land and valuables.

Many factors, in addition to years since migration, are important in predicting the amount of remittances. For example, it appears that more highly-educated immigrants remit less money. This might be because they are often able to bring their immediate family with them to the host country thanks to more lenient immigration laws in host countries towards high-skilled labor. In addition, they are more likely to be able to afford travel back to their home country and bring money back with them. This is a type of informal remittance which is not captured by the measurements of World Bank. Another reason why more highly skilled migrants tend to remit less might be because they do not have to pay their family back for the transportation costs incurred with the initial migration. For many lower-skilled migrants, their trip was funded by family and friends, with an explicit agreement that all expenses would be
reimbursed, and that the emigrant would also send back remittances and other goods from the host country.

**Policies to Harness Remittances**

There is an exorbitant amount of interest in harnessing remittances to spur growth in developing countries. Remittances are spent on basic needs of the family, including purchasing food, paying for education, clothing, and housing and very little of the money is spent on luxury goods (Aguinas 2006; Orozco 2004). In addition, Adams (2006) in his research on a large household survey in Ghana, finds that remittances reduce the level, depth and severity of poverty in Ghana. These findings, specific to Ghana, are consistent with other studies on the impact of remittances in developing countries. Based on the results of these studies, there has been a growing interest in policies to increase the scope and magnitude of remittances.

While in their nascent stages, interesting initiatives have been put forth by governments, non-governmental organizations, and donors alike to harness remittances. Beginning in 1999, the Mexican government instituted the “tres por uno” program in specific states where the federal, state and local governments each match one dollar for every dollar in remittances sent back through formal channels for
infrastructure-development purposes (Dallas Fed 2004). The Pan American Development Foundation (PADF) has begun working with diaspora groups, governments, and bi-lateral donor organizations in Latin American and Caribbean countries to coordinate initiatives to improve the overall impact of remittances. In Haiti, there was a USAID/PADF matching initiative, contributing $1.75 for every dollar sent back through approved diasporic associations for the purposes of rebuilding and repairing schools (PADF 2003).

Aside from subsidizing remittances directly, there has been a recent trend for countries to officially encourage continued involvement and integration of émigrés; traditional sending countries have recently begun to reassure their citizens abroad that, even if they do decide to naturalize, they would be welcomed back to their home country and that their citizenship would not be revoked. Countries such as Mexico, Turkey, Colombia, the Dominican Republic, and El Salvador have encouraged the dual nationality of their citizens (Spiro 1997, Faist 2007). Indian policy goes so far as to extend legal status to non-resident Indians and people of Indian origins (ICG 2007).

It is important to note that there is a temporary nature to Ghanaian migration, with many if not most migrants planning on returning to their home country. Ammassari and Black (2001), in studies funded by the Sussex Center for Migration Research, have found a positive correlation between return migration and the
frequency and amount of remittances sent back home (Higazi 2005). According to findings by Mohan and Henry (2003), one of the principle concerns of the Ghanaians abroad is amassing enough money to establish homes back in Ghana, often in Accra or Kumasi. This return migration model indicates that the ultimate loyalties of Ghanaian migrants are to Ghana, and not to their host country.

Recently, the Ghanaian government has moved to harness some benefits of migration, including remittances and return migration of more highly-skilled Ghanaians. In July of 2002, the Minister of Defense and Acting Minister of the Interior launched the Ghana Dual Citizenship Regulation Act permitting Ghanaians with foreign passports to apply for Ghanaian citizenship. This initiative formally encourages Ghanaians living abroad to apply for citizenship in their host country while maintaining their original Ghanaian citizenship. It also encourages those who have already become citizens of their host countries and second and third generation Ghanaians to apply for Ghanaian dual-citizenship. The Minister said, “I can now clearly state that the government’s policy of making it possible for all Ghanaians living abroad to become citizens of Ghana as well as citizens of other countries is now a reality” (Anarfi et al 2003, quoting Ghana web). Fitzgerald notes that such a policy "reinforces the institutional power of states by extending ties to nationals living outside state territory” (Fitzgerald 2006).
Changing Face of Naturalization

Naturalization used to symbolize the cutting of formal ties with the home countries, and the home countries reciprocating. Host countries insisted that upon naturalization, citizens terminated their rights and obligations in their former country and pledged their allegiance to their new country. However, contemporary transnationalism has changed the notion of international migration and citizenship. Whereas migration was originally seen as a permanent measure, in the post-World War II era, return-migration is the norm. This notion of temporary migration has resulted from guest worker programs, international travel, which has become increasingly easier, and technological advances that have enabled migrants to maintain ties with their sending countries.

Rights which were once reserved for citizens are now being granted to citizens and non-citizens alike. For example, the International Labour Organization has four up-to-date instruments that deal specifically with the treatment of migrant workers (Landuyt 2006) including Convention No. 97 on Migration for Employment. This Convention, which was ratified by the UK, Germany and the Netherlands (and acknowledged by the US), stipulates that ratifying countries must treat migrant workers fairly “without discrimination in respect of nationality, race, religion or sex…no less favourable than that which it applies to its own nationals” (ILO 1949).
The convention goes on to cite services and provisions to which legal migrants must have access: social security, freedom of association, overtime arrangements and holidays with pay, and employment taxes. In essence, these international norms facilitate the incorporation of migrants into the host country, whereby the migrants become part of the polity of the country without necessarily becoming citizens (Soysal 1993). Of the four countries examined in the present study, the Netherlands offers the widest breadth of rights to non-citizens, including giving all legal residents, regardless of nationality, the right to vote in local elections (Howard 2005).

Recent changes in immigration legislation in host countries have weakened citizenship requirements, reducing residency requirements (in the case of Germany) and allowing for immigrants to have dual citizenship. However, citizenship in a host country does not necessarily imply switching allegiance to the host country (Howard 2005; Soysal 1993). Citizenship, as defined by Bertocchi and Strozzi (2006) is “the legal institution that designates full membership in a state and the associated rights and duties. It provides benefits such as the right to vote, better employment opportunities, the ability to travel without restrictions, legal protection in case of criminal charges, and the possibility to obtain a visa for a relative” (4). But, the concept of dual citizenship implies having an economic and political allegiance and full membership to both countries.
In a study conducted in the Netherlands, Bevelander and Veenman identified three advantages to seeking citizenship: elimination of travel restrictions within the European Union; entitlement of voting rights in general elections; and most importantly, increased labor market options, thereby increasing earnings potential (2006). Becoming a citizen in an EU-15 nation entitles a person to vote in general elections, grants EU citizenship as introduced in the Treaty of Maastricht, and eliminates the stigma of being a foreign national (Weil 2006).

Bevelander and Veenman (2006) studied factors that cause naturalization in the Netherlands and found that people who are more highly educated, as well as those who have been socialized through the participation in the Dutch education system, are more likely to seek naturalization. They also found that people who immigrated because of war or some other political reason are more likely to naturalize than those who came for economic reasons. These findings are consistent with what we would expect to observe, based on the NEM theory of migration, especially as immigrants who fled for political reasons or because of war identify less with their sending country, oftentimes feeling alienated. They do not have strong ties to their home communities and often have immigrated on a permanent basis. Unlike economic migrants who are only in the host country temporarily, Bevelander and Veenman also found that citizen acquisition has a positive and significant effect on job chances and that those immigrants who
have Dutch citizenship are more likely to participate in the labor market than those without Dutch citizenship (2006).

While there has been an increased interest in dual citizenship, as seen in the literature, little reliable data exist on the number of dual citizens worldwide, especially as the policies on immigration (and dual citizenship in particular) are not always enforced as they are written. Germany and the United Kingdom both formally allow emigrants to have dual-nationality. On the other hand, the Netherlands and the United States have regulations forbidding it. However, neither country enforces these regulations; in both there is a de facto common practice allowing naturalized citizens to keep their original citizenship (Howard 2005). In any case, legislation about dual nationality is hard to enforce as governments often do not know which of their citizens have multiple nationalities. The oath of renunciation taken during the naturalization ceremony has rarely been enforced, allowing for many naturalized citizens to maintain dual nationality by failing nullifying their previous nationality. In 1985, there were estimated to be between three and four million people with dual nationalities in Western Europe alone (Soysal 1993 citing Perotti, Costes, and Llaumett 1989). Based on the liberalization of policies towards dual nationality in the past twenty years by OECD countries, it is likely that this figure has increased.
Ghanaians Seeking Citizenship Abroad

The Government of Ghana’s policy of encouraging emigrants to obtain dual citizenship by the Government of Ghana has yet to be studied in great depth. In his study in 1995, nearly a decade prior to the implementation of the policy, Peil (1995) found few Ghanaians émigrés seek out citizenship in their host countries; however, this finding was contested later by Akyeampong (2000) who found that many well-educated Ghanaians living in the United States have sought citizenship or permanent residency status (Higazi 2005). Both of these studies, however, pre-date the current policy.

This paper sheds light on the effects of the new policy. Using data collected at least a year and a half after the formal launch of the Ghana Dual Citizen Regulation, it looks at the remittance patterns of Ghanaians residing in four countries: the US, UK, Germany and the Netherlands, of whom nearly one third are citizens of their host country. It attempts to answer the question: If an immigrant has become naturalized in his host country, does this imply, as the Ghanaian government hopes, that his allegiance and identification to Ghana has not waned, and he will continue sending the same levels of financial support to his family and friends at home?
III. CONCEPTUAL FRAMEWORK

Hypothesis

The null hypothesis, which will be tested, is that, holding all else constant, citizenship in a host country does not have a relationship with the total amount of money remitted annually. If there is no relationship, or a negative relationship, the Government of Ghana might consider alternative strategies to encourage the diaspora members to send more remittances. However, based on the findings that Ghanaians, on average, tend to send more money back to their country as their length of time abroad increases, along with the recent acceptance of dual citizenship either implicitly (through ignoring written laws) or explicitly by both the host and sending countries, I expect to find that there is a positive relationship between citizenship and amount remitted. Such a finding would help to validate the government decision to encourage Ghanaians abroad to become naturalized citizens of their host countries.

The regression model is based on research conducted on diaspora groups who remit by researchers at the Inter-American Dialogue. However, a dummy variable for citizenship will be included in the model. This variable does not take into account dual citizenship status, but instead indicates whether the person is a citizen of the host country. The other variables that will be included in the model are consistent with migration literature. These include gender, education, length of time abroad—which is
roughly comparable to the years since migration (YSM) and income. In addition, because there is some variation among the host countries in terms of citizenship laws and regulations, and other country specific characteristics, the countries will be coded as dummy variables.

IV. DATA AND METHODS

Data Source

Between 2004 and 2006, research teams commissioned by Dr. Manuel Orozco of the Inter-American Dialogue, conducted surveys of Ghanaians living in the United States, Germany, Holland and the United Kingdom. The data set I am using is a combination of two rounds of these surveys. The results of the first round were published in 2005 in a report entitled “Diasporas, Development and Transnational integration: Ghanaians in the US, UK and Germany,” which was commissioned by Citizen International through the U.S. Agency for International Development (USAID). The results of the second survey of immigrants in Holland have not yet been published. The initial three-country survey was conducted in cities which have large populations of Ghanaians: New York, Washington, DC, London and Frankfurt. Of the 986 people who were surveyed, 842 were from Ghana, the rest from
neighboring West African countries. For the purposes of this study, I will only examine the Ghanaians. The second survey, conducted in Holland, was also centered on areas with historically large populations of Ghanaians. In both surveys, researchers identified money transferring establishment and conducted surveys within close proximity of these areas.

The first question posed to the Ghanaian was whether or not he sends remittances. If the answer was affirmative, the survey was continued; if the respondent did not send remittances, the researcher did not continue to collect information. Respondents volunteered to participate in the survey. Thus, those who opted to participate responded to virtually all of the questions, although there are some missing values where respondents did not feel comfortable giving information about personal finances. For the variables of interest to this research, there are few concerns with missing data.

I have concatenated the two data sets to create a single dataset because the survey instruments are similar and the survey methodology was the same. The survey of Ghanaians in Germany, the US, and the UK was more extensive than the survey of Ghanaians in the Netherlands, and contained questions that are irrelevant to this paper (mostly dealing with specific financial transactions). These questions were not included in the harmonized data set.
Analysis Plan

This paper uses a simple OLS regression model. All of the respondents send remittances, what differs is the amount sent and frequency of remitting. The variable of interest for the study is citizenship: whether having citizenship in a host country has any association with the amount and frequency of remittances. Thus, there will be three models, with the dependent variable as the log of annual remittances as reported during the interviews. The first model simply regresses citizenship on the dependent variable.

Model I: \[ Y_{\text{Log Amt Remitted}} = \beta_0 + \beta_1 \text{Citizen} + \mu \]

The second model includes more dependent variables, adhering to variables established in the literature of remittances and immigration. These variables include: gender, years since migration, connection to index (as measured by using the 5Ts), income and education level.

Model II: \[ Y_{\text{Log Amt Remitted}} = \beta_0 + \beta_1 \text{Citizen} + \beta_2 \text{Gender} + \beta_3 \text{Years Since Migration} + \beta_4 \text{Connection to Ghana Index} + \beta_5 \text{Income} + \beta_6 \text{Education} + \mu \]
The third model is the most complicated, where country effects are controlled for. It builds on Model 2 by adding dummy variables for each of the four host countries.

Model III:  \[ Y_{\text{Log Amt Remitted}} = \beta_0 + \beta_1 \text{Citizen} + \beta_2 \text{Gender} + \beta_3 \text{Years Since Migration} + \beta_4 \text{Connection to Ghana Index} + \beta_5 \text{Income} + \beta_6 \text{Education} + \beta_7 \text{US} + \beta_8 \text{UK} + \beta_9 \text{Germany} + \beta_{10} \text{Netherlands} + \mu \]

V. VARIABLES

Dependent variable

- **The Log of Annual Remittances**: In order to create a linear relationship, the dependent variable, annual remittances was logged. Annual remittances were calculated by combining two of the survey questions about the frequency of remitting and the amount sent back on average.

Independent variables

- **Citizen**: This is the main variable of interest, and is a dummy variable for whether or not the respondents have citizenship in their host country.
expected there to be a relationship between having citizenship in the host country and annual remittances.

- **Years Since Migration:** There are a series of dummy variables that identify how long the survey respondents have been residing in their host country. These have been broken down into four groups. Based on previous literature about West African migrants who remit, I expect that the longer a person has resided in the host country, the greater the amount of money he will back home. Someone who has spent greater time abroad often has better labor market opportunities, reflected in better jobs with higher wages.

- **Gender:** Based on the literature, the majority of migrants from Sub Saharan Africa are men, and men are more likely than women to participate in the labor market. Thus, I expect to find there to be a positive relationship between men’s earnings and amount spent on remittances, as compared to women.

- **Connection to Ghana Index:** This is an index that synthesizes the concept of the 5Ts, developed by Orozco, into one continuous variable ranging from 0 to 4 in order to get an approximation of immigrants’ actual connection to Ghana. People who *travel* back to Ghana at least once a year get a value of one. Those
who participate in *nostalgic trade* by purchasing Ghanaian-made goods get a value of one. Those people who spend at least $2,000 when they go to Ghana for *tourism* get a value of one. Finally, those Ghanaians who spend at least fifteen minutes a week on the phone with people in Ghana also get a value of one. Because everyone in the sample remits (*transfers money*), this was not included in the index. The highest possible connection score is 4. This variable is meant to describe a person’s feeling of connection to Ghana. According to the literature, the more connected someone feels towards his home country, the greater the amount of remittances he will send. Thus, I expect a positive relationship between the Index variable and remittances.

- **Income:** Four dummy variables are included in the model to describe the income level of the respondents. Unlike the other variables that had high survey response rates, the response rate for income was quite low. There were two survey questions inquiring after income. Of the two questions, respondents were more likely to answer the less precise question, where they identified ranges in which their income fell. Compared to the response rates for the other questions in the survey, the response rate of 85 percent was quite low. Those who did not provide their income probably refused to answer this question.
because they felt it to be too personal, or did not trust the interviewer. Both
women and men did not answer the question, non-citizens and citizens alike.
Thus, according to the statistical analysis, the composition of the people who
did not respond to the question on income was not strikingly different than
those who did respond. In addition, there was an even distribution of people
with various educational levels who refused to answer the question. For these
reasons, and to be consistent with the previous studies done on remittances,
income was included in this study.

The four dummy income variables are coded for people with high
income, average income, low income, and those who did not respond. I predict
that people who have average and high income values will remit more than
people who have low income, as high income indicates having more disposable
income. It is important to note that this does not imply that they will give, on
average, a greater percentage of their income towards remittances, rather that in
absolute terms the amount they give will be greater as their income level
increases.

- **Education:** There are three dummy variables to measure education levels of
  the Ghanaians surveyed: at least some college (highly educated), a high school
degree (average educated), and having completed less than a high school degree (poorly educated). The literature suggests that there is a negative relationship between having a college education and sending remittances, as these people are more likely to identify more with their host country than with their home country. However, I do not expect to see this negative relationship with this data because the surveys did not ask whether people had graduate degrees, and I could not control for this group. Having a higher education level is often correlated with having more work potential and higher income levels. Therefore, I expect people who fall into my average and high education categories to remit more in absolute terms than those who are poorly educated.

VI. RESULTS

DESCRIPTIVE STATISTICS

As reported in Tables 1 and 2, the sample consisted of 1172 Ghanaians who were interviewed: 321 who were surveyed in the United States, 295 in the United Kingdom, 226 in Germany and 330 in the Netherlands. Sixty-one percent were men. The vast majority (73 percent) were between the ages of 30 and 49 years old. Forty-nine percent of all those surveyed had completed some college, with an additional 32
percent who were high school graduates. Nearly forty percent of those surveyed earned less than $15,000 annually. Only 18 percent earned more than $25,000. On average, the annual amount remitted was $2,781.99 with the median at $1,800. The range from the 25th to 75th percentiles was $1,200 to $6,000. Out of a possible four points, the average connectivity to Ghana index score was 2.48, demonstrating that the majority of the respondents were still quite connected to their home country.
Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th>Dependent Variable: Log of Annual Remittances Reported</th>
<th>Total Sample N=1172</th>
<th>US N=226</th>
<th>UK N=295</th>
<th>Germany N=321</th>
<th>Netherlands N=330</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>61%</td>
<td>60%</td>
<td>67%</td>
<td>62%</td>
<td>57%</td>
</tr>
<tr>
<td>Female</td>
<td>39%</td>
<td>40%</td>
<td>33%</td>
<td>38%</td>
<td>43%</td>
</tr>
<tr>
<td>Citizen of Host Country</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>34%</td>
<td>22%</td>
<td>42%</td>
<td>41%</td>
<td>29%</td>
</tr>
<tr>
<td>No</td>
<td>66%</td>
<td>78%</td>
<td>58%</td>
<td>59%</td>
<td>71%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-29 years old</td>
<td>8%</td>
<td>11%</td>
<td>19%</td>
<td>8%</td>
<td>5%</td>
</tr>
<tr>
<td>30-39 years old</td>
<td>38%</td>
<td>51%</td>
<td>32%</td>
<td>29%</td>
<td>37%</td>
</tr>
<tr>
<td>40-49 years old</td>
<td>35%</td>
<td>32%</td>
<td>20%</td>
<td>36%</td>
<td>52%</td>
</tr>
<tr>
<td>50-59 years old</td>
<td>11%</td>
<td>37%</td>
<td>14%</td>
<td>22%</td>
<td>5%</td>
</tr>
<tr>
<td>60-69 years old</td>
<td>5%</td>
<td>38%</td>
<td>15%</td>
<td>5%</td>
<td>0.30%</td>
</tr>
<tr>
<td>Years Since Migration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>2%</td>
<td>2%</td>
<td>5%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>1-3 years</td>
<td>11%</td>
<td>8%</td>
<td>21%</td>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>4-6 years</td>
<td>20%</td>
<td>30%</td>
<td>20%</td>
<td>8%</td>
<td>19%</td>
</tr>
<tr>
<td>7-9 years</td>
<td>20%</td>
<td>37%</td>
<td>12%</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>10-12 years</td>
<td>17%</td>
<td>16%</td>
<td>7%</td>
<td>21%</td>
<td>25%</td>
</tr>
<tr>
<td>13-15 years</td>
<td>10%</td>
<td>4%</td>
<td>10%</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>15+ years</td>
<td>19%</td>
<td>3%</td>
<td>26%</td>
<td>34%</td>
<td>19%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than Primary School</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Completed Primary School</td>
<td>9%</td>
<td>10%</td>
<td>1%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>High School</td>
<td>32%</td>
<td>35%</td>
<td>14%</td>
<td>62%</td>
<td>26%</td>
</tr>
<tr>
<td>Some College</td>
<td>29%</td>
<td>38%</td>
<td>28%</td>
<td>18%</td>
<td>28%</td>
</tr>
<tr>
<td>College Degree</td>
<td>20%</td>
<td>15%</td>
<td>57%</td>
<td>8%</td>
<td>30%</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Income (&lt;$15,000)</td>
<td>39%</td>
<td>34%</td>
<td>40%</td>
<td>11%</td>
<td>67%</td>
</tr>
<tr>
<td>Mid Income ($15,000 - $25,000)</td>
<td>29%</td>
<td>16%</td>
<td>33%</td>
<td>36%</td>
<td>26%</td>
</tr>
<tr>
<td>High Income (&gt;=$25,000)</td>
<td>18%</td>
<td>5%</td>
<td>19%</td>
<td>36%</td>
<td>7%</td>
</tr>
<tr>
<td>Income Missing</td>
<td>15%</td>
<td>44%</td>
<td>9%</td>
<td>16%</td>
<td>0%</td>
</tr>
<tr>
<td>Remittances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>$2,781</td>
<td>$1,643</td>
<td>$2,315</td>
<td>$4,746</td>
<td>$2,053</td>
</tr>
<tr>
<td>Median</td>
<td>$1,800</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$4,800</td>
<td>$1,800</td>
</tr>
<tr>
<td>Mode</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$6,000</td>
<td>$1,800</td>
</tr>
<tr>
<td>25% percentile</td>
<td>$1,200</td>
<td>$1,200</td>
<td>$800</td>
<td>$6,000</td>
<td>$1,500</td>
</tr>
<tr>
<td>75% percentile</td>
<td>$6,000</td>
<td>$1,800</td>
<td>$2,400</td>
<td>$2,400</td>
<td>$2,400</td>
</tr>
</tbody>
</table>

Source: author's data
The following four sections focus more specifically on the descriptive statistics disaggregated by country level. The final section focuses specifically on citizenship both on an aggregate level, and broken down by demographics and country.

**Germany:**

Compared to the other countries, Ghanaians in Germany, with the average connectivity index score of 2.08 compared to the aggregate mean of 2.48 across all countries, are not as connected to Ghana as their compatriots residing in the European...
countries, with the average score being 2.08 compared to the aggregate mean of 2.48 across all countries. The educational distribution for these Ghanaians was relatively normal, with 35 percent having completed high school and another 53 percent having completed at least some college. Compared to the other host countries, the Ghanaians who participated in the survey were relatively recent arrivals to Germany, with only 7 percent having lived there for more than twelve years. The majority (67 percent) had been living in the Germany for between four and nine years. Ghanaians in Germany remitted, on average $1,643.00 a year, which is about $1000 less than the aggregate average.

**United States:**

Ghanaians living in the United States send back, on average, the greatest amount of remittances of the four host countries. The average amount sent per year is $4,745.47. Sixty-two percent of Ghanaians in the US have at least completed their high school degrees, with an addition 26 percent having completed at least some college. A third of those interviewed have lived in the United States for at least fifteen years: 51 percent have resided in the US for less than six years and only 13 percent had
lived in the US for less than six years. Seventy two percent earn at least $15,000 a year, and of those, 36 percent earn at least $25,000 a year.

The Netherlands:

The majority of Ghanaians in the Netherlands who participated in the study are between the ages of 30 and 49 years old. Less than 6 percent are older than 50, and only 5 percent are in their twenties. Fifty-eight percent of those surveyed had completed some college, and an additional 26 percent had completed high school. Two thirds of those surveyed earn less than $15,000 annually, and only 7 percent earn more than $25,000. On average, Ghanaians in the Netherlands give $2,053.24 annually in remittances, with the median at $1800. The 5T index measurement for the Netherlands (2.34) is the second lowest after Germany.

United Kingdom:

With a mean value at 2.47 Ghanaians residing in the UK have a Connectivity to Ghana index score that is closest to the overall mean of 2.48. On average the amount remitted was $2315.47 with the median being $1200. The UK hosts the most highly-
educated immigrants, with 65% of those surveyed having had some college. The majority of the respondents were in their twenties through their forties. Despite having, on average, the most highly-educated émigrés of the four countries, nearly 40 percent of those surveyed reported earning less than $15,000 a year, and only 19 percent reported earning more than $25,000 a year. The findings for Ghanaians in the UK and their income levels are counterintuitive to what would be expected, as it would seem that education level and income would be highly correlated.

**Citizenship:**

Overall, 34 percent of the people surveyed were citizens of their host country. As shown in Table 3, when disaggregated by education level, 63 percent of those surveyed who were considered to be highly education (having at least some university schooling) were citizens of their host country. Only 28 percent of those who had completed high school were citizens of their host country, and this figure fell even further for those surveyed who had not completed high school; 5 percent of those who had less than a high school level education were citizens of their host country. These findings are consistent with what we would expect from the literature, and current
immigration laws which make naturalization more accessible to more highly-educated migrants.

When disaggregated by country, the UK had the greatest percentage of naturalized citizens at 42 percent, followed closely by the US at 41 percent. Twenty-eight percent of Ghanaians in the Netherlands were citizens and only 22 percent of those in Germany were naturalized. This breakdown corresponds to the laws and policies the four countries have towards citizenship. The US has the most liberal of policies, with pure *jus soli*, followed by the UK and the Netherlands. However, the UK has agreements allowing people from former colonies to gain citizenship more easily, thus this might explain why the UK had the highest percentage of naturalized citizens. Germany has the most restrictive of policies, only recently changing from rules based on *jus sanguini* to those based on *jus soli*, but with strict qualifications.

When further broken down by educational level, two distinct patterns emerge. In the United States and the United Kingdom, there is a positive relationship between education level and whether or not the migrant was naturalized. In the US, 67 percent of those with some university education were naturalized. In the UK, this figure leapt to 85 percent. Of those who completed high school, 28 percent were naturalized in the US, whereas only 7 percent were naturalized in the UK. According to the survey sample, only 2 percents of Ghanaians living in the US with less than a high school
education were naturalized, and there were no naturalized Ghanaians with this low level of education surveyed in the UK.

Table 3: Citizenship broken down by education level

<table>
<thead>
<tr>
<th>Country</th>
<th>Low Education &lt; high school diploma</th>
<th>Average Education high school diploma</th>
<th>High Education &gt; high school diploma</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>2%</td>
<td>28%</td>
<td>67%</td>
</tr>
<tr>
<td>UK</td>
<td>0%</td>
<td>7%</td>
<td>85%</td>
</tr>
<tr>
<td>Germany</td>
<td>8%</td>
<td>45%</td>
<td>43%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4%</td>
<td>46%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Source: author's data

The pattern of the US and the UK differs from the pattern that emerges from the Netherlands and Germany. In these two countries, a lower percentage of Ghanaians with higher educations are naturalized, compared to those who have a merely a high school diploma. For example, 46 percent of Ghanaians with a high school degree in the Netherlands were naturalized, compared to only 39 percent who had some university education. These figures are similar to the German figures, with 45 percent of those surveyed who possessed high school degree being naturalized,
compared to 43 percent of those with at least some university coursework. Only 8 percent of Ghanaians residing in Germany who had less than a high school education were naturalized; this figure was 4 percent for the sample surveyed in the Netherlands.

These findings about education level and naturalization are interesting, in that the countries with the two highest naturalization rates (the UK and US) were more likely naturalize those Ghanaians who were more highly educated. In addition, both the Netherlands and Germany have a language requirement as a component of their naturalization requirements. Ghanaian immigrants have to master Dutch or German before applying for citizenship, making it relatively harder to become a citizen of these countries compared to the Anglophone countries, where they would not have to master any new languages.

**Regression Results**

Tables 4 and 5 contain the regression results for the analysis: the former containing the OLS regressions for the three models and Table 5 contains the OLS regressions for Model II with the data disaggregated by host country. I chose my models based on the forward selection procedure, where each model added more
independent variables to the previous model, until a model that maximizes the explanatory power is reached.

The first model, which had the lowest explanatory power of any of the models, with an r-squared value of 0.01, regressed the variable of interest, citizenship, on the log of annual remittances reported. According to the regression analysis, there is a significant positive relationship between citizenship and the amount of remittances sent back to Ghana. However, the explanatory power is low as is seen in the poor r-squared value. Model II, which includes many other variables, including citizen, years since migration, gender, connection to Ghana index, income, and education levels, has greater explanatory power with an r-squared value of 0.20. Model III, however, has the highest explanatory power, with an r-squared value of 0.26. This model, in addition to including all of the variables in Model II, controls for the fact that the survey was conducted in four different countries by including country dummies, thus allowing me to take into account the variation in migration laws and realities in the four countries. Ultimately, because of the superiority of the model’s explanatory power, the results from the third regression will be interpreted.
## Table 4: Results of OLS Regressions

<table>
<thead>
<tr>
<th>Dependent Variable: Log of Annual Remittances Reported</th>
<th>Model Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>Constant</td>
<td>7.53</td>
</tr>
<tr>
<td></td>
<td>-0.03</td>
</tr>
<tr>
<td>Citizen</td>
<td>0.20***</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
</tr>
<tr>
<td>0-3 Years Since Migration</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>(-0.09)</td>
</tr>
<tr>
<td>4-9 Years Since Migration</td>
<td>0.41***</td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
</tr>
<tr>
<td>10+ Years Since Migration</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
</tr>
<tr>
<td>Gender</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
</tr>
<tr>
<td>Connection to Ghana Index</td>
<td>0.21***</td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
</tr>
<tr>
<td>Income high</td>
<td>0.57***</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
</tr>
<tr>
<td>Income mid</td>
<td>-0.13*</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
</tr>
<tr>
<td>Income Low</td>
<td>-0.13**</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
</tr>
<tr>
<td>At least some college</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
</tr>
<tr>
<td>High School Degree</td>
<td>0.15**</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
</tr>
<tr>
<td>UK</td>
<td>-0.33***</td>
</tr>
<tr>
<td>Germany</td>
<td>0.44***</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
</tr>
<tr>
<td>US</td>
<td>-0.40***</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
</tr>
<tr>
<td>Number of observations</td>
<td>1147</td>
</tr>
<tr>
<td>R2</td>
<td>0.0127</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.0118</td>
</tr>
</tbody>
</table>

Source: author’s data. Note: Value of standard error in parentheses; significant at 1 percent; **significant at 5 percent; * significant at 10 percent
It is interesting to note that among the three models, the coefficient for the variable citizenship changes from being positive and highly statistically significant at the 99 percent level (p < .001) to having a negative coefficient and being marginally statistically significant at the 90 percent level (p < .10). The sign change on the regression coefficient for citizenship from positive to negative occurred in Model II. Models II and III are superior to Model I in that they hold other variables of interest constant, including income, education and the connectivity to Ghana index. Once these other variables are controlled for, citizenship appears to have a less positive relationship with remittances. Indeed, as could be seen in Table 5 (on page 35), which shows the results of regressions run based on Model II for each individual country, the relationship between citizenship and remittances is statistically significant for only one country: the United States, and this relationship is a negative relationship.

Based on the regression results from Model III, using the Netherlands as the reference group, I find that, on average, holding all else constant, Ghanaians who migrated to the UK will spend 33 percent less on remittances; and those who migrated to Germany will spend 40 percent less. As could be seen in the descriptive statistics, Ghanaians in the US remit more than their counterparts in other countries. This remains the case after controlling for other explanatory variables. In fact, Ghanaians in
the US, spend, on average, 44 percent more on remittances than their counterparts in the Netherlands. Thus, the regression results show that migrants in the US and the Netherlands are more generous in sending remittances back than their counterparts in Germany and the UK.

The regression analyses suggest that the relationship between citizenship and amount of remittances is marginally negative. That is, a migrant who is a citizen of his host country, will spend nearly 9 percent less on remittances annually than a migrant who does not have this citizenship status.

Table 4 reflects the fact that the migrants who have a higher income send back a greater amount of remittances annually. Indeed, according to the results of Model III reported in Table 4, Ghanaians with relatively high incomes compared to the other Ghanaians who participated in the study (over $25,000 annually) spend, on average, 26 percent more on remittances than those who did not report their incomes. Conversely, Ghanaian migrants earning $15,000 annually or less, spend 19 percent less on remittances annually. It would be expected that those who have more money at their disposable send greater amounts back to Ghana.

Finally, the results of the regression analysis show that compared to people who have not completed high school, Ghanaians who are better educated tend to send more
remittances per year. Holding all else constant, those Ghanaians who have a high school degree send, on average 22 percent more in remittances than those who have not completed high school. Those who have completed at least some college, send 19 percent more in remittances than those who have not completed high school.

After having chosen Model III as the superior model, in that it holds the country of migration constant, I separated the data by country (US, UK, Netherlands and Germany), and re-ran Model II four times to further examine any country effects that might exist. Because the sample sizes for these four regressions are smaller than the aggregated sample used in Model III, there are fewer degrees of freedom associated with each regression. Table 5 shows the results of the regressions with the data disaggregated by host country. Of the four host countries, the variable for citizenship was statistically significant in only one country: the United States. Indeed, holding all else constant, a Ghanaian migrant with American citizenship will spend, on average, 30 percent less on remittances than a Ghanaian migrant without American citizenship.
Table 5: Results of OLS (Model II) Regression Disaggregated by Country

<table>
<thead>
<tr>
<th>Dependent Variable: Log of Annual Remittances Reported</th>
<th>US</th>
<th>UK</th>
<th>Germany</th>
<th>Netherlands&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>7.47</td>
<td>6.48</td>
<td>6.47</td>
<td>7.31</td>
</tr>
<tr>
<td></td>
<td>-0.24</td>
<td>-0.33</td>
<td>(0.19)</td>
<td>-0.11</td>
</tr>
<tr>
<td>Citizen</td>
<td>-0.29***</td>
<td>-0.04</td>
<td>0.05</td>
<td>-0.07</td>
</tr>
<tr>
<td></td>
<td>-0.09</td>
<td>(0.16)</td>
<td>(0.13)</td>
<td>-0.07</td>
</tr>
<tr>
<td>0-3 Years Since Migration</td>
<td>-0.32</td>
<td>-0.19</td>
<td>-0.08</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>-0.23</td>
<td>(0.21)</td>
<td>(0.22)</td>
<td>-0.11</td>
</tr>
<tr>
<td>4-9 Years Since Migration</td>
<td>0.18</td>
<td>-0.16</td>
<td>0.06</td>
<td>-0.02</td>
</tr>
<tr>
<td></td>
<td>(0.20)</td>
<td>(0.18)</td>
<td>(0.15)</td>
<td>-0.09</td>
</tr>
<tr>
<td>10+ Years Since Migration</td>
<td>0.1</td>
<td>-0.08</td>
<td>-0.01</td>
<td>-0.19***</td>
</tr>
<tr>
<td></td>
<td>(0.20)</td>
<td>(0.18)</td>
<td>(0.12)</td>
<td>(0.07)</td>
</tr>
<tr>
<td>Gender</td>
<td>0.04</td>
<td>0.08</td>
<td>0.14</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
<td>(0.13)</td>
<td>(0.10)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Connection to Ghana Index</td>
<td>0.14***</td>
<td>0.20***</td>
<td>0.26***</td>
<td>0.07***</td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.06)</td>
<td>(0.05)</td>
<td>(0.02)</td>
</tr>
<tr>
<td>Income high</td>
<td>0.28**</td>
<td>0.57**</td>
<td>0.27</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.26)</td>
<td>(0.23)</td>
<td>(0.10)</td>
</tr>
<tr>
<td>Income mid</td>
<td>-0.07</td>
<td>0.17</td>
<td>0.05</td>
<td>0.11*</td>
</tr>
<tr>
<td></td>
<td>(0.11)</td>
<td>(0.24)</td>
<td>(0.15)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Income low</td>
<td>-0.42***</td>
<td>0.06</td>
<td>-0.40***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.15)</td>
<td>(0.25)</td>
<td>(0.11)</td>
<td></td>
</tr>
<tr>
<td>At least some college</td>
<td>0.35***</td>
<td>0.21</td>
<td>0.15</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
<td>(0.20)</td>
<td>(0.16)</td>
<td>(0.08)</td>
</tr>
<tr>
<td>High School Degree</td>
<td>0.39***</td>
<td>0.08</td>
<td>0.24*</td>
<td>0.18**</td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
<td>(0.25)</td>
<td>(0.13)</td>
<td>(0.08)</td>
</tr>
<tr>
<td>Number of observations used</td>
<td>320</td>
<td>257</td>
<td>224</td>
<td>330</td>
</tr>
<tr>
<td>R2</td>
<td>0.22</td>
<td>0.15</td>
<td>0.24</td>
<td>0.12</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.20</td>
<td>0.11</td>
<td>0.20</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Source: Author’s data. Note: Value of standard error in parentheses; ***significant at 1 percent; ** significant at 5 percent; * significant at 10 percent.<sup>1</sup> because there was no missing income reported, low income replaced unknown income as the reference category.
The results show that the higher someone scores on the connectivity to Ghana index, which is based on the 5Ts theory put forth by Manuel Orozco, the greater the amount of remittances he will send back to Ghana. This is consistent throughout all of the regression analysis, including Model III where the country dummy variables were included as well as when the data were disaggregated according to host country as reported in Table 6. According to this, Model III, which included all of the 1172 observations and the country dummy variables, a one point increase in the index of connectivity results in a 16 percent increase in the amount of remittances sent. When the data are disaggregated by country (see Table 6), we see that the index is still highly statistically significant for all countries, but the magnitude of the effects are different. For example, in Germany, a one point increase in the index of connectivity is associated with a 26 percent increase in the amount of remittances; whereas in the UK it is associated with a 20 percent increase; in the US, a 14 percent increase, and in the Netherlands, a mere 7 percent increase. These findings are consistent with the literature, since they show that the more strongly one is tied to a home country, through travel, trade, tourism and transportation, the more strongly one associates himself with his home country and the people who remain back there.

Overall, the results from the regression analyses are consistent with initial expectations. Ghanaians who are more educated, better paid, and more closely
connected to Ghana (based on the 5T Index) send a greater amount of remittances to Ghana. The one finding that was not consistent with my initial expectations was that Ghanaians who have citizenship in their host country, especially in the United States, send less remittances than non-citizens.

VII. LIMITATIONS OF THE DATA

The results of this paper cannot be widely generalized, because there was not a random sampling of the survey respondents. Given the nature of the survey, which was meant to collect information about Ghanaians who remit money back to their home country, the majority of respondents have preferences to send money through specific money transfer locations. A large fraction of remittances are sent back informally, through networks and compatriots traveling abroad. This was not captured in this dataset. Therefore, I expect the outcomes will only be reflective of the 1200 Ghanaians who participated in the surveys, not of all Ghanaians living abroad in the four countries. Basing the analysis on a random sample, although ideal, would have been impossible for a number of reasons, including financial constraints and the fact that there are no central directories of Ghanaians living abroad.
Also, the great disparities between the World Bank and the Bank of Ghana’s estimates of total remittances, indicate that the majority of remittances are sent via informal means. The survey, upon which this study was based, was conducted in close proximity to formal money transfer centers. Thus, it is unclear whether or not the estimates for remittances captured both the informal and formal nature of remittance flows back to Ghana.

In addition, while the survey instrument did ask whether or not the respondents were citizens in their host countries, it did not address whether or not they were also citizens in Ghana, or if they identified themselves as dual-citizens. Thus, this limits the analysis of the Ghana Dual Citizen Regulation Act. In the future, to further address this policy, the data should be more representative of Ghanaians abroad, not just those who remit via formal means.

VIII. DISCUSSION AND POLICY IMPLICATIONS

The findings of this study suggest that encouraging Ghanaian emigrants to obtain citizenship in the host country does not meet the policy goal of increasing remittances to their home country. Indeed, overall it results in fewer remittances and less economic benefit to the home country. This is especially true for the United
States, where citizens are likely to give 29 percent less in remittances than non-citizens.

If trying to find ways to maximize remittances emphasis should be placed on examining ways to increase an emigrants feeling of connection with his host country, as using the 5Ts as indicators of perceived connectivity. Probably the most interesting finding of this study is that how feeling loyalty to Ghana positively impacts the amount of remittances sent back annually. Ghanaians, across all four countries, tend to send more remittances when they have stronger ties to Ghana as measured by the 5Ts: travel, trade, tourism, and telecommunications. This relationship was strongest in Germany, with a one point increase in the index value leading to a 26 percent increase in the total amount of remittances sent. It was weakest in the Netherlands, with a one point increase in the index value leading to only a 7 percent increase in the amount of remittances. This might have something to do with the fact that Ghanaians residing in the Netherlands travel back to Ghana less often as those in Germany. Indeed, only 27 percent of those surveyed in the Netherlands responded that they return to Ghana at least once a year, compared to 64 percent of Ghanaians in Germany.

Another reason which might account for the disparity in the 5T regression values is based on how migration is perceived in the host society. With only 22 percent of Ghanaians naturalized as German citizens, compared to 42 percent in the
United States, those in Germany probably see their migration as temporary, ultimately planning on returning back to Ghana. While only 29 percent of Ghanaians in the Netherlands are naturalized, non-naturalized citizens are afforded many rights, which facilitates their integration into the society, making their migration permanent in nature. Indeed, nearly three quarters of all Ghanaians who were surveyed in the United States, and sixty percent of those in the Netherlands, had been living abroad in the respective country for at least ten years, compared to less than a quarter of those surveyed in Germany.

Some possible ways to address this might be to find ways to further reduce telecommunications costs and improve infrastructure to encourage more phone use between Ghanaians abroad and their families in Ghana. In addition, as the members of the diaspora already are a frequent presence in Ghana, returning often and spending great sums of money upon their return, the Government of Ghana should consider further expanding the tourism industry to attract an even greater number of people of Ghanaian descent. By establishing Ghana as a meaningful tourist destination for Ghanaians who left the country when they were young, or for people of Ghanaian descent, who might not have as strong of ties with the country as their parents, a third initiative that should be considered would be to develop a stronger export industry for items that would appeal to the diaspora community, who are conscious of purchasing
Ghanaian goods. Exporting more locally-made Ghanaian products, and increasing access to these goods outside of specialty boutiques, would allow Ghanaians residing abroad to purchase products from home more efficiently, in addition to spurring economic growth back in Ghana.

The Ghanaian government could also sponsor the creation of Home Town Associations (HTAs) for Ghanaians living abroad. As the Connectivity to Ghana Index variable illustrates, Ghanaians place a great deal of importance on social linkages and networks. Ghanaians who are more tapped into these social networks tend to remit more, on average than those who are not. These networks do not just exist back in Ghana. They exist within the host countries, where there are certain geographic areas with higher distributions of Ghanaians, who maintain diasporic social networks. Often, people from the same ethnic group or region join social clubs—hometown associations—as a way of maintaining their linkages to Ghana in addition to establishing a social safety net while they live abroad. Events at these clubs involve eating local foods, drinking local drinks, and raising awareness or money to go towards specific small-scale development-initiatives back in Ghana, such as providing scholarships for promising students or providing equipment to health centers. As a result, people who participate in hometown associations send both individual remittances and collective remittances back to Ghana.
The Ghanaian Government should also consider working with bi-lateral and multi-lateral donors to create partnerships with the diaspora community to encourage collective remittances channeled towards targeted projects and developmental needs. Other sending countries, mostly in Latin America (notably Mexico and El Salvador), have developed programs to further encourage these collective remittances by Hometown Associations. By matching funds targeted towards infrastructure, the Mexican “tres-por-uno” program has effectively incorporated members of the diaspora into the official development strategy, and harnessed their remittances to go towards projects overseen by the government. However, these initiatives do not always have to be funded by the government; bi-lateral donors and multi-lateral donors who have initiated programs meant to incorporate the efforts of the diaspora, and to augment their overall impact by providing matching funds for specific projects.

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Citizenship in a host country, by itself, does not have the desired effect of promoting more remittances to Ghana. However, by combining this policy of promoting dual citizenship with other initiatives meant to promote loyalty and connection to Ghana, the Government of Ghana can work to promote more remittances.
REFERENCES


