A BETTER QUALITY OF LIFE: THE DIMENSIONS OF SOMALI SECONDARY MIGRATION

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ABSTRACT

The purpose of this study is to identify the dimensions associated with the early wave of Somali secondary migration. Many contemporary refugee groups embark on secondary migrations, but it is the Somali who receive more attention than most – primarily because of false allegations circulating at the destination of state shopping and welfare (or government provided financial and nonfinancial support) hunting. This study subjected several socioeconomic variables to a principal component analysis/regression which empirically revealed that, while welfare was a factor, its influence was nominal and last behind several dimensions associated with a better quality of life.

Key Words: migration, secondary migration, Somali, refugees

Introduction

A Festering Issue

Since the early 1990s, the Somali have been granted admission to the United States (US) each year, in sizeable numbers, due to a convergence of forces that have ravaged their population and – in some respects – left their homeland in ruins. These forces have a basis in culture, politics, and the environment, and manifests in everything from sporadic armed ethnic and political conflicts to regional drought and intermittent famine. Thus, their entrance into the US has primarily been the result of humanitarian concerns based on their United Nations High Commissioner for Refugees (UNHCR) sanctioned status as refugees. Not all Somali who have been admitted to the U.S. are refugees, but the vast majority granted entry – nearly ninety five percent – was categorized as such (Newberry and Darden 2011).

This group has been the focus of a fair amount of research over the past two decades; however, questions still arise concerning their adaptive behavior with respect to their migratory practices within this country of resettlement. More specifically, the motivational determinants for their secondary migration are still shrouded in controversy. Despite the impeccable works of Horst (2007) who coupled the Somali secondary migrations to Minnesota with their desire to find a better quality of life and Huisman (2011), who likewise found the quality of life aspect behind the Somali migration to Maine, there is still widespread assumption/belief that Somali secondary migrants migrate simply for the welfare benefits (Corcoran 2009). One possible reason for the lack of complete acceptance or acknowledgement of the previously mentioned research by those who criticize Somali migration could be the qualitative nature of the research. Qualitative research helps us to understand processes, provides context, and emphasizes the voice of the participant group (Creswell et al. 2010). Thus, it is possible the results were ignored or dismissed simply for the fact that they were born of Somali testimony – i.e. not believing the Somali do not migrate simply for the welfare benefits they are likely to access more easily or readily, because they say they do not in interviews or on questionnaires. The aim here is to fill a gap in the literature; quantitative migration determinant studies have not focused on the Somali, and the quantitative studies pertaining to the Somali have not focused on migration determinants. By adding a quantitative aspect to support the qualitative work that has been done, it is hoped that the combination of the two will resolve the "welfare hunting" stereotype.

Objective Progression

The objective of this study is to quantitatively identify the dimensions of Somali secondary migration utilizing data derived from various government databases. The goal is to provide empirical evidence of the destination attributes that held the most influence on drawing Somali migrants to their secondary migration destinations during the early stages of this secondary migration phenomenon. Quantitative research typically provides measurable evidence to help establish cause and effect (Creswell et al. 2010); thus it is hoped that the results from this empirical study will add support to the work of researchers such as Huisman (2011) and dispel the welfare magnet rumor as it pertains to this particular group. The importance of dispelling rumors and hearsay is found in the notion that policies can sometimes be initiated or terminated based on inaccurate information. For example, in the latter months of 2013, Maine's Governor – Paul LePage – proposed severe restrictions to the state's General Assistance program that would have prevented several immigrant categories from receiving benefits. From the start the Governor had shown his irreverence for newcomers migrating to Maine looking for a better life. This was clearly demonstrated with LePage's first act as governor when he instituted Executive Order 08 FY 11/12, which allowed state agencies to question those who applied for assistance about their immigration status. The order was described as a means for discouraging "outsiders" from moving to Maine to take advantage of the state's generous welfare benefits (Billings 2013). The stereotype of Somali secondary migrants as welfare hunters, or state shoppers, seeking better welfare benefits has plagued the group ever since they first arrived in Lewiston, Maine in 2001. Propagation of the stereotype has since followed the group in subsequent migrations. This study aims to identify the quantifiable determinants behind the movement of Somali secondary migrants to their new destination communities across the country. Thus, this study is geared towards the pull factors of migration – the push factors are beyond the scope of this study.

This paper will proceed first with background information on refugees and their resettlement, the Somali, and secondary migration followed by an examination of previous research pertaining to the migration of immigrants within the US. The methodology of the study will then be outlined followed by the results and a concluding summary pertaining to the motivation for secondary migration amongst the Somali.

Refugees, resettlement, and Contradictions Refugees

An important goal of US foreign policy is the assistance to and resettlement of refugees. The resettlement process in this country is governed by the Refugee Act of 1980 and is largely based on humanitarian concerns (Kennedy 1981). A refugee is defined as a "person who is outside his or her country and who is unable or unwilling to return because of persecution or a well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group, or political opinion" (Bruno 2008:1). In 2012, there were over fifteen million refugees worldwide (Withnall 2013). For this group, the United Nations (UN) recognizes three durable solutions: voluntary repatriation to their homeland; integration into host society; or resettlement to a third country (Stein 1983). As a traditional resettlement country, the US is a mainstay for the third solution. Traditional resettlement countries refer to those countries that have historically and consistently participated in the resettlement of refugees. The US is by far the most committed accepting more refugees (over three million since 1975 (Senate Committee Print, 111th Congress 2010)) than the other traditional countries combined (Patrick 2004). The US has been resettling refugees under the guise of humanitarian concerns since as early as World War II when 250,000 Europeans were admitted. Later, Congress enacted The Displaced Persons Act of 1948 allowing another 400,000 European refugees into the U.S. (Bridging Refugee Youth & Children's Services 2013). In 1980, The Refugee Act was enacted which provided a uniform procedure by which to admit refugees; the act also served as a basis for the authorization of federal assistance to refugees in securing their resettlement and procuring their self-sufficiency (Bruno 2008). Uniformity was necessary because prior to 1980, refugee admissions commonly fell under special legislation, or some stretched interpretation of the parole authority (Zucker and Zucker 1987).

The refugees admitted during the World and Cold War Eras typically originated from regions where the culture was compatible with American culture. A growing proportion of contemporary refugees, however, are now coming from regions, like Africa (Figure 1), where the culture is sometimes vastly different from that found in this host country. Somalia, for example, ranked in the top five refugee sending countries eleven out of fifteen times between 1997 and 2012. In addition, from 1992 (the first year of large scale admission) to 2012, the Somali comprised, on average, 43.0 percent of the African admits (Figure 2) and the number of African

admits has grown by an average of 25.5 percent each year between 1980 and 2012. The differences found between US culture and many African cultures commonly translate into the need for greater assistance in helping the newcomers adapt to American life.

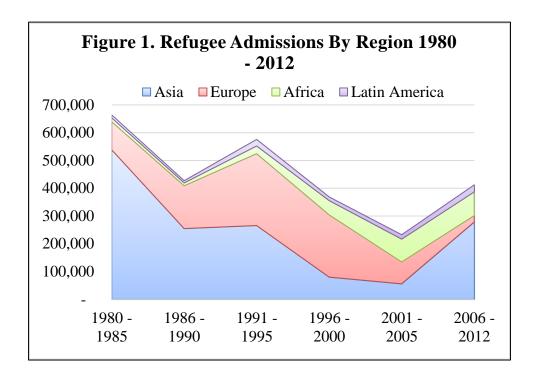


Figure 1. Refugee admissions by region for the years 1980 to 2012. Author's calculation of data from US Department of State, Bureau of Population, Refugees, and Migration (PRM), Worldwide Refugee Admissions Processing System (WRAPS).

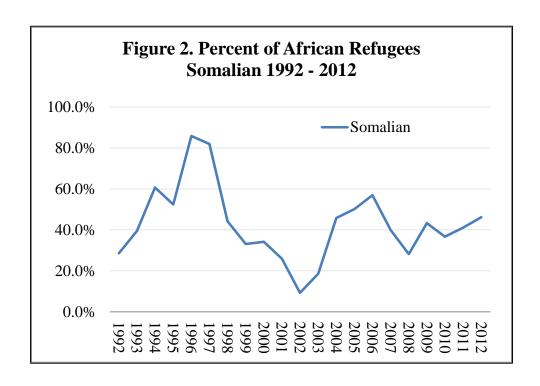


Figure 2. Percentage of refugees from the African Region that are Somali. Author's calculation of data from US Department of State, Bureau of Population, Refugees, and Migration (PRM), Worldwide Refugee Admissions Processing System (WRAPS).

This line of thought was reiterated in a Congressional report for the Committee on Foreign Relations which revealed that many of the contemporary refugees are being resettled in the US after spending many years living in refugee camps; they typically have a greater need for prolonged government support in order to become economically and mentally self-sufficient (Senate Committee Print, 111th Congress 2010). The Congressional report, however, clashes with the reality of change. In the initial years following the enactment of the 1980 Refugee Act, states were eligible for full reimbursement for the services they provided to the refugees for the first three years of the refugee's residence in the US (Stein 1983). The three-year time limit was assumed to be the amount of time it took for refugees to become fully immersed in American society – economically and culturally. According to Zucker (1983), services provided to refugees came under fire when the Reagan Administration executed an ambitious policy of social program

reduction – federal funding for social services like job training, education, and welfare were cut or eliminated. The commitment to refugee resettlement was reduced by one-half forcing the limitation of services from thirty-six months to eighteen months and the limitation of the reimbursement to states from 100 percent to 50 percent. Ensuing changes to refugee policy has since cut the time limit set on services offered to refugees to from eighteen months to four months. Despite the change in the refugee support window, little has been done to alter the Refugee Act's government objective of immediate integration, rapid assimilation, and self-sufficiency. So herein lies one contradiction; the classical refugee cohort primarily came from US compatible cultures and had more support for a longer period of time in their progression towards self-sufficiency. This is in comparison to contemporary refugees, with the vast majority coming from divergent cultures (and for some, places of unspeakable conditions) with a larger learning gap who now have less support and a shorter period of time in which to reach self-sufficiency.

Resettlement

The U.S. State Department and the Department of Homeland Security (DHS) handle the first half of the resettlement process by approving and processing refugees overseas. The Department of State then aligns with ten national voluntary agencies (Volags) to determine the US communities in which the refugees will be placed (US Government Accountability Office 2011). The US President determines the number of refugees that will be admitted each year. According to Bruno (2008), this is done in consultation with Congress; the President submits a proposed refugee ceiling and regional allocations for each fiscal year. The refugee ceilings represent the maximum limit for refugee admissions alone, and for admissions between 1990 and 2012, the average ceiling was 90,913 – the actual admissions during this period, however, were averaged at 80.5 percent of the ceiling (Figure 3). The remaining percentage of the ceiling not filled by admissions is generally held for potential emergency admissions.

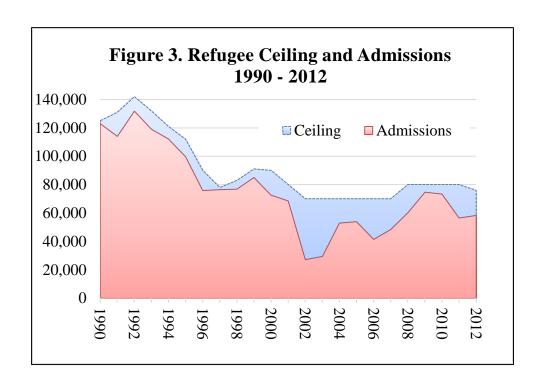


Figure 3. Author's compilation of data from the ORR of proposed ceiling and admissions for the fiscal years 1990 through 2012.

Refugee policy established by the 1980 Refugee Act dictates the dispersion of refugees. Even though refugees have been dispersed to virtually every state, ten states in particular have received the majority (Table 1). An examination of the refugees resettled between 1983 and 2012 revealed that the largest proportion was sent to California (21.9 percent) followed by New York (12.4 percent). Table 1 reflects the states of initial resettlement, thus secondary migration would necessarily change the counts. According to the Office of Refugee Resettlement (ORR) (2006), much of the secondary migration commonly occurs within the first few years after arrival – then, the refugee group becomes relatively stabilized in their spatial distribution after an initial period of adjustment. Migration was typically to communities with ethnic clusters, for they proved to be extremely valuable in helping fellow compatriots adjust to a new society. They tended to bridge the cultural differences found between the originating country and the host country (Marger 2000). This was heavily prevalent among the classical refugees (Mortland and Ledgerwood 1987); but, despite the relative benefits of this clustering, the secondary migrations contradict (another contradiction) resettlement policies of dispersion.

Table 1. Top ten refugee resettlement states and totals 1983 - 2012.							
Rank	State	No. of Refugees	Percent of Refugees	Rank	State	No. of Refugees	Percent of Refugees
1	CA	464,663	21.90%	6	IL	86,352	4.10%
2	NY	262,828	12.40%	7	MN	70,957	3.30%
3	TX	128,966	6.10%	8	PA	68,406	3.20%
4	WA	101,511	4.80%	9	MA	64,758	3.10%
5	FL	100,557	4.70%	10	GA	61,973	2.90%

Out of the 2,121,257 refugees admitted 1983 to 2012, 1,410,971 (66.5%) lived in these top ten states. Source: Author modification and expansion of the Singer and Wilson (2006) calculation of refugee admits from 1983 to 2004.

This policy of dispersing refugee populations throughout the U.S. was incorporated into the Refugee Act to insure they were not being placed into areas that were highly impacted by refugees or other comparable populations unless immediate family was present (Office of Refugee Resettlement 2010). The dispersal policy was meant to prevent strain on communities with respect to jobs, housing, and social services (Black 2001). Somali migration destinations, however, not only included established ethnic communities – like that found in Minneapolis and Columbus (the first and second largest Somali concentrations in the US) where it is reported that between 80 and 90 percent of the population is due to secondary migrations – but also frontier communities like Barron, Wisconsin, Lewiston, Maine, and Emporia, Kansas (just to name a few) where there was no history of Somali habitation or refugee resettlement representation. In effect, the Somali were clustering as well as dispersing after being initially resettled (Huisman 2011).

Secondary Migration

The term 'secondary migration' is used to denote the process whereby refugees leave their community of initial resettlement. This act has, on occasion, led to fiscal and social issues in the new receiving community (Nadeau 2003). Lewiston, Maine serves as a good example – not because it was the first case of large scale Somali secondary migration, but rather because it was

the first sensationalized case. Early in 2001, Lewiston became the focus of widespread national and international media attention when an influx of Somali secondary migrants unexpectedly converged on the city. In response to the perceived threat to the city's financial situation, then-Mayor Laurier T. Raymond issued a public plea in an open letter to Somali community leaders urging them to discourage further Somali secondary migration to Lewiston (Belluck 2002). Secondary migrations are not as trivial as some would believe because the phenomenon basically challenges the framework of the refugee resettlement program as a stationary solution. The program is based on the assumption that refugees would stay and achieve self-sufficiency in their initial community of resettlement (Ott 2011). Congressional studies have found, however, that the resettlement efforts in many communities are underfunded and overextended. Thus, some of these resettlement communities fail to meet even the basic needs of the refugee populations they are officially asked to assist in their initial resettlement let alone the unaccounted additions (Senate Committee Print, 111th Congress 2010). Ott (2011) acknowledges that the congressional studies highlight the lack of accounting for secondary migration as a primary causal factor behind the faltering communities. By and large, this is because municipal officials consistently scramble to stretch services and resources to cover not only those expected refugees who were officially assigned to the community, but also those unexpected refugees who relocated to the community in secondary migrations. According to Barnett (2011), the refugee resettlement program, in sum, has a price tag that is easily 10 times the annual 1.1 billion dollar estimate stated by government officials. One of the issues contributing to the uncertainty of the price tag is secondary migration which, according to Nadeau (2003), can generate social, fiscal, and program changes that require amendments to local and statewide policy. There are no laws barring refugees from leaving their communities of initial resettlement, so many undertake these secondary migrations – commonly to locations with established ethnic enclaves where there is some sort of social support provided by persons of similar origin. When a refugee exercises agency by emigrating away from their community of initial resettlement, the benefits awarded as part of the resettlement process seldom transfer to their new destination. This is problematic because destination communities are often pressed into providing the initial support to the secondary migrants.

In the U.S., refugee resettlement is a process that requires financial as well as human resources for tasks ranging from the provision of cash assistance and translation services to

housing and job placement. The money provided to resettlement communities by the ORR and the federal government to complete those tasks is based on calculations for the set number of refugees sent to those communities. The unexpected arrival of additional refugees from secondary migrations is uncalculated and therefore initially unfunded. Under this scenario, providing services and support not only potentially taxes social and other services in the destination community, it also potentially diminishes the level of service meant for the refugees who were officially assigned to that community. Refugee placement is decided based on several criteria to include housing availability, job market, presence of family, and community resources; this is by design to facilitate self-sufficiency. Despite the criteria being satisfied in many of the communities of initial resettlement, a large proportion of contemporary refugees still embark on secondary migrations — even to areas where none of the criteria are satisfied. This suggests that there might be additional factors that contemporary refugees, like the Somali, find appealing enough to stimulate the secondary migration. Some (in unsubstantiated claims) contend it is the welfare benefits that serve as the major draw of the Somali to their new destination (Corcoran 2009).

The Somali

The Somali constitute a group that is fairly new and consistently growing in the US. While there are several reasons for the consistency in the immigration stream, the major contributors include drought, famine, and above all else – civil war between rival clans and political factions in their homeland. Admission data obtained from the ORR and the DHS indicate that nearly 120,000 Somalis entered the US between 1990 and 2011 collectively under the refugee, asylee, and I-94 non-immigrant admission categories. For the Somali admits, the refugee/asylee group constitutes

the largest proportion – nearly 95 percent (Figure 4).

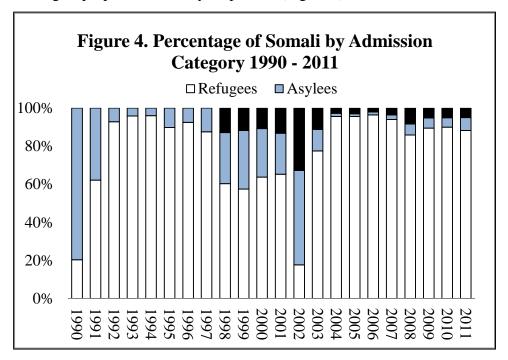


Figure 4. Data compiled from the DHS and the ORR for the fiscal years 1990 through 2011 on immigrant group entry by category.

Figure 5 is a map created from ORR data at the county level for Somali admissions for the years 1990 through 2009. As evident from the top map, the Somali have been resettled in nearly every state. Again, these are areas of initial placement, so their actual distribution would be different as a result of the immense amount of secondary migrations. The bottom map depicts a hot spot analysis of the Somali resettlement distribution. As one can see, there are four main clusters centered on Washington, Southern California, Minnesota, and The Northeast which would incorporate Maine. Columbus, Ohio is known to have the second largest concentration of Somali; however, this is not reflected on the map. The primary reason for the omission is because the data pertains to where they were initially resettled – the vast majority (over 85 percent) of the Somali in Columbus are secondary migrants.

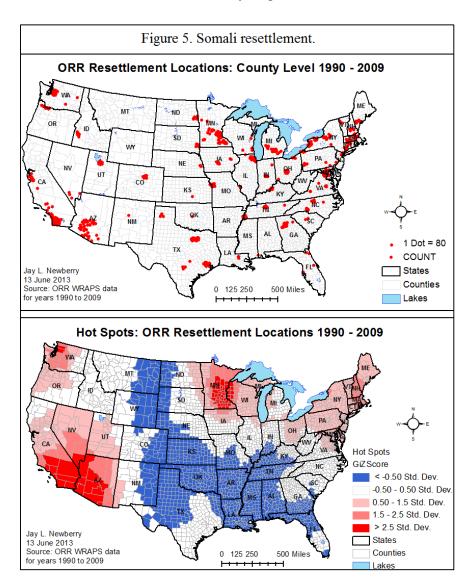


Figure 5. The top map represents ORR resettlement locations for the Somali at the county level aggregated from 1990 through 2009. The bottom map represents a Hot Spot Analysis – ArcGIS tool's implementation of the Getis-Ord spatial autocorrelation calculation Gi*.

There are several reasons why Somali secondary migrants, as a group, warrant such investigation. First, due to the social, political, and environmental turmoil Somalia frequently experiences, the region will continue to generate refugees for years to come (Goza 2007). Second, they are a part of the contemporary wave of refugees originating from regions where the culture is vastly different from the American culture. In many of the US communities the Somali have migrated to, they comprise a minority culture, language, religion, and race – this presents itself as a barrier and manifests as conflict, thus providing for a different type of immigration issue (Schaid and Grossman 2007). Third, their secondary migrations have captured headlines in numerous communities (both resettlement and frontier) more so than other refugee groups highlighting their propensity for spatial mobility. Table 2 depicts Somali mobility versus Nativeborn mobility; 73.7 percent of the Somali – compared to 43.9 percent of the native-born – were living in a different house in 2000 from their residence in 1995. Out of the Somali who were in a different house, 51.2 percent were in a different county compared to 43 percent for the natives.

Table 2. Residence five years prior to the 2000 Census enumeration.						
Group:	Native-born		Somali			
Population 5 years & over:	231,666,090		34,815			
Living in the US 5 years prior:	229,795,565		13,835			
RESIDENCE IN 1995	Count	Percentage	Count	Percentage		
Same house:	128,946,395	56.10%	3,650	26.40%		
Different house:	100,849,170	43.90%	10,190	73.70%		
In same county	57,530,090	57.00%	4,970	48.80%		
In different county	43,319,080	43.00%	5,220	51.20%		
Same state	23,294,650	53.80%	1,715	32.90%		
Different state	20,024,430	46.20%	3,505	67.10%		

Source: (FILES: Census 2000 Special Tabulation (STP-159) - United States / prepared by the U.S. Census

Bureau 2002). Table FBP-1. Profile of Selected Demographic and Social Characteristics: 2000.

Out of those Somali living in a different county – 67.1 percent were in a different state. For the native-born, this figure was only 46 percent. Somali mobility has been attributed to their previous lifestyle as "nomads" in Somalia trying to find "greener pastures" (Horst 2007:47). The Somali have been characterized as continuously moving – even after their resettlement in the global diaspora (Kapteijns and Arman 2004). Finally, and most importantly, this group warrants study because there is still widespread confusion about the primary reasons for their secondary migration.

Previous Research

Academic investigation into refugee secondary migrations have tended to focus on the largest group resettled – the Indochinese (Ott 2011). Findings from those studies have reinforced the notion that familial, social, and economic factors served as motivation for secondary migration (Weine et al. 2011). In effect, migration was motivated by the lure of family, co-ethnics, or jobs. The issues that set the Somali apart include the fact that the initial wave of Somali secondary migrants that arrived in Lewiston had no money, no jobs, no job prospects, and no housing.

Lewiston's welfare budget had doubled because the vast majority migrants were seeking housing in addition to rent and food assistance (Bouchard 2002). This scenario was not an isolated incident; mass movements were witnessed in several other communities. Columbus, Ohio experienced an influx of over 300 Somali secondary migrants in a time span of only a few weeks. The majority had no family connection to the area, no job, no job prospects, and no housing – a large proportion of the secondary migrants spent several months in homeless shelters that were originally intended to house people for only a couple of weeks (Juliano 2005). This was just two of several examples, but the intent was to show that the secondary migration concerning this particular group did not adhere to what is known about refugees and their motivations for secondary migration. These examples point to the need for continued examination of refugees on a group by group basis simply for the fact that they are not all the same or exhibit the same behavior.

There have been a limited number of quantitative studies assessing the migration destinations of the foreign-born. This gap in the literature inspired Newbold's (2002) research as he established differences in the literature in which the status of the foreign-born was studied in aggregate. Newbold believed making the distinction between the categories in which the foreignborn are admitted is important for geographic research because the motivation for immigrating and the differences in human capital (between refugees and economic immigrants for example) exert an influence on the settlement patterns and adjustment behaviors within the host society. The problem Newbold noted was the lack of information concerning admission categories. To overcome this barrier, the researcher employed an estimation method that assumed all persons from specific points of origin were either immigrants or refugees. Newbold then applied basic statistical techniques to identify the similarities and differences in the geographic distribution and personal attributes of the immigrant and refugee groups he identified. Newbold found that the geographic distribution of the foreign-born population reflected a combined effect of gateway city roles and government resettlement policy. The gateway city roles referred to the notion that some cities have been, continue to be, or are starting to become a magnet for immigrants attracting family preferences, immediate relatives, employment, and refugee arrivals. The government resettlement policy refers to the refugee resettlement policy of dispersion.

One of the earliest studies concerning the migration determinants was conducted by Ann Bartel (1989). Using 1980 PUMS and Public Assistance Statistical data, Bartel applied a logit regression to several socioeconomic predictors using select immigrant groups as the dependent.

She found that the percentage of co-ethnics already residing in the area had the greatest effect on migration choice for immigrants at the metropolitan level. But, as highlighted by Newbold, no distinction was made between immigrants and refugees. Later, F.H. Buckley (1996) conducted a similar study – but at the state level using OLS regression on legal permanent residence (LPR) data. Buckley's goal was to identify factors attracting immigrants to their immigration state. The significance of this study was that Buckley separated the immigrants into 4 categories including a refugee category. The findings revealed that his welfare variable had its strongest positive and only significant reading with the refugee category indicating that this group is more apt to reside in states with higher welfare benefits (recall from Newbold's (2002) study of the government dispersion policies). Zavodny (1999) also studied the determinants of immigrant migration choices at the state level. With respect to refugees, the findings revealed that welfare and total population variables had the strongest positive effect and unemployment had the strongest negative effect. This confirmed Buckley's findings of positive association with welfare benefits and negative association with unemployment for refugees. The findings from the above research ultimately set immigrants and refugees apart in academic locational studies; however, the results are more likely a matter of initial placement for the refugees. Traditional immigrants choose where to live – refugees, on the other hand, initially have little choice in the matter. As previously stated, refugees are placed according to pre-established criteria aimed at facilitating self-sufficiency. Such places are likely to have above average welfare benefits and low unemployment. Thus, the application of welfare magnet theories may not initially be applicable to refugees – the application would have to depend on the act of secondary and subsequent migrations which is the focus of this study.

Again, there has been work on the qualitative side published in Ìrìnkèrindò examining Somali secondary migrations – most notably the works of Huisman (2011) who drew on interviews, focus groups, and observations to understand the movement of Somali secondary migrants to Maine – in Lewiston alone, "secondary migrants accounted for 95 percent of the city's Somali refugee population" (Huisman 2011:56). While Huisman contends that social capital facilitated the secondary migration, the contention does not apply to this study because this study looks at data from a time during the initial movements where the secondary migrants had no social capital. As stated before, when the Somali secondary migrants first arrived in Lewiston – their care and placement came through the voluntary actions of the city.

Nevertheless, Huisman ultimately came to the conclusion that, as a migration determinant, welfare benefits may be a macrostructural factor enticing some of the Somali migrations to Maine. Huisman also noted – as have I in the beginning of this article – that the state shopping perception of the Somali is highly exaggerated and that other determinants influencing their migrations are overlooked. This research is intended to empirically identify those determinants.

Methods

The goal of this study is to identify the dimensions underlying Somali secondary migrations within the US. This will be accomplished by – first – subjecting 32 social, economic, and demographic variables (Table 3) from various government agencies for the year 2000 – 2002 at the county level to a principal component analysis (PCA). This method was chosen because it allows for the retention of more variables without succumbing to the correlation bias introduced when analyzing sociological data (Jolliffe 2002).

Table 3. Variables f	for Principal Component Analysis				
Aspect	Description				
-	Average wage per job for the county				
Employment	The estimated per capita number of jobs for the county				
	The unemployment rate for the county				
	Number of open units under contract for federal subsidy				
Public housing	Average months on waiting list among admissions				
C	Average utility allowance among households who have it				
	FSP Participation Per Poor Person				
Public Assistance	FSP Benefits Per Poor Person				
	TANF Benefits Per Poor Person				
Crime	Crime per 1000 persons				
Schools	Drop-out rate for teens 16-19				
	Number of hospitals				
II a al4la	Percent of persons insured				
Health	Number of physicians				
	Infant mortality rate				
Climate	Number of climate events causing more than \$50,000 in damages.				
	Total population				
	Percent of the Somali population				
	Percent of the population white				
Population	Percent of the population black				
Population	Percent of the population foreign-born entering between 1990 and 2000				
	median age of the population				
	Percent of the population in poverty				
	Population density (square mile)				
	Percent of households: family				
	Vacancy rate for rental units				
Households	Percent of households: 3 + bedrooms				
	Median rent asked				
	Median real estate taxes				
Political	Percent of population voting Democrat				
Religion	Muslim adherence rate				
Clan	Clan diversity				

The PCA is optimal for dealing with the issues of multicollinearity as it transforms the set of correlated variables into a set of uncorrelated principal components (Liu et al. 2003). These reduced orthogonal components – also known dimensions or synthetic variables – reflect the

underlying similarities of the correlated variables; therefore, they can be used as independent variables in a linear regression model (O'Brian et al. 1995). The following is the general formula for computing the first component created in a PCA: $C_1 = b_{11}(X_1) + b_{12}(X_2) + ... + b_{1P}(X_P)$ where C_1 equals the subject's score on component 1, b_{1p} equals the coefficient for the observed variable p as used in creating principal component 1, and X_p equals the subject's score on observed variable p (Hatcher 1994). The following is the general formula for the linear regression: $y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + ... + \beta_k x_k + \varepsilon$ where y equals the percent of Somali migrants in each county, $x_1, x_2, ... x_k$ represents the independent variables, and $\beta_0, \beta_1, \beta_2, ... \beta_k$ represents the regression coefficients to be estimated – ε represents the error term. The data for the dependent variable will come from Public Use Microdata Sample files (PUMS) for census year 2000. PUMS contains data pertaining to migration – a count of the persons in a tabulated census area who indicated that they lived in different census areas 5 years prior to that census date. The group extracted was the foreign-born of Somalian ancestry. By creating a county level matrix for each state comprised of migrant counts and their origins, the state files can be merged to create a master migrant matrix for the US. The PUMS data can then be matched to the county level independent variables for analysis.

Analysis Results

Extracted Dimensions

Table 4 contains the resulting dimensions, loadings, and variance percentages from the PCA. The PCA is a data reduction method and is commonly seen as exploratory. Here, however, its main function is to produce a stable set of uncorrelated independent variables that can be used in a regression analysis to yield coefficients that are not skewed by multicollinearity issues. Thus, reporting of the dimensions extracted is primarily descriptive for the purpose of understanding the independent variables used in the upcoming regression. As evident from the table, nine orthogonal dimensions were extracted accounting for 71.1 percent of the total variance in the dataset. The name given to the individual extracted dimensions is subjective and dependent on the researcher's interpretation of the collective of variables that comprise the individual dimensions. One would examine the variables and then assign a name that adequately describes their overall theme. With respect to this study, Dimension 1 was derived from the population size, number of hospitals, number of physicians, and clan diversity variables. The variables presented had the highest loading (< 0.6), and together they accounted for the greatest amount of

variability in the dataset (12.2 percent). This dimension was aptly named "Supportive Development."

Table 4. PCA Migration determinants - Ds, loadings, and variance.						
D 1: Supportive Development (12.2%)	D 6: Regional Employment Effects (9.6%)					
- Total population	0.915	- % of the population in poverty	0.748			
- Number of hospitals	0.896	- County unemployment rate	0.692			
- Number of physicians	0.851	- % of persons insured	-0.821			
- Clan diversity	0.671	D 7: Family Accommodations (6.5%)				
D 2: Welfare Generosity (7.2%)		- % of households: 3 + bedrooms	-0.644			
- FSP Participation Per Poor Person	0.913	- % of households: family	-0.878			
- FSP Benefits Per Poor Person 0.907		D 8: Racial Demographic Effects (8.5%)				
D 3: New Immigrant Attraction (4.1%)		- % of the population black	0.898			
- % foreign-born entering 1990 to 2000	-0.67	- Infant mortality rate	0.786			
D 4: Regional Economic Effects (10.5%)		- % of the population white	-0.734			
- Median rent asked	0.736	D 9: Criminal Propensity (5.5%)				
- Median real estate taxes	0.724	- Crime per 1000 persons	0.647			
- Average wage per job for the county	0.644	- Median age of the population	-0.562			
- Vacancy rate for rental units	-0.707					
D 5: Housing Availability (6.9%)						
- # of open units for federal subsidy	0.908					
- Population density (sqmi)	0.906					

The clan diversity variable found in Dimension 1 was a special creation variable derived from the ethnicities reported by the Somali during the resettlement application process. A diversity value was calculated and assigned to each spatial unit using Simpson's Index of Diversity. In ecology, this index is commonly used to quantify the biodiversity of a habitat. The primary strength of the index is that it takes into account the aspects of richness and evenness. Richness refers to the number of species found in a given sample and evenness refers to the abundance of the different species making up the richness of the habitat. For the purpose of this research, the Simpson's Index was applied to the human element and used to quantify Somali

clan-family diversity where S equals the number of clan-family groupings, n_i equals the number of persons belonging to ith clan and N equals the total number of persons in the sample. The Simpson's Index of Diversity (D) is denoted by the following formula (DeJong 1975):

$$D = 1 - \frac{\sum_{i=1}^{S} n_i (n_i - 1)}{N(N - 1)}$$

The logic behind the use of clan diversity is found in the Somali past. Clan is a vital part of Somali history and present – and, clan conflict over resources was one of the primary factors facilitating the Somali diaspora (Besteman 1999). Therefore, there is the possibility that the animosity was transported along with the people throughout the diaspora. Darboe (2003), however, asserts that – in a US context – clan tensions have lessened because Somalis are faced with more pressing social issues such as learning the English language, and working and raising children in a new environment. Darboe called this collusion between clans "ethnogenesis" and suggested it was happening because Somalis of different clans now live, work, and worship together (469). In either scenario, the diversity – or lack thereof – can serve to influence Somali migration destinations.

The second dimension, which is of primary concern, was given the name "Welfare Generosity." A number of welfare variables were incorporated into the original list; however, those associated with food stamps had the highest loadings. This commands attention because, as was revealed in the literature, some studies indicate an association between the residential location of refugees and welfare. It was also previously mentioned that in order to make a valid claim associating refugees with welfare, it must be analyzed through the lens of secondary migration. This is because of the resettlement placement process criteria sending them to communities with higher than average benefits. The PCA analysis identified the "welfare" dimension of the data – but, the dimension's performance in the upcoming regression will be a true test of the impact welfare has on refugee secondary migration. Two more dimensions of special concern include Dimension 4 which is "Regional Economic Effects" and Dimension 6 – "Regional Employment Effects." The aforementioned dimensions are important because they encompass several of the criteria looked at in the refugee resettlement program's placement process. In addition, both dimensions have a direct impact on quality of life measures. The last

dimension of special concern here is Dimension 8 – "Criminal Propensity." This dimension addresses aspects of crime and crime is a factor that is consistently brought up by Somali (who have suffered a higher level of victimization after resettlement than most other contemporary groups) secondary migrants (Coen 2013). The secondary migrants commonly made reference to escaping the crime ridden neighborhoods of their initial resettlement communities to find a safer place for raising children (Cullen 2011). As such, this dimension should have a strong impact on the regression dependent if the safer place rationale truly provides a strong motivation for secondary migration.

Regression on the Dimensions

The results for the regression on the 9 dimensions extracted are presented in Table 5. The p for the F-ratio under the ANOVA tells us the overall model is statistically significant. The R^2 reveals that the dimensions extracted from the PCA account for 63 percent of the variation found in the dependent variable (Percent of Somali Migrants) dataset.

Table 5. Regression on Migration Dimension Scores						
Dependent Variable	% of Somali	Analysis of Var.				
N	1,667		F-ratio	126.8		
R^2	0.639		p-value	0.0		
	Std. E	nate	0.53			
Independent / Dimension	β	Std. Beta	t	Sig.		
1: Supportive Development	0.26	0.39	20.36	0.00		
2: Welfare Generosity	0.07	0.09	4.99	0.00		
3: New Immigrant Attraction	-0.27	-0.39	-20.63	0.00		
4: Regional Economic Effects	0.09	0.13	6.61	0.00		
5: Subsidized Housing Availability	-0.11	-0.16	-8.61	0.00		
6: Regional Employment Effects	-0.02	-0.03	-1.63	0.10		
7: Family Accommodations	0.12	0.18	9.28	0.00		
8: Racial Demographic Effects	0.02	0.03	1.39	0.17		
9: Criminal Propensity	-0.11	-0.16	-8.22	0.00		

The coefficient results reported for this research is based on the standardized version; this is preferable because the standardized coefficients allow you to compare predictor variables measured across differing scales. With that said, out of the nine dimensions extracted, two were found to be insignificant (p>0.05) as seen under the Sig. column – the "Regional Employment Effects" and "Racial Demographic Effects" dimensions. Of those that were found to be significant (p<0.05), two dimensions shared the strongest impact on the percentage of Somali secondary migrants relocating to an area. The first was Dimension 3 – the "New Immigrant Attraction" (-0.39). One would expect this given the tendency for refugees to migrate to areas where they have co-ethnics; however, this particular impact is negative meaning the secondary migrants were more prone to move to areas void of new immigrants – this goes a long way in explaining their movement to the frontier communities. Dimension 3 was countered by the

"Supportive Development" variable (0.39). There were a couple of other significant dimensions that also had a negative impact on the percentage of Somali secondary migrants; they include "Subsidized Housing" and "Criminal Propensity" (both -0.16). The negative influence of these dimensions would be consistent with the proposition that Somali secondary migrants *are* in search of areas with a better quality of life which *would* include better housing and less crime. This statement is further strengthened by the dimension exerting the third strongest positive influence (0.18) – "Family Accommodations" – a dimension based on larger family housing. The main finding here, however, is the dimension that exerted the least amount of influence (0.09) – which was Dimension 2, the "Welfare Generosity" dimension. The appearance of this dimension in last place is surprising given that researchers have previously found welfare variables to be among the primary motivators behind secondary migrations. This research, however, indicates that while welfare may exert an influence on the movement of Somali secondary migrants, the influence is minimal and does not supersede that of family and safety.

Conclusion

The objective of this study was to identify the dimensions underlying the initial wave of Somali secondary migrations within the U.S. The Somali constitute a consistently growing group due to continued turmoil in their homeland, thus it is vital that we understand the kind of factors that motivate their decisions to migrate shortly after being resettled in the U.S. Secondary migration among refugees is a common occurrence and, to a point, it is expected. However, with regards to the Somali as a member of the contemporary refugee group, their secondary migration behavior appears to be different from that of their classical refugee counterparts. This notion becomes apparent in the examples given for places such as Lewiston, Barron, and Columbus where the migrants had no previous connection to their secondary destination – from the research on classical refugees, connections at the secondary destination dominated their motivation. Connections for the classical refugees were followed closely by welfare benefits. This study, however, has shown that for the Somali secondary migrants, destinations void of new immigrants (our so called frontier communities) and with an acceptable level of supportive development with respect to hospitals and doctors have precedence in exerting the most influence. The supportive development is understandable given the fact that many of the contemporary refugees require a higher level of medical assistance given the circumstances that

they fled. Classical studies have also consistently found that welfare plays a large role in the motivation for secondary migration among refugees; however, this empirical study finds that – even though welfare does exert an influence, the influence is nominal and takes a backseat to factors such as family and safety when it comes to the Somali searching for a better quality of life.

This study of the Somali secondary migrants reveal results that counter what is known about typical refugee migration behavior – or does it? Previous research is dominated by studies conducted on European and Southeast Asian groups who comprise the majority of all refugees ever admitted to the US. These were classical refugees who came from a comparative culture which allowed for a relatively smooth transition. The contemporary refugees now entering the U.S. commonly come from cultures that are vastly different and most are entering after spending years in refugee camps. The difference in background could provide for a variation in goals and adaptation methods. As this study has already shown with the Somali, quintessential differences exist in the factors that influence their secondary migrations, and this should be sufficient enough to bring doubt to the charges of state shopping and welfare hunting as the sole purpose of their movements thus supporting Huisman's (2011) assertion of welfare being a macrostructural factor as a determinant of the Somali secondary migration.

BIOGRAPHY

Jay Newberry earned his PhD from the Department of Geography at Michigan State University and is currently an Assistant Professor in the Geography Department at Binghamton SUNY. His interdisciplinary research focuses on minority migration, social mobility and exclusion, which results in literature such as *Opposite Sides of the Road: An Analysis of African-American and Somali-Immigrant Migration Patterns, Social Distance: An Analysis of the Residential Segregation Between African American and West Indians in New York, and Middle-Class African-Americans: A Segregated Distribution in the Pittsburgh Metropolitan Area.* Professor Newberry occupied a seat on the Board of Directors for the Ethnic Geography Specialty Group and serves as a Board Member for the Biannual Race, Ethnicity, and Place Conferences.

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