What explains the increasing trend in African emigration to the US?

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Abstract

In this study, data from the US State Department's visa database and other sources are used to examine trends in African emigration to the US. The results suggest that, on average, moderate increases in African GDP between 1992 and 2007 had a buffering effect on emigration trends. Yet, emigration to the US increased much faster from the poorest than wealthiest countries in Africa. Contrary to expectations, larger emigration increases were found in Africa's non-English than English-speaking countries. Despite the increasing overall trend, however, critical differences were observed in the impacts of specific types of flows. For example, overall trends were driven by increases in Diversity Visa migration, refugee movements, and the migration of immediate relatives. However, significant declines were observed in employment-related emigration from Africa to the US. The results further suggest that impact of trends in African fertility, urbanization, and phone use are circumscribed to specific contexts and types of migration flows. The findings, therefore, provide an empirical basis for concluding that the dynamics of African migration to the US are becoming increasingly more complex.

Introduction

The surge in African migration to Europe and North America towards the end of the twentieth century is well documented in the literature (Arthur 2000; Carling 2007; Hoggart and Mendoza 1999; Van Moppes 2006; Owusu 1999). Not surprisingly, these trends have engendered increased scholarly attention to the determinants of these movements. Much of the discourse on contemporary African emigration however revolves around an elucidation of its determinants (e.g. Adepoju 2004; Adepoju 2006; Hatton and William 2003) or give special focus to issues such as the migration of skilled professionals (Eastwood et al. 2005; Hagopain et al. 2005; Reynolds 2002). In doing so, the current discourse gives less attention to the comprehensive understanding of the dynamics of African migration to US. This gap in the literature is generally surprising. As the evidence suggests, these trends have resulted in the fastest growth in the African-born population of the US in the past four decades (Arthur 2000; Gordon 1998). Prior research indicates, for example, that an average of about 463 Africans arrived annually in the US during the one hundred year period between 1861 and 1961 (Kondu-Agyemang and Takyi 2006). Using data from the US census Kent estimates that close to 60,000 African-born individuals arrived in the US each year between 2000 and 2005 (Kent 2007). Compared to other groups, such as Caribbean immigrants, the majority of the African population in the US arrived within the past two decades (Kent 2007). As a result, there now is a growing body of work assessing how well these new immigrants are assimilated and incorporated into the US society (e.g., Chacko 2003; Djamba 1999; Wilson and Habecker 2008). Missing from this work, however, are empirical studies assessing the extent to which specific migration theories contribute to our understanding of the factors driving the recent surge in African emigration to the US.

This gap in the literature can be attributed to two factors. The first is that data limitations on the number of migrants departing African-origin countries for the US have traditionally constrained the analysis of Africa-US migration flows. In particular, very limited information is available on the number of Africans emigrating to the US for specific reasons (e.g., Family-reunification or employment). Consequently, previous studies have not been able to assess the extent to which the surge in African emigration to the US is driven by specific types of migration flows. A second factor associated with the limited research on these issues is that diverse social and economic transformations occurring within African countries complicate our understanding of ways in which domestic African contexts affect African emigration trends. Little is known, for example, about the relationship between emigration to the US and either African GDP or urbanization trends. Moreover, empirical studies assessing the relative importance of these contextual factors for understanding specific types of emigration flows are generally absent from the literature.

In this study, therefore, data on African nationals emigrating to the US, and other country-specific information, are used to develop an empirical understanding of the determinants of recent emigration trends. Specifically, the study attempts to achieve three main objectives. Firstly, it estimates the relative size of the overall trend in African emigration to the US between 1992 and 2007, and the respective trends associated with specific types of movements (e.g. employment-related or family-reunification migration). Secondly, the study examines the extent to which country-level socioeconomic and demographic factors mediate these recent emigration trends. The study's third objective is to examine whether trends in African emigration to the US vary across linguistic and developmental contexts. Finally, using the empirical results as a

backdrop, the study concludes by discussing the theoretical implications of its findings for future research on African emigration to the US.

Historical Background

Africa has a longer history of serving as an origin region for migrants to the US than most other world regions. Historical evidence suggests, for example, that the first African slaves arrived in the US in 1619, months before the Pilgrims landed on US soil (Kollehlon and Eule 2003). As now well-documented, more Africans later arrived during the trans-Atlantic slave trade that resulted in the forced-migration of over 10 million African slaves to destinations in the New-World (Eltis 2001; Nun 2008). At the height of the slave trade, Africans accounted for a significant proportion of the US population and outnumbered the native non-Black population in a few Southern states (Konando-Agyemang and Takyi 2006). Less-represented in the historical discourse on African migration are significant trans-Atlantic non-slave movements that occurred between Cape Verde and the United States, beginning as far back as the early 1800s (Wilson and Habecker 2008). These movements were much unlike prior forced-migration flows since they mostly involved voluntary migration movements that were driven by the commercial interests of whaling communities in both countries (Halter 1993).

The legal end of slavery in 1865 led to dramatic declines in the annual number of Africans arriving in the US. In fact, according to Arthur (2000), only three hundred and fifty Africans arrived in the US between 1891 and 1900. Yet the scale of African immigration in the post-slavery period was further constricted by pre-1965 US immigration restrictions that significantly curtailed African emigration to the US during the first half of the twentieth century (Gordon 1998; Kent 2007). The limited African emigration that occurred during this period was

mainly driven by non-Black South Africans since their movements were not affected by US immigration restrictions (Djamba 1999; Gordon 1999). By the mid 1960s, therefore, Africans accounted for only one percent of all immigrants admitted to the US (Arthur 2000).

Although the 1965 immigration reforms ended national-origin quotas, the volume of African emigration flows to the US in the 1970s was much smaller than that observed in the ensuing decades. By the 1980s, however, African emigration to the US was occurring at a faster rate compared to any other time in the twentieth century. The number of Africans arriving in the US between 1982 and 1992, for example, exceeded the corresponding number that arrived between 1861 and 1961 by about five-hundred percent (Konando-Agyemang and Takyi 2006). Nevertheless, compared to other immigrant groups, the African-born population of the US is still relatively small (Logan and Deane 2003). One attribute that distinguishes Africans from other immigrant groups is their exceptionally high growth rate. According to Rumbaut (1994), Africans, along with Asians, have the fastest rates of immigration to the US. More recent evidence points to even greater levels of African emigration to the US following the start of the twenty-first century (Kent 2007). Thus, given the social implications of these increases, new studies are needed to underscore the contributions of migration theory to our understanding of the determinants of these surging trends.

Theoretical Perspectives

Most explanations for African migration to Western destinations are generally framed within the context of neo-classical migration theory. Originally developed to explain internal-migration movements, the theory considers migration as product of wage differentials between origin and destination countries (Rooth and Saarela 2007; Hatton and Williamson 2002).

Specifically, neo-classical migration theory hypothesizes that international migration occurs as a result of the desire of migrants from low-wage or labor-surplus countries to move to high-wage or labor-scare countries (Massey et al 1998). Accordingly, palpable income differences between Africa and the US undergird the appeal of neo-classical explanations in contemporary Africa migration research. Indeed, considerable increases in African emigration to the US occurred during much of 1980s, which was a period of declining African economic performance, otherwise referred to as the lost decade (Easterly 2001; Hope 2002; Michaels 1992). Wilson and Habecker (2008) thus identify the failure of economic development in Africa as a crucial determinant of contemporary African emigration to the US. Likewise, Hatton and Williamson (2003) argue that slow economic growth increases the pressure to migrate from Africa to high income countries. Africa's economic failures are also associated with the lack of basic infrastructure, increasing poverty, and high levels of unemployment (Kates and Dasgupta 2007; Lugalla 1997; Potts 2000). One consequence of these transformations, is that Africans now dream 'of enjoying the better life in the United States' (Nwoye, 2009, p. 96), or expect to migrate to other destinations in the West to achieve their desired higher living standards (Van Dalen, Groenewold, and Schoorl 2004).

Increasingly, neo-classical type explanations are also being used in research on contemporary trends in skilled migration, or the 'brain-drain', from Africa to the US (Marchal and Kegels 2003; Mullan 2005). As some studies imply, when wages are higher in destination than origin countries, emigration flows are likely to be dominated by highly-skilled migrants (Rooth and Saarela 2007). Underscoring this nexus is Hagopian et al.'s (2004), observation that most of the 5,000 African doctors living in the US are from the continent's poorest countries. Other scholars even argue that contemporary African migration to the US is, in fact, dominated

by highly-skilled Africans. For example, Carrington and Detragiache (1999) maintain that seventy-four percent of all African immigrants in the US are highly-educated individuals.

Zolberg's (1989; 1999) theory on the state's control of migration processes provides another perspective through which African emigration to the US could be understood. His basic premise is that migration flows are a product of the immigration laws of states (Zolberg 1999). States, for example, can set numerical limits on immigrant admissions and determine the characteristics of immigrants allowed to live within their borders. Thus, as the historical evidence demonstrates, the first phase of African migration to the US was brought to an end by state laws abolishing the legal trade in slaves. Similarly, the US state, through the Immigration and Nationality Act of 1965, abolished pre-1960 immigration quotas, thereby providing new opportunities for Africans to emigrate to the US. Yet, the evidence suggests that this action resulted in limited increases in African migration to the US immediately following the 1960s compared to the increases observed at the end of the century. More generally, a number of scholars (e.g., Lobo 2001; Konadu-Agyemang and Takyi 2005) argue that the surge in African immigration to the US reflects the impacts of the US Diversity Visa (DV) Program created as part of the 1990 immigration reforms. This program, which seeks to increase immigration from non-traditional sending countries, was implemented in the mid 1990s and has facilitated the migration of approximately 20,000 Africans per year since its inception (Konadu-Agyemang and Takyi 2005). Conceptually, however, the legal framework of destination states does not preclude variations in migration trends between origin and destination countries. These variations can occur, for example, as a result of structural changes in origin countries that affect the incentive to migrate across time.

World Systems theory (Wallerstein 1974; 1980) also provides useful insights into the likely determinants of African migration to the US. As Massey et al. (1998) note, early proponents of the theory focused on the 'brain-drain' as a product of Western exploitation of developing countries. However, the dynamics of African emigration to the West can also be understood within the context of two further implications of the World Systems theory. The first stems from the fact that the theory considers migration to be a product of the penetration of capitalist economic relations into less-developed countries. Accordingly, as wealthy multinational corporations penetrate poorer countries (e.g., those in Africa) they create mobile populations through processes of labor displacement (Massey et al. 1998). Secondly, World Systems theory also suggests that emigration from Africa to the West is driven by cultural and ideological linkages created by the latter during the period of colonial rule in Africa (Castles and Miller 2009; Fonseca 2000; Thierry 2004). Linkages created by British Colonialists, for example, resulted in the adoption of English as the official language spoken in their former colonies in Africa. Given the role of linguistic proficiency in determining post-immigration success, World Systems theory would hypothesize that contemporary African migration to the US will be driven by emigration flows from English than non-English speaking African countries.

Migration theorists also maintain that following the start of migration between two regions, subsequent flows will be perpetuated by, among other things, the strength of migrant networks. These networks are sets of interpersonal relationships connecting migrants and non-migrants in origin and destination areas through kinship and friendship ties (Massey et. al 1998). In fact, Boyd (1989) argues that these networks facilitate most international migration flows from less developed countries to high income countries in the West (Boyd 1989). Significantly,

however, Dietz (1999) argues that migrant networks are created by family reunification policies since these policies further strengthen familial ties between immigrants and their relatives in their origin countries. There are, however, limited studies on the role of family networks in facilitating African emigration to the US. Yet the evidence from prior studies suggests that the significance of these networks may be limited. For example, although family immigration preferences were adopted in the 1965 Immigration and Nationality Act, increases in African immigration in the following decade were much smaller than the increases observed towards the end of the century (Gordon 1998; Kent 2007).

Other determinants of migration less prominent in previous African migration research include improvements in the communications infrastructure linking Africa and the rest of the developed world. As hypothesized by Kent (2007), improved phone services in Africa may positively affect emigration to the US since these services facilitate the transmission of information on US job opportunities. More generally, Vertovec (2004) maintains that the availability of cheap international calls strengthen family connections between origin and destination countries. In short, phones can hypothetically facilitate family reunification migration through their positive impact on the strength of family ties. Political instability, and its impact on refugee movements, has also been identified as a key determinant of African immigration to the US (Gordon 1998; Wilson and Habecker 2008). At the same time, Takyi and Konadu-Agyemang (2006) also suggest that African emigration to the North America is associated with African urbanization processes. This relationship, in their view, is underscored by the fact that urban populations have greater access to information and resources to facilitate migration than their rural counterparts.

In sum, existing migration theories present a number of hypotheses concerning the possible determinants driving contemporary trends in African migration to the US. Neo-classical economic theory, for example, hypothesizes that emigration trends will increase at a slower rate among the wealthiest than the poorest countries in Africa. Theories on the state's control of migration flows hypothesize that specific state-level policies such as the US Diversity Visa migration program are the crucial drivers of recent emigration trends. Sociological perspectives based on migrant networks, however, suggest that recent increases in African migration to the US are in fact driven by trends in the emigration of relatives of African immigrants already in the US. Moreover, World Systems theory predicts more rapid increases in emigration flows from English than non-English speaking African countries. Surprisingly, however, the relative significance of these seemingly competing hypotheses has not been systematically investigated using available empirical data. This study, therefore, attempts to examine the extent to which these theories provide any useful framework for understanding the main factors that drive recent increases in Africa to US emigration trends.

Data and Methods

African governments generally lack reliable data collection systems on international migration (IOM 2003). However, information on trends in emigration from the continent can be derived from alternative data sources. One such source is the US State Department's database on immigrant visas issued by US Consular offices abroad (Report of the Visa Office, 1992-2008). This database is the primary source of migration information used in this study. Its practical utility lies in the fact that it contains information on all individuals travelling directly from Africa to the US for purposes of immigration. Information on African immigrants is also available in

the US Citizenship and Immigration Services (USCIS) database. However, determining the number of African immigrant arrivals from this source is problematic since its immigrant totals includes information on immigrant adjustments[1]. A second advantage involved in using the visa database is that it contains panel-level information that spans approximately two decades. This information is therefore used to examine African emigration trends between 1992 and 2007. This observation period is selected on the basis of the number of continuous years for which data on the dependent and independent variables used in the analysis are available. The visa database, however, lacks specific information on refugees. Therefore, the information on visa trends is complemented with data on trends in African refugee arrivals, by country of origin, available in the Yearbook of Immigration Statistics (US DHS, 2009; US INS 2002).

For each African country, information on domestic socioeconomic characteristics is captured using data from the World Bank's World Development Indicators database (World Bank 2009). In particular, the analysis employs data on trends in six country-level domestic indicators. These include the percentage of population living in urban areas, population size, Gross Domestic Product (GDP) per capita, Foreign Direct Investment (FDI) inflows, mobile and fixed-line phone subscribers per thousand, and the Total Fertility Rate (TFR). Conceptually, for example, there may be positive association between TFR, a proxy measure of family size, and the emigration of immediate family members. Data on the TFR were only available for non-annual intervals. As a result, linear interpolation was used to provide annual TFR estimates for the observation period. In general, the final database used in the analysis contained information

[1] While immigrant adjustments are a legitimate channel of immigration to the US, including information on adjustments may bias the analysis of the determinants on emigration. These biases may involve, for example, Africans arriving in the US from non-African countries or in other non-immigrant categories (e.g. students), but who later become immigrants by adjusting their status through employment preferences. For such immigrants, the determinants of their initial emigration to the US may differ from the determinants of their immigration. The primary focus this study, therefore, is on the determinants of emigration among Africans whose primary reason for migrating to the US is for purposes of immigration. The dataset used in the analysis also does not contain information on immigrant adjustments.

for fifty-one African countries. Excluded from the analysis were Sao Tome and Somalia since they lacked information for a variety of origin-country indicators. As in the analysis of migration trends by Cobb-Clark and Connolly (1997), missing data for a specific country-year resulted in it being dropped from the analysis.

The longitudinal structure of the information in the final sample suggests these data are best analyzed using panel-data analytical techniques. Accordingly, Haussman specification tests were conducted to determine whether to employ fixed or random effects regression methods in the empirical analyses. These tests consistently revealed that the coefficients estimated from both methods were systematically different, suggesting that fixed-effects, rather than random-effects, models should be employed in the models used in the regression analysis. By focusing on country fixed-effects, therefore, the empirical models are able to account for the impacts of unique country-specific characteristics that are both unobserved and constant across time. The basic model used in analysis is thus as follows:

$$ln\left(\frac{EM_{ij}}{POP_{ij}}\right) = \alpha_0 + \alpha_i + \beta_1 T_{ij} + \beta_2 A_{ij-1} + \beta_3 M_{ij} + \epsilon ij$$

Accordingly, i and j refer to country and year respectively, while the dependent variable is the natural log of the estimated emigration rate to the US from country *i* in year *j*. EM_{ij} is the sum of all emigrants granted US visas in country *i*, plus the number of refugees from that country in the respective year. The total number of emigrants is weighted by the population size of origin-country *i*, in year *j* to account for the fact that, other things being equal, larger countries will produce more emigrants than smaller countries. Furthermore, because African emigrants to the US are small in proportion to their populations of origin, emigration rates used in the analysis are estimated per 10,000 of national-origin populations. T_{ij} is a continuous measure of time

measured in years. Accordingly, β_1 can be used to estimate the annual change in emigration between 1992 and 2007. In other words, since the dependent variable is the log transformation of the emigration rate, β_1, can be used to measure the annual percentage change in emigration as $100^* e^{(\beta_1 - 1)}$. Likewise, β_2 captures the change in emigration associated with each one unit change in variables captured in A_{ij-1}. Specifically, A_{ij-1} is a vector of African country-level domestic indicators such as GDP per capita and urbanization rate in year *j* minus *1*. Finally, the empirical model also captures the extent to which overall emigration trends are driven by the three major types of emigration flows suggested by the data. Thus, by controlling for M_{ij}, the analysis captures the contribution of refugees, immediate relatives[2], and Diversity Visa migrants, to African emigration trends.

Findings

Trends in African emigration to the US, based on data on refugee migration and the immigrant visa database, are presented in Figure 1. These trends show the mean number of immigrants by year, and type of migration, in the past one and a half decades. Appendix 1 shows summary measures describing the gross number of emigrants from African countries with selected characteristics. According to Figure 1, there was an approximately three-hundred percent increase in the number of African emigrants to the US between 1992 and 2007. Yet, despite these increases, considerable variations are found in the trends associated with specific types of migration flows. For example, there were systematic annual increases in the migration

[2] Immediate relatives include the spouses, unmarried children, and parents of US citizens. These relatives are given special preference according to US immigration law. Other relatives (e.g. the spouses of permanent residents or the siblings of US citizens) are admitted to the US through family-sponsored preference categories. These relatives are referred to in this study as 'non-immediate family' members.

of African refugees during the latter part of the 1990s. In fact, by the year 2000 African refugee migration was among the top two types of migration flows driving overall African emigration to the US. There were, however, abrupt declines in these trends between 2001 and 2002 as a result of the temporary suspension of the US refugee resettlement program after the September 11 attacks (Bruno 2006). However, these trends rebounded around 2003/2004 but have since been on the decline. Figure 1 also points to the possible impact of the Diversity Visa (DV) program on overall African immigration trends. Although the program was enacted as part of the Immigration Act of 1990, the first Diversity Visa immigrants arrived in the US in 1995. As Figure 1 suggests, DV migration appears to increase trends in the number of African emigrants from a mean of below four hundred before 1995 to between six and eight hundred during the latter half of the 1990s. African nationals are, however, less likely to emigrate to the US as part of family reunification processes or strictly for purposes of employment. At the same time disparate trends are observed in African emigration for family or employment related reasons. For example, the results show consistent increases in the mean number of Africans emigrating as the immediate relatives of US citizens. A possible explanation for these increases is that earlier cohorts of African immigrants may be increasingly fulfilling the residency requirement for US citizenship thus becoming more legally eligible to sponsor the migration of their immediate kin. Emigration of non-immediate family members, however, occurs on a much smaller scale. Contrary to expectations, few highly-skilled individuals are emigrating from Africa to the US through formal employment preferences. As Figure 1 suggests, trends in African emigration for employment reasons slightly declined between 1992 and 2007.

- Figure 1 about here -

Results from the regression analysis of the determinants of overall trends are presented in Table 1. Descriptive statistics for the dependent variables used in the models are found in Appendix 2. In Table 1, Model 1 only presents an estimate for the year coefficient, allowing us to capture the gross annual change in the overall emigration rate. The results indicate that on average emigration from Africa to the US significantly increased by six percent per year between 1992 and 2007. This overall trend, according to Model 2, seems significantly associated with specific trends in at least two of the three major types of emigration flows, i.e. refugee migration and the Diversity Visa migration. Yet, controlling for the influence of the three major flows results in only a slight reduction in the overall annual emigration trend. Model 2 further suggests that in absolute terms, Diversity Visa migration had a greater average impact on overall trends than either refugee migration or the migration of immediate family members. In fact, the average contribution of refugee migration is about four times higher than the contributions associated with the other flows accounted for in Model 2.

The extent to which African domestic contexts mediate overall emigration trends is examined in Model 3 by controlling for both year and the influence of other country-level covariates. The inclusion of the latter results in a higher annual emigration trend in Model 3 compared to the corresponding trend shown in Model 1. This finding implies that the increasing trend in African emigration is unlikely to be driven by the country-level factors accounted for in Mode 3. Instead, the increased year coefficient in Model 3 suggests that between 1992 and 2007, overall emigration trends were likely suppressed by significant changes in domestic African socioeconomic contexts, especially those associated with changes in GDP. Among countries in the sample, for example, GDP per capita grew by about one and a half percent per annum, reflecting the average of a higher post 2000 GDP growth and the negative economic growth

experienced the early 1990s. Model 3 suggests, therefore, that had there been no change in GDP and other factors between 1992 and 2007, trends in African emigration to the US would have increased at a faster rate than the trends actually observed**.** In Model 4, the results reveal that after accounting for country-level changes and the impacts of the major emigration flows, the increasing emigration trend still persists. Additional analyses were also conducted to investigate whether the difference in GDP between African countries and the US, and trends in the GDP of the US, were significant predictors of recent migration trends. These differences were found to be statistically insignificant and were subsequently dropped from the empirical models.

Table 1 also examines the relationship between African emigration to the US and other specific country-level correlates. For example, it shows that there is a negative association between the number of telephone subscribers and African emigration to the US (e.g., in Model 3). However, this association is not statistically significant suggesting that access to phones has no influence on overall trends in emigration to the US. Similarly, no empirical support is found for the notion that FDI inflows, a proxy measure of the influence of multinational corporations, significantly increase emigration to the US. Given the significance of family networks for immigration to the US, Models 3 and 4 also investigate whether there is relationship between African fertility and emigration to the US. The coefficients generally point to a negative association between the two. However, the fertility-emigration association is not statistically significant.

- *Table 1 about here* -

Table 2 examines the extent to which proxy differences in economic development mediate the relationship between emigration and other country-level determinants. To pursue this objective, countries in the sample are stratified into three groups, based on their initial level of

GDP at the start of the observation period. Accordingly, low income countries are defined as countries with an initial GDP value below $250; moderately low income are countries with respective GDP values between $250 and $749; and middle/upper income countries, a corresponding GDP level of $750 and above.

Three notable findings are revealed in the dynamics of emigration observed across these three groups. First, as expected, Table 2 confirms that there is a strong negative relationship between level of initial GDP and the size of the estimated emigration trends. Specifically, differences in the sizes of the year coefficients suggest that the growth in emigration from the poorest African countries is about three times faster than that among their wealthiest counterparts. Second, emigration trends at lower levels of GDP generally remain robust to the influence of additional country-level controls accounted for in Model 2. These controls, however, have disparate impacts on emigration trends across the three groups. Among moderately low income African countries, for example, the annual emigration trend becomes statistically insignificant after controlling for the influence of other covariates (Model4). Furthermore, among moderately low income countries, the annual trend is reduced by a third after other factors are controlled (Model 4). However, among Africa's poorest countries the annual trend increases in Model 2, relative to Model 1. In general, this is consistent with the view that structural changes occurring in Africa partly contributed towards stemming emigration trends among its poorest countries.

A third finding revealed in Table 2 is that there are important differentials in the determinants of emigration that are conditional on GDP levels. In the poor and moderately poor countries, for example, emigration is more likely to occur through the DV program than by forced-migration flows. On the contrary, Model 6 shows an unexpected, but substantial, net

influence of refugee migration on overall emigration flows from the wealthiest African countries to the US. This finding, according to the data, is driven by refugee migration from countries such as Namibia, Algeria, Tunisia, the republic of Congo, as well as by refugee emigration from South Africa in the early 1990s. Table 2 also suggests that urbanization trends have contrasting associations with emigration in Africa's poorest and wealthiest countries. However, the factors associated with these disparities are not quite clear.

- - *Table 2 about here* –

Comparative estimates of emigration trends, and their determinants, in English and non-English-speaking countries are presented in Table 3. Contrary to expectations, the annual emigration increase observed between 1992 and 2007 is higher in non-English than English-speaking countries. Instructively, therefore, although English-speaking countries sent a larger number of emigrants to the US than non-English countries (Appendix 1), relative emigration *increases* were larger among the latter than among the former. In fact, Model 1 suggests that emigration trends in English-speaking countries have reached a figurative plateau. Among non-English speaking countries, however, the estimate annual increase was about ten percent per year (Model 3). Additionally, the annual emigration trend in non-English speaking countries is robust to the influence of other country-level covariates. In contrast, the direction of relationship implied by the year coefficient for English-speaking countries is entirely reversed after other factors are controlled (Model 2).

One unique feature of the emigration trends in Africa's Anglophone countries, however, is that they are more likely to be driven by the emigration of the immediate relatives of US citizens than by either the diversity visa program or refugee migration. Since African migration to the US in the 1970s and 1980s was dominated by nationals from English-speaking African

countries (Gordon 1998), this finding mostly reflects the increasing significance of family reunification among earlier immigrant cohorts. Emigration trends in Africa's non-English speaking countries are not driven by family migration flows but by refugee movements and diversity visa migration (Model 4). One explanation for this finding is that it reflects the compositional characteristics of countries found within this group. For example, non-English speaking countries in the sample include some of Africa's major refugee-origin countries such as Ethiopia and Eritrea. As the results suggest, the diversity visa program also has a greater relative impact on emigration trends in non-English speaking than English-speaking African countries (e.g. French or Portuguese-speaking Africans). Seemingly, therefore, the diversity visa program has had a greater overall impact on increasing overall emigration from the non-traditional than traditional origin countries of African immigrants in the US.

Other contrasts suggested in Table 3 include the fact that the influence on urbanization on emigration may be conditional on the linguistic or cultural characteristics of African countries. Accordingly, while urbanization trends are positively associated with emigration in Anglophone countries, the reverse is true for respective association in non-English speaking countries. Underscoring this disparity is the fact that recent evidence presented elsewhere suggests that there are unique declines in urban growth in Africa's non-English speaking countries that are contrary to the urban dynamics observed elsewhere in the continent (Beauchemin and Bocquier 2004).

- Table 3 about here -

In Table 4, attention is turned to the determinants of specific types of Africa-US emigration flows, using the natural log of the rates associated with each types of emigration flow as dependent variables in the ensuing models. In general, the results confirm that the fastest

annual increases in African emigration to the US were associated with refugee migration (Model 7) and the emigration of immediate relatives (Model 1). Significantly, both trends are robust to the influence of domestic socioeconomic indicators and thus remain significant even after these factors are controlled. Model 9 indicates that annual trends in emigration through the diversity visa program did not significantly change. For non-immediate family members, however, Model 3 suggests that emigration trends declined by about one percent per year between 1992 and 2007 although this gross annual decline is not significant. Declines also occurred, at a rate of about two and a half percent per annum, in the trend associated with African emigration for reasons of employment (Model 5). In contrast to the decline in the emigration of non-immediate family members, the downward trend in emigration for employment completely disappears after other factors are controlled (Model 6). One implication of this finding is that modest changes in African socioeconomic conditions between 1992 and 2007 may have also had a buffering effect on economically-induced emigration among skilled professionals. Accordingly, after accounting for country-level socioeconomic factors (Model 6) the direction of annual employment migration trend is entirely reversed while also becoming statistically non-significant.

Instructively, declining fertility trends, and their possible impact on family sizes, are negatively associated with emigration for family-reunification purposes. However, this implied fertility effect is only statistically significant with regard to the emigration of non-immediate than immediate family members (Model 4). Changes in the number of phone subscribers in Africa are also positively associated with the emigration of non-immediate relatives. Accordingly, this finding is consistent with Vertovec's (2004) hypothesis that phones sustain familial relationships between origin and destination countries. However, because the influence of phones is only significant among non-immediate family members, the results further suggest

that the implied phone effect is itself dependent on the strength of familial ties. In other words, strong altruistic ties between immediate family members are likely to preclude the need for frequent communications in order to maintain familial relationships. As a result, phones may be more important facilitators of migration among family members with weaker altruistic ties.

- Table 4 about here –

Discussion and Conclusions

Given the lack of empirical data on African migration processes, the scale and determinants of African emigration to the US are insufficiently documented in the existing literature. In this study, however, unique migration data sources are used to describe and explain the dynamics of these trends. In the process, the extent to which existing migration theories provide a useful basis for understanding these movements has also been assessed. A key conclusion arising from the study, however, is that trends in African emigration to the US are not fully explained by a single migration theory. Rather, the findings suggest that these trends are better understood as products of the combined influence of US immigration policy and the complex interplay of structural factors operating within the African milieu. More generally, however, the analysis provides four contributions to the empirical understanding of determinants of the recent surge in African emigration to the US.

Firstly, contrary to theoretical expectations, the findings indicate that the surge in African emigration to the US is driven by the outcomes of Africans from non-English than English-speaking countries. In short, although World Systems theory would hypothesize that the increase is driven by English-speaking African countries the analysis indicates that the reverse is true in contemporary Africa. In doing so, the study suggests that contemporary African immigrants

arriving in the US are more linguistically and culturally diverse. Further implied by this finding is the fact that nationals of French, Portuguese, and Arabic-speaking countries in Africa are becoming more willing to move beyond their traditional migrant destinations abroad (e.g. those in Europe). Among English-speaking Africans, however, the results show that contemporary emigration trends are driven by the migration patterns of the past. In other words, Africans who arrived from the region's Anglophone countries in previous decades are now becoming more legally able than other African immigrants to sponsor the migration of their immediate kin.

Secondly, the results imply that there are nuanced relationships between development processes and the dynamics of African emigration to the US. In other words, the influence of income or GDP may be more complex than hypothesized by neo-classical economic theory. The overall emigration trend was robust to the influence of GDP changes although these changes had a moderating influence on the size of the emigration flows. Significantly, variations were also found in the determinants of African emigration that were conditional on levels of GDP. For example, country-level determinants fail to explain overall emigration flows in the poorest and moderately poor African countries. Yet, they fully account for the increasing emigration to the US from Africa's wealthiest countries. Significantly, however, disparities in the determinants of emigration across socioeconomic contexts also have additional implications for future empirical research on African emigration. In particular, they suggest that in the evaluation of the factors that drive international migration in the region, more attention should to be given to possible interactions between these factors and levels of economic development.

A third contribution of this study is that it underscores role of forced migration movements as a determinant of overall African emigration trends. In many previous studies, the significance of these movements for trends in African emigration to the US is discounted,

although the 1990s saw considerable increases in the number of armed conflicts in Africa (Gleditsch et al. 2001). As the results suggest, the net impact of refugee migration on overall emigration flows is greater than that of other types of migration flows, except for those associated with the diversity visa program. More importantly, the strong state influence on refugee migration, through the US refugee resettlement program, and the diversity visa program, is consistent with Zolberg's theory on state-level influences on migration processes. At the same time, the influence of these state programs on African emigration trends is likely to decline in the coming decades. In other words, given recent declines in African refugee migration and the stable trend in diversity visa immigration (Figure 1), future emigration trends are likely to be driven by the immigration of the immediate family members of prior African immigrant cohorts. As the analysis reveals, with the exception of refugee emigration trends, trends in the emigration of immediate family members experienced the fastest rates of growth between 1992 and 2007 (Table 4).

Finally, new lines of research on African emigration are also suggested by these analyses. For example, concurrent increases and decreases in emigration through the DV program and employment preferences respectively, may be due to a greater use of the DV program by emigrants seeking employment in the US. Information on employment-related emigration also provides only one perspective on the emigration of highly-skilled Africans. Still, the study suggests that employment-related migration among highly-skilled Africans is only a small fraction of overall emigration flows to the US (Figure 1). This finding is, however, unlikely to provide a complete picture on the apparent 'brain-drain' of African professionals to the US. Prior research indicates, for example, that significant variations exist in the educational characteristics of African refugees (Steyn and Grant 2007). Refugees migrating to countries abroad are

generally more educated than their counterparts in neighboring countries, suggesting that considerable interactions exist between the brain-drain and refugee migration to the West. Other skilled Africans in the US, who are also non-immigrants, may elect to become immigrants by adjusting their legal status. In addition, family reunification migration may be educationally selective if this process revolves around networks of highly-educated kinship groups. It is therefore possible for the emigration of skilled Africans to the US to occur through multiple types of emigration flows. This possibility cannot be fully interrogated using existing data sources. However, they have significant implications for understanding African migration processes that should be fully explored in future migration research.

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Tables

Table 1: Factors associated with the trend in emigration rates from Africa to the United States

	Model 1	*Model 2*	*Model 3*	*Model 4*
Year	0.061**	0.055**	0.085**	0.083**
	(0.014)	(0.013)	(0.031)	(0.028)
Type of emigrant flow (Rates)				
Diversity		0.818**		0.778**
		(0.187)		(0.200)
Refugee		0.185**		0.190**
		(0.098)		(0.087)
Immediate family		0.157		0.169
		(0.112)		(0.108)
GDP per capita (ln)			-0.998*	-0.975*
			(0.569)	(0.521)
FDI per capita (ln)			0.030	0.016
			(0.019)	(0.018)
Percent Urban			-0.016	-0.018
			(0.035)	(0.033)
Phone subscribers			-0.006	-0.005
			(0.004)	(0.004)
Total Fertility rate			-0.040	-0.005
			(0.159)	(0.147)
Constant	-123.2**	-111.8**	-165.8**	-162.0**
No. of observations	689	689	689	689
No. of countries	51	51	51	51

Notes: *p<0.10; **p<0.05. Robust standard errors that adjust for country-level clustering are presented in parentheses.

Table 2: Disparities in the predictors of total emigration rate from Africa to the US, by level of initial GDP

	Very low income		*Moderately low income*		*Middle and upper income*	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Year	0.082**	0.116**	0.063**	**0.042**	**0.029**	0.001
	(0.031)	(0.048)	(0.020)	**(0.036)**	(0.020)	(0.037)
Type of emigrant flow (Rates)						
Diversity		0.885**		2.44**		0.553
		(0.128)		(0.768)		(0.364)
Refugee		0.179**		1.889*		5.542**
		(0.073)		(0.957)		(0.354)
Immediate family		0.092		1.532*		0.139*
		(0.451)		(0.813)		(0.076)
GDP per capita (ln)		-1.209		-1.281*		-0.035
		(0.883)		(0.696)		(0.179)
FDI per capita (ln)		-0.004		0.034		-0.026
		(0.032)		(0.027)		(0.016)
Percent Urban		-0.085		-0.015		0.073*
		(0.071)		(0.046)		(0.040)
Phone subscribers		0.019		0.004		-0.003
		(0.018)		(0.009)		(0.004)
Total Fertility Rate		0.108		-0.167		0.030
		(0.297)		(0.152)		(0.268)
Constant	-166.4**	-227.8**	-128.4**	-77.31	-60.0	-7.05
No. of observations	242	242	250	250	197	197
No. of countries	17	17	18	18	16	16

Notes: *p<0.10; **p<0.05. Robust standard errors that adjust for country-level clustering are presented in parentheses.

Table 3: Disparities in overall trends in the emigration rate and their associated covariates in English and Non-English speaking African countries

	English		*Non-English*	
	Model 1	Model 2	Model 3	Model 4
Year	0.008	-0.008	0.096**	0.123**
	(0.013)	(0.018)	(0.020)	(0.028)
Type of emigrant flow (Rates)				
Diversity		0.694**		0.826**
		(0.286)		(0.282)
Refugee		0.131**		0.875**
		(0.027)		(0.174)
Immediate relatives		0.845**		0.082**
		(0.296)		(0.021)
GDP per capita (ln)		-0.287		-0.635
		(0.405)		(0.491)
FDI per capita (ln)		0.021		0.007
		(0.037)		(0.019)
Percent Urban		0.063**		-0.071**
		(0.019)		(0.042)
Phone subscribers		-0.005		0.000
		(0.004)		(0.004)
Total Fertility rate		0.160		0.007
		(0.139)		(0.163)
Constant	-16.95	11.80	-194.0**	-243.1**
No. of observations	272	272	417	417
No. of countries	20	20	31	31

Notes: *p<0.10; **p<0.05. Robust standard errors that adjust for country-level clustering are presented in parentheses.

Table 4: Factors associated with emigration rates related to specific types of emigration patters from Africa to the US between 1992 and 2007

	Immediate family		*Other family*		*Employment*		*Refugee*		*DV*	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Year	0.055**	0.045**	-0.012	-0.071**	-0.026**	0.011	0.098**	0.196**	-0.013	0.013
	(0.008)	(0.013)	(0.012)	(0.020)	(0.011)	(0.020)	(0.034)	(0.066)	(0.017)	(0.029)
GDP per capita (ln)		-0.328		-0.208		-0.286		-0.807		-0.199
		(0.208)		(0.252)		(0.207)		(0.979)		(0.370)
FDI per capita (ln)		0.012		0.007		0.026		0.021		0.012
		(0.016)		(0.014)		(0.027)		(0.054)		(0.025)
Percent urban		0.012		0.043		-0.029		-0.105		-0.067
		(0.023)		(0.032)		(0.027)		(0.078)		(0.043)
Phone subscribers		0.000		0.011**		0.004		-0.018		0.002
		(0.003)		(0.005)		(0.004)		(0.020)		(0.004)
Total Fertility rate		-0.103		-0.281*		0.080		0.158		-0.079
		(0.101)		(0.143)		(0.126)		(0.298)		(0.154)
Constant	-113.5**	-92.05**	21.05	140.0**	46.41**	-24.69	-198.9**	-387.5*	13.6	-24.83
No. of observations	670	670	511	511	499	499	247	247	532	532
No. of countries	51	51	49	49	49	49	33	33	49	49

Notes: *p<0.10; **p<0.05. Robust standard errors that adjust for country-level clustering are presented in parentheses.

Appendix 1: Means and Standard Deviations of the gross number of emigrants, by selected characteristics

	Mean	*Standard Deviation*
Emigrant type		
Diversity Visa migrants	264.41	679.46
Refugees	226.14	1,011.72
Immediate family members	157.0	381.57
Other family members	70.53	169.24
Employment migrants	23.37	66.28
Language Origins		
English-speaking countries	928.36	1,562.21
Non-English-speaking countries	633.88	1,614.25
Level of initial GDP[3]		
Less than $250	827.15	1,624.66
$250 to $749	617.79	1,409.72
$750 and above	794.63	1,747.28

Appendix 2: Means and Standard Deviations of Variables

	Mean	*Standard deviation*
Diversity (Rate)	0.15	0.35
Refugee (Rate)	0.20	1.27
Immediate family (Rate)	0.25	1.01
GDP	909	1,369
FDI inflows (in millions)	353	965
Percent Urban	37.04	17.18
Phone subscribers	8.77	16.26
Total Fertility rate	5.18	1.42

[3] This refers to GDP levels at the start of the observation period, i.e. 1992.