Predicting Economic Incorporation Among Newly Resettled Refugees in the United States:
A Micro-Level Statistical Analysis

By

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A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Social Welfare

in the Graduate Division

of the

University of California, Berkeley

Committee in charge:

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Professor Cybelle Fox

Spring 2016

Abstract

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The United States plays a central role in the global response to individuals displaced by violence and persecution, offering permanent resettlement and a pathway to citizenship to more refugees than any other nation. Upon arrival in the US, refugees face a number of challenges in adjusting to their new lives and achieving the goal of economic self-sufficiency laid out by the Federal Resettlement Program. Across the country, recently resettled refugees' employment and economic standings fall below those of the general public, as well as other immigrant populations.

While some scholars have attempted to gain an understanding of refugee economic incorporation (e.g., employment status, income) and its determinants, existing studies have fallen short of reliably doing so. The existing literature is limited by outdated findings, small non-representative samples, vague operationalization of outcomes, and a general lack of theoretical underpinning. This study serves to address these gaps in academic scholarship, leveraging inferential statistical analysis to identify factors that predict refugee economic incorporation across four measurable outcomes: binary employment status, elapsed time to first employment, hours worked per week, and hourly wage.

This study utilizes nonpublic survey data secured from the federal Office of Refugee Resettlement (ORR). Collected via the ORR's Annual Survey Questionnaire of Refugees, the data captures a wide range of information on respondents' lives, including demographic information, pre-resettlement experiences, post-resettlement activities, household characteristics, and economic performance. The survey data—compiled in 2013—was gathered through a random stratified sampling scheme, ensuring national representativeness. Multi-level logistic and ordinary least squares regression modeling was performed to identify predictors of the four economic outcomes listed above.

Regression modeling results suggest a high degree of predictive power at the demographic level; that is, the collection of non-modifiable traits and factors refugees bring with them to the resettlement process. These factors include gender, marital status and region of origin, among others. In addition, a number of post-resettlement factors were found to be predictive of

employment and economic outcomes, including participation in job training and improvements in English language proficiency.

This study's results yield a number of implications for future research, resettlement practice, and policy. Moving forward, research on the incorporation of refugees in permanent resettlement contexts should incorporate both quantitative and qualitative methods, as well as a holistic view of study outcomes beyond traditional economic indicators. In this vein, results from the study can be utilized to begin development of a modern, evidence-informed resettlement practice framework that integrates multi-faceted assessment, diverse service planning, and rigorous program evaluation. In the policy realm, findings call for a reassessment of the rapid-employment resettlement model, as well as a renewed focus on identifying and accommodating particularly vulnerable refugee subpopulations.

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ACKNOWLEDGEMENTS

The completion of this project—and the PhD program in general—would not have been possible without the overwhelming support I received from those around me. I have so many people to thank for helping me reach this point. Some are mentioned below; many others are not. Regardless, I am forever indebted to these individuals.

I would first like to give my thanks to the members of my dissertation committee: Prof. Neil Gilbert, Prof. Julian Chow, and Prof. Cybelle Fox. I could not have asked for a more supportive and encouraging group of advisors. Thank you for providing me with invaluable guidance and wisdom, while simultaneously placing confidence and trust in my own vision for the project. Thank you, also, to Prof. Jill Duerr Berrick, who served as chair of the PhD program during my time at Berkeley. I have no doubt that any graduate asked about their time in the program would immediately jump to mentioning Jill, and her pivotal role in supporting and nurturing the development of countless students. I would also like to express my gratitude to the greater faculty and staff of the School of Social Welfare, all of whom have treated me with absolute kindness and respect.

I likely would not be in this position today without the encouragement of Prof. Keith Warren, at the Ohio State University. It was Keith who—in the midst of an undergraduate research methods seminar—first implanted in me the idea of pursuing a PhD one day. We have remained connected throughout this experience, and I am honored and grateful to know him.

Most importantly, I would like to thank my family and friends, without whom none of this would be remotely possible. I am grateful for my closest friends—the Akhs—who have held it down over the years and offered me endless loyalty and comradery. I am forever thankful for having this group of brothers in my life. Thank you to Ms. Deb Cooksey, who has been a source of limitless warmth, kindness, and support, in an area of the country that once felt distant and unfamiliar. Thank you to my brother, Khalid, and sister, Deema. I am grateful to have grown up as your younger brother, and love you both deeply. I would be nowhere, were it not for my parents. I will never have the words to express my admiration, appreciation, and humble respect for the sacrifices they made to raise their children in a new and foreign world. Everything I am today, I owe entirely and unequivocally to them. Thank you for providing me an example of humanity and love to strive for. Finally, my boundless love and appreciation to my wife, Sadiya, who has accompanied me on every step of this journey. I am blessed to have a partner who shows me unyielding kindness and mercy, challenges me, teaches me, and makes me laugh through most of my days. Thank you for always believing in me, and for trusting me with your companionship.

I. INTRODUCTION

There are currently 54 million people around the world who have been forced to migrate from their homes due to violence or persecution. Of these migrants, approximately 13 million are classified as refugees by the Office of the United Nations High Commissioner for Refugees (UNHCR), and fall under the organization's mandate (UNHCR, 2015). While the vast majority of these refugees live in a state of temporary residence, many are afforded the opportunity to permanently resettle in host countries. Since the beginning of the 1980s more than two million refugees have traveled to the United States (Singer & Wilson, 2006). Upon arrival, refugees come face to face with a new reality and social order, while simultaneously coping with past trauma and stressors. It is within this context that they embark upon the vast process of incorporation into American society.

The path toward incorporation is marked with significant challenges for resettled refugees. These individuals are expected to quickly move toward economic self-sufficiency through gainful employment, which often proves difficult. This difficulty is compounded for refugees who enter the US labor market lacking prior work experience, formal education, or English proficiency (Ager & Strang, 2008; Potocky-Tripodi, 2003; Strang & Ager, 2010). The status of refugees' physical and mental health upon arrival further challenges the rapid employment, self-sufficiency model. According to its own observations, the federal Office of Refugee Resettlement states:

> The number of refugees with chronic untreated medical and mental health conditions continues to grow as the number of refugees coming to the United States who have lived their entire lives in inadequate refugee camp settings with limited access to medical care and nutrition grows. These health problems must be treated before the refugees can enter employment (ORR, 2013, p. 228).

It is clear that refugees face an uphill climb in working toward incorporation into their new environments, particularly in the economic sense. While this reality is evident, research on refugee economic incorporation, to date, has been quite sparse. There is a particular dearth of scholarship centered on reliably predicting economic outcomes, while accounting for the diverse characteristics and traits inherent in the refugee population. This gap in academic literature manifests in multiple ways. Without a reliable understanding of the determinants of economic outcomes, refugee policy and service practice is inherently subject to operation in a context devoid of strong evidence. Furthermore, there is a general lack of appropriate theory explaining the refugee incorporation process in permanent resettlement contexts. The current state of knowledge on this process is, therefore, neither evidence-based nor theory-based.

In light of the shortcomings mentioned above, this study seeks to provide foundational evidence regarding the economic incorporation of refugees, as well as a theoretical framework through which to filter this evidence. To these ends, the study achieves the following aims:

- To synthesize existing refugee scholarship and develop a hybrid theoretical framework of multi-axial incorporation.

- To identify predictors of refugee economic incorporation through statistical analysis of secondary data.
- To utilize theory development and quantitative analysis results in forming recommendations for future research, service practice, and policy.

This work employs Marrow's (2005) scholarship to contextualize incorporation, and utilizes the following adapted definition of the term: The process by which immigrants accumulate experience during their time in a new country. The study is presented in five chapters. Chapter II includes a detailed overview and critique of current academic literature on refugee incorporation, as well as the development of a hybrid theoretical framework to understand the incorporation process. Chapter III provides an overview of the research methods employed in the study, including details on the data utilized, variable construction and considerations, and quantitative analysis strategies. Chapter IV offers an exhaustive examination of analysis findings. Finally, Chapter V summarizes these findings and outlines their implications for research, service practice, and policy development.

II. REFUGEE INCORPORATION: REVIEW AND FRAMEWORK

The economic incorporation of refugees and—indeed—the overall process by which refugees adjust to life in the United States, are multifaceted and nuanced topics. As such, any attempt to leverage statistics and quantitative data analysis to explain these processes must be preceded by a thorough review of the relevant contextual, theoretical, and empirical literature. This review begins with an overview of refugee resettlement history, processing, objectives, and current dynamics. Next, a hybrid framework is offered to define and conceptualize refugee incorporation along multiple axes, including economic. The next section presents theoretical and empirical literature aimed at highlighting predictors of refugee economic incorporation. Finally, the review concludes with a brief summary of literature findings that inform both methods and analysis strategy, as well as a detailed presentation of the study's research questions.

Refugees and Resettlement

Refugee History

Beiser (2009) concisely summarizes the historical progression of refugee protection, asserting that "the idea…has evolved from individual moral precept to socially shared responsibility, and ultimately to legal imperative" (p. 540). The impetus for the creation of a unified body to regulate the flow of refugees was the large-scale migration of Europeans during and after World War II (Gibney, 2010). This body, established in 1950, would be known as the Office of the United Nations High Commissioner for Refugees (UNHCR). Since its inception, the UNHCR has operated principally under the mandate of the 1951 Convention relating to the Status of Refugees and its amendment in 1967, which offers a workable definition of the term 'refugee,' as well as refugee rights and the obligations of states receiving refugees (Kumin, 2012). The 1951 Convention and ensuing 1967 Protocol define a refugee as any person who:

> owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable, or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having such nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it (Gibney, 2010, p. 12).

This definition, embedded within the mandate of the UNHCR, has been the driving force behind the temporary and permanent resettlement of refugees across the globe.

While the United States is a signatory of the 1951 Convention and 1967 Protocol, its own history of refugee resettlement predates the formation of the UNHCR. In the aftermath of World War II the U.S. admitted some 650,000 refugees from Europe under the Displaced Persons Act of 1948. In the interest of systematizing the process of refugee entry Congress passed the Refugee Act of 1980, which follows the framework of the U.N. Refugee Convention and standardizes the services extended to new refugee arrivals in the United States. The Act of 1980

would set the stage for annual refugee quotas, federal funding for resettlement, and pathways to citizenship for refugees (Singer & Wilson, 2006).

Current Trends

The UNHCR estimates that there are 11.7 million refugees under its mandate and in need of assistance worldwide, representing the highest level since 2001. It should be noted that this figure does not include an estimated 5 million Palestinian refugees documented by the UNHCR, but ineligible for assistance and resettlement under its mandate (UNHCR, 2014). Roughly 1% of refugees under the UNHCR mandate are permanently resettled to host countries annually (Kumin, 2012). In 2013, 98,400 refugees were permanently resettled in 21 different host countries, each of which sets its own annual quotas and domestic immigration policies.

The United States receives a significantly higher proportion of the world's annual refugees than any other developed nation. Of the 98,400 refugees permanently resettled in 2013, 70,000 were sent to the U.S. (ORR, 2014). In 2013, the most recent year for which detailed federal data are available, more than 70% of these refugees originated from the nations of Iraq, Burma, and Bhutan (ORR, 2014). The following tables summarize current admissions figures from the top 12 countries of refugee origin, as well as six-year regional trends:

Table 1. U.S. Refugee Arrivals by Country of Origin, FY 2013 (ORR, 2014)

Country of Origin	Arrivals	Percent of Total
Iraq	19,000	27%
Burma	16,000	23%
Bhutan	9,000	13%
Somalia	8,000	11%
Cuba	4,000	6%
Iran	3,000	4%
Dem. Rep. of Congo	3,000	4%
Sudan	2,000	3%
Eritrea	2,000	3%
Other	2,000	3%
Ethiopia	1,000	1%
Afghanistan	1,000	1%
Total	**70,000**	**100%**

Table 2. U.S. Refugee Arrivals by Region, FY 2008- 2013 (ORR, 2014)

Fiscal Year	Africa	East Asia	Europe	Latin America/Caribbean	Near East/South Asia	Grand Total
2008	9,000	19,000	2,000	4,000	25,000	59,000
2009	10,000	20,000	2,000	5,000	38,000	75,000
2010	13,000	18,000	2,000	5,000	36,000	74,000
2011	8,000	17,000	1,000	3,000	27,000	56,000
2012	11,000	14,000	1,000	2,000	30,000	58,000
2013	15,000	17,000	1,000	5,000	32,000	70,000
Grand Total	**67,000**	**105,000**	**9,000**	**24,000**	**188,000**	**393,000**
Total %	**17%**	**27%**	**2%**	**6%**	**48%**	**100%**

US Refugee Program

      Overview. The procedures employed by the United States federal government to select and resettle refugees from around the world are activated long before a new immigrant sets foot on U.S. soil. The U.S. Refugee Program's (USRP) multi-step resettlement process often spans years for individual cases, and begins with the point at which a refugee accesses the program. Access can be achieved in three distinct forms: Individual referral, group-based eligibility, and family-based eligibility. Individual referrals come primarily from UNHCR field offices, and often include extensive case files on an individual, which detail his or her eligibility under the 1951 Refugee Convention. Group-based access is possible for refugees belonging to ethnic or national groups that the U.S. State Department has designated as priority populations. Membership in such a group presupposes refugee status, and no further documentation of persecution is necessary. Family-based access is available for refugees with relatives already resettled in the U.S. These individuals are eligible to be sponsored by family members in the United States who, themselves, entered the country with refugee status (Martin, 2005).

      Following initial access, the next steps in the USRP resettlement process involve case preparation and security screening. During these steps, private contractor organizations collect and compile all necessary documentation from eligible refugees, and submit them to the Department of Homeland Security (DHS). DHS agents then schedule and conduct extensive screening interviews with individuals and families applying for resettlement. Assuming DHS approval, refugees are then placed on waiting lists to be resettled by American volunteer agencies (volags). These volags will eventually be responsible for matching refugees with local resettlement affiliate agencies, which assume responsibility for new arrivals once they enter the U.S. While waiting to be processed by a volag, refugees also undergo brief medical screenings and a cultural orientation, the aim of which is to prepare migrants for their new lives in the United States (Martin, 2005). After completing the medical screening and cultural orientation, refugees processed by the USRP are considered travel-ready, at which point the International Organization for Migration (IOM) prepares flight arrangements and ensures safe passage to the United States. IOM representatives assist refugees in clearing international customs screenings and DHS processing at the American point-of-entry, but do not accompany passengers to their final destination cities. Refugees are met at their arrival airports by representatives from their sponsor resettlement agency, who then take on the task of disseminating services (Martin, 2005).

      Before refugees arrive in their host communities, resettlement case managers are tasked with securing rental housing for their future clients, furnishing their apartments with basic necessities, and stocking their kitchens with food. Within the first few days of refugees' arrival, case managers are further tasked with enrolling their clients in eligible welfare programs, such as cash assistance, food assistance, and medical insurance. Shortly thereafter, refugee children are enrolled in local schools, and adults begin attending English language classes and employment training. These educational programs are often offered by the resettlement agencies, themselves, though refugees may also be referred to other organizations (Smith, 2008; U.S. Department of State, 2007).

      The USRP provides funding for resettlement services primarily through the federal Office of Refugee Resettlement (ORR). The ORR offers three types of services to newly

resettled refugees, both through direct provision and contracting with local nonprofit organizations: cash and medical assistance, social services (e.g. employability training and job search assistance), and targeted assistance. Unlike other immigrant groups, refugees and their families may be eligible for TANF, SSI, or Medicaid. Refugees who meet the programs' financial requirements but are not categorically eligible—such as those who are nonelderly or without children—receive specialized Refugee Cash Assistance (RCA) and Refugee Medical Assistance (RMA) for a maximum of eight months. RCA and RMA are further contingent on the recipient's active enrollment and participation in employability and/or job placement programming (Bruno, 2011; HHS, 2014).

The ORR's Refugee Social Services (RSS) program provides funding to local public and nonprofit agencies that "assist refugees in obtaining the skills which are necessary for economic self-sufficiency, including projects for job training, employment services, day care, professional refresher training, and other recertification services; and provide training in English where necessary" (Bruno, 2011, p. 10). RSS programming is available to refugees who have lived in the United States for less than five years. As evident above, RSS programming is limited only to services with a direct connection to employment and economic self-sufficiency. The guidelines provide little in the way of program expectations or frameworks, though. Target Assistance Grants (TAG), like RSS funding, are intended to promote the economic self-sufficiency and gainful employment of refugees. TAGs are authorized for dissemination to local resettlement agencies by the ORR under special circumstances, usually in cases of unusually large refugee immigration waves. In order to receive TAG funding, providers must demonstrate a pressing need for additional services in their community (Bruno, 2011; ORR, 2014).

Current state. With strong public policy support and high levels of federal funding dedicated to the US Resettlement Program, many refugees have found success upon arrival to the United States. Indeed, in their annual survey of refugees, the Office of Refugee Resettlement reports that recently resettled refugees have a labor force participation rate almost equal to that of the US population (60 vs. 63%), and that the overall hourly wage of employed refugees has steadily increased to a rate of $9.79. However, the survey also indicates a refugee unemployment rate double that of the general population (14 vs. 7%), and an economic self-sufficiency rate of only 50% (ORR, 2014). These disparities drive a number of critiques directed toward the USRP. On a strategic level, multiple observers (Montgomery, 1996; Mott, 2010; Potocky-Tripodi, 2003) have questioned the overall wisdom and effectiveness of the URSP's self-sufficiency model, which prioritizes immediate employment over other forms of psychosocial adjustment and incorporation. Critique of the model centers on the difficulty of pursuing rapid employment and economic adjustment as a refugee, while simultaneously coping with past trauma and the stressors of forced migration. Another critique of the USRP's model is centered on a general lack of programmatic standardization: A great deal of variation exists in the types and quality of services available to refugees, across state and local lines (Martin, 2005; Smith, 2008). This variation poses a significant challenge to refugee incorporation and adjustment in the United States, as not all individuals are guaranteed comparable levels of service and assistance.

The significant gaps in refugee economic performance referenced above, as well as foundational critiques of the USRP and its strategies, frame the timelines of this study. The relevance of this project's aims is clear: While debate exists around the merit of emphasizing

employment and self-sufficiency over other forms of incorporation, there is no doubt that these two conditions are crucial to the wellbeing of recently resettled refugees. It is therefore imperative to identify and explore their predictors. In more general terms, the current state of refugees in the United States points to the overall importance of developing scholarship around refugee incorporation, both economic and otherwise.

Importance of Refugee Research

By analyzing the process of refugee incorporation in the United States, this study makes a fundamental assumption that refugees warrant scholarly attention independent of other immigrants. This assumption is rooted in the work of a number of researchers (Boyd, 1989; Connor, 2010; Cortes, 2004; Hein, 1993), all of whom recognize significant differences across multiple spectrums, between refugees and non-refugee immigrants.

Refugees are often unable to return to their countries of origin after migration, and thus embark on a more linear adaptation process in their host country than non-refugees. In contrast, non-refugee immigrants often exhibit circular patterns of migration, making multiple and sometimes frequent trips between their country of origin and receiving state. These unique patterns of migration have a significant effect on post-migration social identity construction. Non-refugee immigrants are less likely to afford the process of migration a major role in their identity formation. Refugees, on the other hand, often build their new social identities around concepts of exile and detachment from roots (Hein, 1993). The demographic disparity between the two groups is also noteworthy. Refugees are more likely to migrate as entire family units, bringing along individuals who would otherwise not make the journey. These individuals are often less equipped for successful adaptation in their host country than their non-refugee counterparts (Boyd, 1989). This incongruence in preparation for adaptation is manifested in a number of markers: When compared to other immigrants, refugees exhibit less English ability, less educational experience, and poorer mental and physical health. Refugees are also more likely to reside in disadvantaged neighborhoods (Connor, 2010). Refugees and non-refugee immigrants also exhibit divergent economic trajectories, attributable in large part to their differing time horizons and migratory patterns (Cortes, 2004).

Perhaps most significantly, refugees and non-refugee immigrants in the U.S. hold different relationships with the state. Refugee incorporation is more tightly managed by state actors than the incorporation of other immigrants (Hein, 1993). This difference is highlighted in the provision of social welfare services. Unlike other immigrants, refugees are immediately eligible for a number of public benefits upon resettlement, such as cash assistance, medical insurance, and food stamps (HHS, 2014). Refugees' unique relationship with the state—coupled with divergent patterns of social identity formation, migration, demographics, and economic adaptation—warrants the study of refugee incorporation as a distinct subfield of immigrant incorporation in the United States.

Conceptualizing Refugee Incorporation

In order to explore predictors of refugee incorporation—economic or otherwise—it is necessary to thoroughly define and conceptualize the construct. That is, before incorporation can
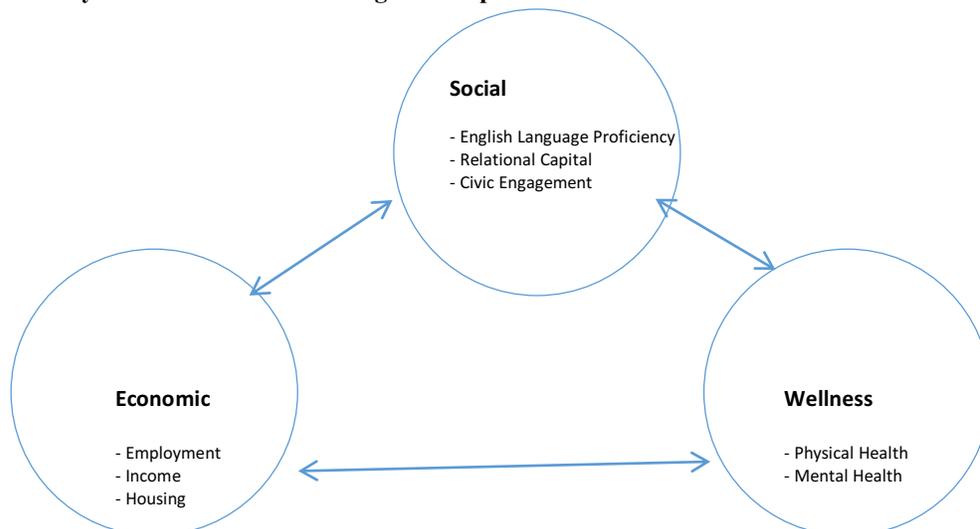
be predicted, it must first be operationalized. One such operationalization is suggested below, in the form of a hybrid theoretical framework. The framework will later inform the methods and scope of this study.

Existing Frameworks

The process of conceptualizing refugee incorporation—the construct of interest for this study—faces a significant barrier: a general lack of consensus in definition and understanding (Castles, Korac, Vasta, & Vertovec, 2001). Ager and Strang (2008) identify ten core domains of refugee incorporation: Rights and Citizenship, Language and Cultural Knowledge, Safety and Stability, Social Bridges, Social Bonds, Social Links, Employment, Housing, Education, and Health. Beiser (2009), in a more abridged attempt at conceptualization, identifies three core indices: Employment, Language Fluency, and General Health. Bloemraad's (2006) work serves a unique purpose in that it—for the first time—comprehensively frames refugee incorporation through a political lens, utilizing such indicators as naturalization rates, participation in electoral politics, and the prevalence of ethnically grounded civic organizations.

Given the lack of consensus among scholars in framing, a synthesized framework of refugee incorporation—rooted in multiple existing models (Ager & Strang, 2008; Beiser, 2009; Bloemraad, 2006)—is suggested below. This hybrid framework is distinct both in its attempt to distill multiple incorporation indicators into themed axes, as well as its ability to describe the potential interconnectedness of these incorporation axes. Further, by holistically interpreting physical and mental health as components of overall wellness, the framework is consistent with attempts to contextualize these indicators amongst refugees as interconnected challenges (Palinkas et al., 2003). The hybrid framework, presented in Figure 1 below, conceptualizes refugee incorporation along three distinct, yet interconnected axes: Social, Economic, and Wellness. The aims of this framework are threefold: 1) to highlight potential benchmarks and indicators of incorporation, 2) to cluster these indicators into distinct axes, in a manner that is both intuitive and conducive to testing, and 3) to account for the interdependence of incorporation indicator axes.

Figure 1. Hybrid Framework of Refugee Incorporation

Social
- English Language Proficiency
- Relational Capital
- Civic Engagement

Economic
- Employment
- Income
- Housing

Wellness
- Physical Health
- Mental Health

Hybrid Incorporation Framework

Social axis. The social axis of the hybrid framework includes the following indicators of refugee incorporation: 1) English language proficiency, 2) Relational capital, and 3) Civic engagement.

English language proficiency plays a central role in defining and predicting the incorporation of immigrants in developed countries like the United States (Ager & Strang, 2008; Harkins, 2012; Ives, 2007; Montgomery, 1996; Okigbo, Reierson, & Stowman, 2009). 45% of refugees report speaking no English upon arrival to the United States (ORR, 2014). Among immigrants, refugees display lower levels of English proficiency and education than their non-refugee counterparts (Connor, 2010). This disparity stems from a number of causes, many of which involve the dissemination of English as a Second Language (ESL) classes targeted at refugee groups. Students of these programs cite a number of issues that seemingly hinder English language acquisition, including lack of peer education, short class lengths, limited separation of cohorts along proficiency lines, and outdated curricula and materials (Tshabangu-Soko & Caron, 2011). ESL learning is further hindered within these groups by a heightened prevalence of native language illiteracy among refugees, which increases the difficulty of acquiring fluency and literacy in a new language (ORR, 2014; Tshabangu-Soko & Caron, 2011). Access to ESL education represents another significant barrier for certain segments of refugee communities. Many refugee ESL classes are sponsored and funded by government sources and contain strong elements of workforce development, vocational training, and economic self-sufficiency (ORR, 2014; U.S. Department of State, 2007). As such, these classes are catered mostly to young men, leaving behind many female and elderly refugees. Over time this access gap can create and perpetuate increasingly large disparities in English proficiency across gender and age characteristics (Beiser, 2009), which also have implications for access to community resources and services (Mott, 2010).

English language proficiency among refugees is also a potential predictor of employment (Beiser, 2009; Tshabangu-Soko & Caron, 2011), increasingly so with the passage of time (Beiser, 2009). Furthermore, limited English proficiency among refugee groups has been linked to increased social isolation and difficulty creating and maintaining social bonds with community members (Harkins, 2012; Okigbo et al, 2009). This multi-level interplay highlights the potential power of language acquisition as a determinant of both social and economic incorporation, and the importance of examining it closely.

The development of social bonds with co-ethnics and other community members is fundamental to the pursuit of refugee social incorporation (Ager & Strang, 2008; Ives, 2007). These bonds provide refugees with information and material resources, emotional resources to build confidence, and capacity building resources. The development of social bonds is a two-way process, which requires the effort of both refugees and other community members (Ager & Strang, 2008). However, this process is often derailed by xenophobia, racism, and unwelcoming gestures (Ager & Strang, 2008; Harkins, 2012). Many refugee groups have developed antagonistic and sometimes adversarial relationships with community members of other ethnicities and religions, greatly limiting the opportunity for social incorporation and bridge building (Harkins, 2012). Indeed, isolation and conflict create an incentive for refugees to

associate and group only with co-ethnics, in the interest of maintaining solidarity and coping with a lack of belonging. This inward shift has significant consequences when extended for prolonged periods of time, often further isolating refugees from their social environment (Beiser, 2009; Montgomery, 1996). Research has shown that limiting social ties only to other members of refugee groups has detrimental effects on economic incorporation, even within the context of developing social capital. Allen (2009) concludes that when refugees limit their social capital development to co-ethnics, the economic benefits are outweighed by the reciprocal obligations, such as money lending and overseas remittances, that are expected in return. In contrast, refugees whose social capital building includes outsiders, such as volunteer sponsors, exhibit increased economic incorporation over time.

Rarely highlighted as a major area of refugee studies, civic engagement is an often-overlooked segment of incorporation. For many researchers focused on refugees' development of social capital and economic independence, political participation and incorporation is a seldom-explored topic (Bloemraad, 2006). However, this burgeoning field offers a great deal of insight into the adaptation of refugees in the United States.

Assessing refugee civic engagement is an inherently laborious process; limited data exist that distinguish between types of immigrants in politically grounded studies. Bloemraad (2006), in her work, utilizes a multi-pronged model of assessing immigrant and refugee political participation in the United States and Canada. This model includes measures of naturalization rates, participation in electoral politics, and prevalence of ethnic organizations within immigrant and refugee communities. Ramakrishnan (2005) assesses political participation through the analysis of immigrant and refugee voter turnout over the course of three national elections.

Bloemraad (2006) and Ramakrishnan's (2005) work suggest that refugees' civic engagement is higher in some domains than that of other immigrants. Specifically, refugees naturalize at 1.5 times the rate of other eligible immigrants (Fix, Passel, & Sucher, 2003), and invest significant capital into ethnically based community organizations (Bloemraad, 2006; Doherty, 2007; Vo, 1996). Nevertheless, refugees in the United States and Canada are, as a whole, reluctant to enter the arena of electoral politics (Bloemraad, 2006). One notable exception to this trend is the case of Hmong refugees in Wisconsin and Minnesota, who have fielded a number of candidates for local and state elections. Doherty (2007) posits that this phenomenon is largely rooted in Hmong community members' desires to improve school conditions for their children and raise awareness of Hmong-specific issues. However, while Hmong candidates displayed a promising sign of civic engagement by choosing to run for office, voter turnout within the community did not reflect this same level of engagement (Doherty, 2007). In general data regarding voter turnout do not consistently yield a significant difference between refugees and other immigrants, though there are indications that refugees—having often been drawn into the sphere of the state—may be more inclined to organize politically and vote (Ramakrishnan, 2005). If so, such a trend would be in line with Hein's (1993) assertion that refugees are distinguished from other immigrants in their special relationship with the state.

Economic axis. The economic axis of the hybrid framework includes the following indicators of refugee incorporation: 1) Employment, 2) Income, and 3) Housing.

Gainful employment and financial sustainability promote the economic incorporation of refugees, and contribute to increased English proficiency (Ager & Strang, 2008). Employment is also a catalyst for social empowerment in refugee communities (Yakushko, Backhaus, Watson, Ngaruiya, & Gonzalez, 2008). However, these goals are not easily met. Upon arrival in the United States, refugees as a whole hold lower level jobs and earn less income than other non-refugee immigrants, a disparity with far-reaching implications for economic incorporation (Connor, 2010; Cortes, 2004). These gaps in income level and employment status are believed to be attributed to limited English proficiency, factors related to the neighborhood of resettlement, and educational deficiencies (Connor, 2010). Refugees are somewhat unique in that these educational deficiencies often hinder those who are well educated in their native countries. Having typically left their homes amidst conflict, chaos, or urgency, refugees often do not carry with them the printed credentials that prove their level of education or employment history. Diplomas, certificates, and transcripts are frequently left behind, with no prospect of retrieving them in the future; crossing back into hostile territory or asking a family member to brave a trip to collect documents, is rarely an option (Ager & Strang, 2008). Thus, regardless of prior experience or skill level, most refugees enter the American workforce in entry-level, low-paid hourly work. Research has substantiated this claim, with studies showing that refugees are subject to higher levels of occupational downgrading than non-refugee immigrants. For example, Cannedy (2011) highlights the difficulties facing highly educated Iraqi refugees who, upon arrival in the US without recognized credentials, are often placed in employment at hotels and restaurants. When refugees do secure work, wages are often insufficient to meet household budgets, and underemployment is quite common (Ager & Strang, 2008). Underemployment is often a result of refugees feeling pushed into the first job available to them. Under pressure from state-funded vocational programs to achieve self-sufficiency as quickly as possible, and with an 8-month federal cash assistance fund fading, refugees frequently enter into unsustainable employment situations (Connor, 2010). Workplace difficulties are often further compounded by refugee reports of discrimination and exploitation on the job site, as well as inequitable pay (Beiser, 2009).

The financial difficulties faced by refugees predictably contribute to housing insecurity and instability. In order to make due with the federal resettlement funds allotted to them, and often with no significant financial savings, refugees are frequently placed in substandard housing situated in neighborhoods with high rates of drug abuse and violent crime (Ager & Strang, 2008; Harkins, 2012). This reality is reflected in the home ownership rate among refugees resettled in the US within the last five years, which stands at only 10% (ORR, 2014). Faced with the inevitability of renting, refugees often fall victim to predatory landlords who capitalize on their lack of rental history and general housing naiveté (Fennelly, 2006).

Wellness axis. The wellness axis of the hybrid framework includes the following indicators of refugee incorporation: 1) Physical health and 2) Mental health.

Maintaining positive physical and mental health has a significant positive influence on refugee incorporation (Beiser, 2009). This dual maintenance forms the basis of general refugee wellness. According to Palinkas et al. (2003):

The journey to wellness for refugees involves a threefold challenge: 1) treatment of psychiatric disorders precipitated by the refugee experience, including events that occur prior to, during, and subsequent to the journey from countries of origin to host countries; 2) treatment and prophylaxis of infectious and parasitic diseases endemic to countries of origin; 3) prevention of chronic diseases endemic to host countries. (p. 20)

Refugees are exposed to significant stressors and trauma, both pre and post-migration, that significantly increase the likelihood of developing a mental illness (Beiser, 2009; Fennelly, 2006; Murray, Davidson, & Schweitzer, 2010). Mental illnesses frequently observed within refugee communities include major depressive disorder and post-traumatic stress disorder (PTSD) (Murray et al, 2010). Researchers estimate that refugees could be ten times more likely than the general American public to be diagnosed with PTSD (Fazel, Wheeler, & Danish, 2005).

Refugee mental health serves a deleterious role in incorporation not only due to the prevalence of illness and disorder, but also due to the multiple dynamics effecting their onset and manifestation. Trauma experienced before, during, and after the resettlement process creates risk factors for refugees that are not immediately activated. Rather, stressors experienced along the way often serve to convert risk to illness. Unsuccessful acculturation, unemployment, and perceived discrimination are three common stressors that activate traumatic impulses and contribute to the development of mental illness (Beiser, 2009). This conversion of risk to morbidity depends on a number of factors unique to each individual, such as type of trauma, coping strategies employed by the refugee, and details of his or her particular resettlement experience. Pre-migration trauma may also lie dormant for extended periods of time before emerging as a risk factor. The risk of morbidity in refugee mental health is further complicated by the two-way relationship between mental illness and stressors. For example, unemployment is a common inducer of depression for refugees. This dynamic also works in reverse, with trauma-related depression frequently compromising refugees' ability to effectively maintain employment (Beiser, 2009).

In order to fully conceptualize refugee mental health, it is necessary to approach trauma as a phenomenon spanning multiple stages of migration. The pre-flight, flight, and resettlement stages of refugee migration all contain potential hazards, and should be examined individually and in combination with one another. Examples of pre-flight trauma include experiences of violence, sexual abuse, and intimidation. Flight-related trauma often centers on issues of exile and uncertainty following early displacement. Trauma experienced during and after resettlement to a refugee's destination country may include anxiety over friends and family members left behind or a radical shift in culture and lifestyle (Murray et al, 2010).

In examining the relationship that trauma holds with refugee incorporation, it is important to understand the role of religion and spirituality in coping. Although this field of refugee studies has traditionally been understudied, spirituality and spiritual wellness are central in the coping and incorporation process of many refugees (Gozdziak & Shandy, 2002). Indeed, while spiritual wellness is a primary component of refugees' own healing and adjustment (De Voe, 1997), it is very rarely integrated with Western models of behavioral science and therapy that are used to treat traumatized refugees (Gozdziak, 2002; Gozdziak & Tuskan, 2000). Such integration would likely prove effective in the pursuit of refugee mental health and overall wellness.

Refugees face a number of challenges to comprehensive physical health at all stages of the resettlement process. Physical illness is widespread, and most common diseases are more prevalent amongst refugees than other immigrants. Refugees are at particular risk of carrying tuberculosis, malaria, and hepatitis B (Palinkas et al., 2003). Refugees also have lower levels of comprehensive physical health than non-refugee immigrants (Connor, 2010).

While refugees face significant barriers to physical health, these obstacles are ameliorated by standardized screening processes. Current forms of screening, however, do not address the full wellness spectrum. Refugees are screened for infectious diseases prior to final resettlement approval, but no such check is made for mental health. Refugees are further screened for physical ailments upon arrival in the U.S., with funding provided by the federal Refugee Medical Assistance (RMA) program. It is worth noting that, although these screenings are funded by RMA, there are no universal standards or measures employed to ensure uniform checks. RMA does not cover an initial mental health assessment, and agencies are forced to apply for competitive grants to cover the costs of such an assessment, should they choose to do so. In a survey of influential resettlement agencies in the United States, it was reported that only 33% of these agencies conducted mental health assessments with their clients. The results of these assessments were, unfortunately, not published (Vergara, Miller, Martin, & Cookson, 2003). Barring significant and proactive change in the process of refugee health assessment, mental health related factors will likely continue to pose a significant barrier to overall refugee wellness.

Axis interconnectedness. As mentioned earlier, one of the strengths of the hybrid framework is its recognition of the interconnectedness of the three incorporation axes. What follows is a brief discussion of how the axes—and indicators contained within them—hold the potential to interact with one another.

As previously mentioned, English language proficiency plays a significant role in the economic incorporation of refugees. Higher levels of proficiency predict improved employment status, as well as higher income (Beiser, 2009; Tshabangu-Soko & Caron, 2011). Lower levels of proficiency are associated with a higher risk of depression amongst refugees (Hou & Beiser, 2006). In addition, lack of English proficiency can preclude refugees from participating in the political process and engaging civically within their communities (Harkins, 2012; Okigbo et al, 2009). The development of relational capital and social bonds has the potential to positively impact refugee economic incorporation, through increased access to employment opportunities and the ability to pool resources (Beiser, 2009). Furthermore, social support within refugee communities can serve as a protective factor against mental illness (Murphy, 1977; Starr & Roberts, 1982). Finally, there is evidence that civic engagement has the potential to improve the economic incorporation of refugees over time (Bloemraad, 2006).

The economic incorporation of refugees has the potential to significantly impact wellness, civic engagement, and English language proficiency. First, positive economic incorporation can influence the restoration of self-esteem among refugees (Africa Educational Trust, 1998). The attainment of higher levels of income, as well as the achievement of housing security, are also associated with general improvements in physical and mental health (Glover et al., 2001). Gainful employment and sustained financial success have been identified as paths

toward political empowerment and long-term civic engagement for refugee communities in the US (Vo, 1996; Yakushko et al., 2008). Further, active employment presents a crucial opportunity for refugees to develop English language proficiency, particularly in cases where their coworkers are not co-ethnics (Ager & Strang, 2008).

Perhaps unsurprisingly, refugee wellness holds the potential to impact all other areas of incorporation (DeVortez, Beiser, & Pivenko, 2005). Poor mental health has the potential to jeopardize economic productivity among refugees. Furthermore, refugees experiencing depression are more likely to be laid off, if they have found work (Beiser, 2009). Refugee wellness can also impact the capacity of individuals to gain English language proficiency, with mental illness acting as a significant barrier (Tshabangu-Soko & Caron, 2011). Finally, refugees' overall level of wellness has strong implications for their ability to form relational bonds and build vital social capital (Simich et al., 2003; Strang & Ager, 2011).

Applying the framework. The aims of this study focus specifically on the economic axis of refugee incorporation. Although indicators housed within the other two axes will not be explored, they are crucial to understanding the multi-level and multi-system dynamics driving economic incorporation. The framework outlined above serves to inform the methods of this study not only in outcome variable selection, but also in the high-level framing of cross-axis associations and predictive relationships. The section that follows expands on this high-level framing, and offers insight into the goal of identifying specific predictors of economic incorporation.

Predicting Refugee Economic Incorporation

Theoretical Model

In attempting to identify predictors of refugee economic incorporation, this study will draw upon the theoretical scholarship of Kuhlman (1991), whose model of refugee integration remains the preeminent and most comprehensive framework of its kind (Potocky-Tripodi, 2003). Kuhlman's (1991) theoretical framework is rooted in the following definition of integration, which can be reasonably applied to similar, more contemporary terms, such as 'adjustment' and 'incorporation:'

> If refugees are able to participate in the host economy in ways commensurate with their skills and compatible with their cultural values; if they attain a standard of living which satisfies culturally determined minimum requirements; if the socio-cultural change they undergo permits them to maintain an identity of their own and to adjust psychologically to their new situation; if standards of living and economic opportunities for members of the host society have not deteriorated due to the influx of refugees; if friction between host population and refugees is not worse than within the host population itself; and if the refugees do not encounter more discrimination than exists between groups previously settled within the host society: then refugees are truly integrated (p. 8).

Kuhlman's (1991) theoretical model offers five categories of refugee integration, all of which can be considered independent yet interconnected outcomes: legal rights; spatial integration;

economic integration; culture change; and social relations. The primary outcome of interest for this particular study is economic integration which—in the author's view—mainly consists of active participation in the economy and the attainment of a livable income (Kuhlman, 1991). These indicators track well with those explored in the hybrid framework above, lending validity to the use of this particular theoretical model.

Kuhlman's (1991) model of refugee integration, drawing upon the work of prior migration theorists (Lee, 1966; Kunz, 1981; Goldlust & Richmond, 1974), divides the determinants of refugee economic integration into six categories: A) Characteristics of Refugees; B) Flight-Related Factors; C) Host-Related Factors; D) Policies; E) Residence in Host Country; F) Non-Economic Dimensions of Integration. This study employs Kuhlman's (1991) model as a guide to testing four of these domains (A, B, E, F), which are detailed further in table 3 below. While the decision to isolate parts of the model for testing is largely rooted in the limitations of available data and is not ideal, this strategy is explicitly endorsed by Kuhlman (1991), who states, "it is always possible to select a small part of the integration process for a partial analysis, as long as the overall picture is kept in mind" (p. 21).

Table 3. Theoretical Determinants to be Tested for Association with Economic Incorporation (Kuhlman, 1991)

Domain A: Characteristics of Refugees	Domain B: Flight-Related Factors	Domain E: Residence in Host Country	Domain F: Non-Economic Dimensions of Integration
Demographics: -Gender -Marital Status -Disability Status -Household Composition **Socioeconomic Background:** -Education Level -Prior Occupation **Ethno-Cultural Affiliation:** -Region of Origin	**Type of Movement:** -Previous Detention in Prison/Re-Education Camp -Previous Active Military Involvement	**Length of Residence in Host Country** -Time Since Migration **Movements within Host Country:** -Changes in Residence	**Culture Change:** -English Language Proficiency (Current & on Arrival)

To date, Kuhlman's (1991) model of refugee integration is the only theoretical work in the field to have been empirically tested for verification, which is the primary justification for its use in framing this study. However, the model is not without its limitations, particularly when applied to this study's population of interest. One such limitation is the time elapsed since the model was developed. Published almost 25 years ago—and rooted in scholarship from the 1960s, 70s, and 80s—Kuhlman's model may be somewhat outdated, considering the constantly evolving nature and composition of the world's refugees. Perhaps more significantly, Kuhlman's model should be applied to the domestic refugee resettlement context with caution, due to the fact that it was developed to predict integration in the "country of first refuge" (Kuhlman, 1991, p.2). These countries of first refuge—almost exclusively developing nations—offer refugees a

context of incorporation vastly different from that of more developed, permanent resettlement countries, such as the United States (UNHCR, 2014). Most refugees resettled permanently in the US have transitioned, temporarily, through such nations (Kumin, 2012), but Kuhlman's model may not be entirely relevant in predicting their incorporation in a permanent resettlement context. It must, therefore, be applied with caution and tested for relevance in the United States.

Empirical Testing

Before reviewing the somewhat limited empirical literature on refugee economic incorporation, it is first necessary to mention the relative difficulty of conducting such studies. One such difficulty concerns the overall representativeness of study samples. Without a full sampling frame consisting—at the very least—of refugees across a wide geographic and ethnic range, empirical results of refugee population studies cannot be considered generalizable. Effective sampling reach and techniques have largely eluded refugee scholars (Bloch, 1999; Bloch, 2007) and, to date, no study of economic incorporation has utilized a nationally representative sample. Further compounding this challenge is the relative difficulty of administering exhaustive surveys to refugee respondents (Jacobsen & Landau, 2003). This difficulty stems largely from issues of accurate translation and interpretation, and assurance of safety and confidentiality. With these longstanding limitations in mind, it is perhaps unsurprising that scholars have failed to reach a general empirical consensus on the predictors of refugee economic incorporation. Nevertheless, the studies that have thus far attempted to do so are reviewed below.

North American studies. Kuhlman's (1991) model of refugee economic integration has been empirically tested in four North America-based studies (Potocky & McDonald, 1995; Potocky, 1997; Potocky-Tripodi, 2001; Potocky-Tripodi, 2003), over a range of eight years. The studies concluded generally that economic status—operationalized via employment status and annual pay—was most significantly influenced by demographic and socioeconomic characteristics, such as gender, education, household composition, and disability status. Economic status was found to hold a positive relationship with level of education. Meanwhile, being female, having children in the household, and having a disability were all negatively associated with economic status. Economic status was also found to be influenced, to a limited extent, by residency characteristics and cultural factors, such as English language proficiency.

While this four-time replication of model-testing may appear to offer generalizable findings, the studies outlined above were subject to significant limitations. First, three of the studies (Potocky & McDonald, 1995; Potocky, 1997; Potocky-Tripodi, 2001) were conducted through secondary analysis of census data collected in the year 1990, and the most recent analysis (Potocky-Tripodi, 2003) utilized data collected in the year 2000. Due to the ever-changing nature of refugee groups resettled in the United States, the individuals sampled in these studies (mostly Southeast Asian and Eastern European) are no longer representative of today's population. In addition, the most recent empirical study (Potocky-Tripodi, 2003) was conducted using a refugee sample collected in only one US city: Minneapolis. This study was further limited in that one of its primary dependent variables—income—was estimated by the researcher, post-hoc. This figure was produced—using respondents' self-reported job

categories—by "obtaining the mean annual wage estimate for each reported occupation for the Minnesota-St. Paul area for 1999" (Potocky-Tripodi, 2003, p. 71).

A number of additional North America-based empirical studies (Bach & Carroll-Seguin, 1986; Caplan, Whitmore, & Bui, 1985; Chiswick, 1993; Codell, Hill, Woltz, & Gore Jr., 2011; Gozdziak, 1989; Majka & Mullan, 1992; Tran, 1991; Uba & Chung, 1991) have attempted to identify determinants and predictors of refugee economic incorporation. However, these studies have been largely without theoretical influence, and have mostly centered on individual ethnic and national groups. Perhaps unsurprisingly, these empirical analyses have yielded widely differing and inconsistent results.

International studies. Four recent studies (Bakker, Dagevos, & Engbersen, 2014; Bevelander, 2011; Correa-Velez, Barnett, & Gifford, 2013; de Vroome & van Tubergen, 2010) set outside North America have attempted to empirically identify predictors of refugee economic incorporation, using employment as their primary outcome of interest. Utilizing large (n=233 to n=29,637) samples—both survey-based and administrative—of refugees in Australia, the Netherlands, and Sweden, the multivariate regression results produced by these studies appear to partially mirror those forecasted in Kuhlman's (1991) theoretical model and suggested in Potocky-Tripodi's (2003) empirical testing. Across the four studies, the following factors were found to be statistically significant predictors of refugee employment: Gender, marital status, household composition, education, region of origin, time since migration, work experience, host-country language proficiency, and participation in job-search assistance programming (Bakker, Dagevos, & Engbersen, 2014; Bevelander, 2011; Correa-Velez, Barnett, & Gifford, 2013; de Vroome & van Tubergen, 2010).

While the results of the abovementioned international studies may help to inform this study, their applicability to the population of interest is somewhat limited. First, domestic refugee policies and resettlement dynamics differ greatly across nations and regions, particularly in the case of North America and Europe (Ott, 2013). The differences in groups resettled and integration practices implemented on the ground call into question the ability to generalize findings across continents. For example, the two studies produced in the Netherlands (Bakker, Dagevos, & Engbersen, 2014; de Vroome & van Tubergen, 2010) utilize samples of refugees who, in accordance with Dutch policy, transitioned through state-run refugee reception centers. This model of temporary transitional housing differs significantly from US resettlement practice. Furthermore, only one of the four studies (Correa-Velez, Barnett, & Gifford, 2013) utilized data collected in the current decade.

Empirical gaps. Through reviewing the empirical literature on predictors of refugee economic incorporation, the relevance and timeliness of this study become evident. Specifically, this study addresses the gaps in the current body of scholarship in the following ways: 1) Through the use of an exhaustive, adequately sized, randomly sampled and nationally representative respondent base. 2) Through the use of recently collected data, capturing current refugee populations. 3) Through the use of survey responses collected with a validated instrument and in respondents' native languages, which employs clearly defined outcome variables and constructs.

Summary and Current Study

In examining scholarship on refugee incorporation, it becomes evident that economic success plays a crucial and foundational role in adjustment and adaptation to life in the United States. However, there is a significant gap in research on the predictors of such success. This form of inquiry is timely and appropriate; by identifying predictors of refugee economic adjustment, human service planners and providers can utilize sound research evidence to better tailor their programming and focus time and resources appropriately. Furthermore, identifying incorporation predictors may serve to update the somewhat outdated and limited base of theory on the topic.

Research Statement

The primary aim of this study is to identify predictors of refugee economic incorporation in the United States. In doing so, this study utilizes the following constructs as outcome variables: Employment status, elapsed time to first employment, hours worked per week, and hourly wage. The focus on these outcomes is a direct response to the challenges highlighted in the US Office of Refugee Resettlement's most recent annual report (2014) and—with the exception of time to first employment—is consistent with outcome operationalizations utilized in similar empirical studies (Bakker, Dagevos, & Engbersen, 2014; Bevelander, 2011; Correa-Velez, Barnett, & Gifford, 2013; de Vroome & van Tubergen, 2010; Potocky & McDonald, 1995; Potocky, 1997; Potocky-Tripodi, 2001; Potocky-Tripodi, 2003). Outlined below are detailed research questions employed in the study, as well as variables to be tested for association and predictive power. These variables have been selected with consideration for data availability, theory, empirical evidence, and exploratory inquiry.

> **Research Question I.** Among recently resettled adult refugees in the United States, what factors and/or characteristics predict the likelihood of being employed?
>
> **Research Question II.** Among recently resettled adult refugees who have secured jobs since arriving in the United States, what factors and/or characteristics predict the elapsed time to first employment?
>
> **Research Question III.** Among recently resettled adult refugees in the United States, what factors and/or characteristics predict number of hours worked per week?
>
> **Research Question IV.** Among recently resettled adult refugees in the United States who are currently employed, what factors and/or characteristics predict hourly wage?

Table 4. Independent Variables to be Tested

Variable	Theoretical	Empirical	Exploratory
	Justification for Inclusion		
Gender	X	X	
Marital Status	X	X	
Disability Status	X	X	
Region of Origin	X	X	
Length of Residence in US	X	X	
Level of Education on Arrival	X	X	
University Enrollment in US		X	
English Language Proficiency on Arrival	X	X	
Current English Language Proficiency	X	X	
Participation in English Language Training			X
English Language Training Provider Type			X
Employment History on Arrival	X	X	
Participation in Job Training		X	
Previous Detention in Prison/Re-Education Camp	X		
Previous Active Military Involvement	X		
Secondary Migration within US	X	X	
Household Size	X	X	
Children under 6 in Household	X	X	
Children under 16 in Household	X	X	
Home Ownership			X

III. METHODS

This dissertation utilizes cross-sectional data secured from the Office of Refugee Resettlement, housed within the federal Department of Health and Human Services (HHS). The data—due to its large sample size and national representativeness—provides a unique opportunity to accurately explore economic incorporation among recently resettled refugees in the United States. Specifically, this dissertation utilizes the data to identify statistical predictors of employment status, elapsed time to first employment, hours worked per week, and hourly wage. These predictors are explored using descriptive, bivariate, and inferential analysis. This section proceeds with a detailed overview of the study data, variables, and analysis strategy.

Study Data

Annual Survey of Refugees – Office of Refugee Resettlement

This study's data is sourced from the Office of Refugee Resettlement's Annual Survey of Refugees, FY2013. The ORR annual survey—dating back to 1975—is conducted each fall, and is intended to gauge the status and adjustment progress of newly resettled refugees around the country. Typical areas addressed in the survey include English proficiency, education, employment, income, and utilization of public services (ORR, 2014). In order to conduct the annual survey, the ORR contracts with Avar Consulting, Inc., a private firm specializing in data collection and analysis. Avar assists the ORR in revising its annual questionnaire, surveys refugees on behalf of the ORR, logs and processes the resulting data, and presents the ORR with descriptive statistics from the survey (Avar, 2015).

Participants and Sampling Procedures

Each year, a random stratified sample of approximately 1,000 refugee households is obtained from ORR's new-arrivals database and contacted for inclusion in the annual survey. Stratified sampling is utilized to ensure representativeness across ethnicities and national origins. These households are first contacted by mail, with a letter written both in English and their native language. Survey administrators then make contact over the telephone, again in the household's native language. During this telephone call, respondents are given the option to either conduct the survey then, or complete the questionnaire online. Each cohort of randomly sampled refugees is contacted for follow-up inclusion in the annual survey for a total of five years. Therefore, each year one cohort is dropped from the survey while another is added. This sampling method ensures that all respondents have been residing in the United States for less than five years.

For the 2013 annual survey, 2,518 refugee households were contacted and 1,717 households completed the questionnaire (68% response rate). 965 of these households were members of previous cohorts, while 752 were new sample cases for 2013 (ORR, 2014).

Data Transfer and Management Procedures

Data for this study was obtained from the Office of Refugee Resettlement through a Freedom of Information Act (FOIA) request, originally submitted to the Department of Health and Human Services in November, 2013. First contact was made with HHS' FOIA officer in February, 2015, and discussion began regarding data security, confidentiality, and researcher access. Access to the data was granted in May, 2015, at which point it was sent to the researcher—by the FOIA officer—in Microsoft Excel format. Codebooks were also included with the Excel data files.

The data file sent by the FOIA officer included 5,574 individual level records, encompassing approximately six years' worth of refugee arrival cohorts (2008-2013). These records were scrubbed of potential identifiers, including age, specific country of origin, and geographic residence in the US. In order to fit the scope of this study, as well as to address the USRP and ORR's (2014) specific concern regarding recently resettled refugees, the sample was trimmed to include only those individuals who arrived in the US in the 18 months preceding the survey date (3/2012-9/2013). The sample was further reduced to include only those individuals considered of working age (16+). Finally, records were removed for those individuals coded as 'ineligible respondents' by their interviewers. Upon making these adjustments, this study's sample size (n) stands at 1,429 individuals. After eliminating records from the study data, checks were run to ensure that representativeness of the sample was maintained. The results of these checks are included in Chapter 4.

Study Variables

Dependent Variables

Outcome #1: Full-time employment status. This outcome variable is operationalized in a binary fashion (Employed/Not employed). An individual is deemed *employed* if he or she currently works at least 35 hours per week. The variable is constructed based on responses to the following questionnaire items:
    Q5a01. Did you work at a job anytime last week?
    Q6b01. How many hours did you work at all jobs last week?
    Q1301. Have you been looking for work during the last four weeks?

Outcome #2: Elapsed time to first employment. This outcome variable is operationalized in a continuous fashion, and its unit of measurement is months. The variable is constructed based on responses to the following questionnaire items:
    Q11a01. Have you ever worked since coming to the US to stay?
    Q18d01. When did you get your first job in the US?
    Q1j01. What month and year did you enter the US to stay?

Outcome #3: Hours worked per week. This outcome variable is operationalized in a continuous fashion, and its unit of measurement is hours. The variable is constructed based on responses to the following questionnaire item:
    Q6b01. How many hours did you work at all jobs last week?

Outcome #4: Hourly wage. This outcome variable is operationalized in a continuous fashion, and its unit of measurement is dollars. The variable is constructed based on responses to the following questionnaire items:

Q5a01. Did you work at a job anytime last week?
Q701. How much money per hour did you receive at your primary job last week?
Q901. How much money per hour did you receive at your second job last week?

Independent Variables

Gender. This variable is constructed based on responses to the following questionnaire item:

Q1f01. Are you male or female?

Marital status. This variable is constructed based on responses to the following questionnaire item:

Q1c01. What is your current marital status?

Disability status. This variable is constructed based on responses to the following questionnaire items:

Q28a01. Do you have a physical, mental, or other health condition that has lasted for 6 or more months and which limits the kind or amount of work you can do at a job?
Q28b01. Do you have a physical, mental, or other health condition that has lasted for 6 or more months and which prevents you from working at a job?

Region of origin. This variable is constructed based on the following pre-populated survey item:

Region13. Geographic region based on country of birth.

Length of residence in US. This variable is constructed based on responses to the following questionnaire item:

Q1j01. What month and year did you enter the US to stay?

Level of education on arrival. This variable is constructed based on responses to the following questionnaire items:

Q2a01. How many years of schooling did you complete before coming to the US?
Q2b01. What was the highest degree or certificate that you obtained before coming to the US?

University enrollment in US. This variable is constructed based on responses to the following questionnaire items:

Q25a01. Within the past 12 months, have you attended school or university (other than to take English language training or the job-training class indicated in the previous question)?
Q25b01. Were you attending school or university in order to obtain a degree or certificate?

Q25d01. Have you received this degree or certificate?

English language proficiency on arrival. This variable is constructed based on responses to the following questionnaire item:
Q4a01. At the time of arrival in the US, how well did you speak English?

Current English language proficiency. This variable is constructed based on responses to the following questionnaire item:
Q4b01. How well do you speak English now?

Participation in English language training. This variable is constructed based on responses to the following questionnaire items:
Q4e01. Within the past 12 months, have you attended an English language training program?
Q4j01. Are you currently enrolled in an English language training program?

English language training provider type. This variable is constructed based on responses to the following questionnaire item:
Q4k01. What type of organization gave the English language training program?

Employment history on arrival. This variable is constructed based on responses to the following questionnaire items:
Q3a01. Before coming to the US, what was your employment status?
Q3b01. What kind of work (activities) did you perform before coming to the US (e.g. lawyer, typist, farmer, teacher, electrician, student)?

Participation in job training. This variable is constructed based on responses to the following questionnaire items:
Q22a01. What did you do to find your job?
Q24a01. Within the past 12 months, have you attended any job training program?

Previous detention in prison/re-education camp. This variable is constructed based on responses to the following questionnaire item:
Q3d01. Were you in a prison or re-education camp prior to coming to the US?

Previous active military involvement. This variable is constructed based on responses to the following questionnaire item:
Q3a01. Before coming to the US, what was your employment status?

Secondary migration within US. This variable is constructed based on responses to the following questionnaire item:
Q26d01. Did you live in this state a year ago?

Household size. This variable is constructed based on responses to the following questionnaire item:
QF2size. How many individuals live in your household?

Children under 6 in household. This variable is constructed based on responses to the following questionnaire item:

Qf205. How many individuals less than 6 years old live in your household?

Children under 16 in household. This variable is constructed based on responses to the following questionnaire item:

Qf215. How many individuals less than 16 years old live in your household?

Home ownership. This variable is constructed based on responses to the following questionnaire item:

Q38a. Do you own this house or apartment?

Table 5. Variable Descriptions and Names Used in Analysis

Variable Name	Description
EMPLOYED	Employment status
EMPLOY_TIME	Elapsed time to first employment
WORK_HOURS	Hours worked per week
WAGE	Hourly wage
GENDER	Gender
MARITAL	Marital status
DISABILITY	Disability status
REGION	Region of origin
RES_TIME	Length of residence in US
EDUC_ARRIVAL	Level of education upon arrival in US
UNIVERSITY	University enrollment in US
ELP_ARRIVAL	English language proficiency upon arrival in US
ELP_CURRENT	Current English language proficiency
ENGLISHTRAIN	Participation in English language training
ENGLISHTRAIN_TYPE	English language training provider type
EMPLOY_ARRIVAL	Employment history upon arrival in US
JOBTRAIN	Participation in job training
DETENTION	Previous detention in prison or re-education camp
MILITARY	Previous active military involvement
SEC_MIGRATION	Secondary migration within US
HH_SIZE	Household size
HH_SIX	Number of children under 6 in household
HH_SIXTEEN	Number of children under 16 in household
HOME_OWN	Home ownership status

Data Analysis

Univariate Descriptives

Prior to conducting any type of inferential analysis, descriptive analysis is first conducted for each of the dependent and independent variables utilized in the study. These univariate analyses include measures of central tendency and dispersion (e.g. mean, median, standard deviation, etc.) for continuous variables, as well as frequency counts and percentages for categorical variables. Descriptive analysis is undertaken in order to better understand overall trends in the population of interest and to inform model building.

Bivariate Analysis

Bivariate analysis is conducted to test for statistically significant relationships between the independent variables of each multivariate model, and each of the four dependent variables. These analyses are conducted to inform the model building process, and to highlight potential associations that may not be included in the final statistical models. Bivariate analysis of the two categorical dependent variables (employment status and self-sufficiency status) utilizes Chi-Square and t-testing, depending on the independent variable type. Analysis of the two continuous dependent variables (time to first employment and hourly wage) utilizes correlation testing (Pearson's r) and One Way Analysis of Variance (ANOVA), depending again on the independent variable type. In addition, bivariate analysis is used to test for potential multicolinearity among independent variables, in order to prevent potential complications in the final statistical models.

Multivariate Analysis

Logistic regression. Research question one (I) is addressed using multivariate binary logistic regression modeling. The equation representing its full pre-test model is outlined below.

RQ I: Likelihood of being employed

$$\ln (p/1-p) = \beta_0 + \beta_1 GENDER + \beta_2 MARITAL + \beta_3 DISABILITY + \beta_4 REGION$$
$$+ \beta_5 RES\_TIME + \beta_6 EDUC\_ARRIVAL + \beta_7 UNIVERSITY + \beta_8 ELP\_CURRENT$$
$$+ \beta_9 ENGLISHTRAIN + \beta_{10} ENGLISHTRAIN\_TYPE + \beta_{11} EMPLOY\_ARRIVAL$$
$$+ \beta_{12} JOBTRAIN + \beta_{13} DETENTION + \beta_{14} MILITARY + \beta_{15} SEC\_MIGRATION$$
$$+ \beta_{16} HH\_SIZE + \beta_{17} HH\_SIX + \beta_{18} HH\_SIXTEEN + \beta_{19} HOME\_OWN + \varepsilon$$

In the equation above, $\ln (p/1-p)$ represents the log odds of an individual respondent being currently employed, β_0 (constant) represents the predicted log odds of employment given all independent variables are set to zero, and ε represents the error term.

Linear regression. Research questions two (II), three (III), and four (IV) are addressed using multivariate ordinary least squares (OLS) regression modeling. The equations representing their full pre-test models are outlined below. Before finalizing these models, the data are checked for compliance with several assumptions of reliable OLS regression, including: linearity and functional form of predicted lines, constant variance of errors, and normality of the error

distribution. Due to the large sample size—and the tenets of the Central Limit Theorem—normality is preemptively assumed for all three models.

RQ II: Elapsed time to first employment

$$\begin{aligned}
y = \beta_0 &+ \beta_1 GENDER + \beta_2 MARITAL + \beta_3 DISABILITY + \beta_4 REGION + \beta_5 EDUC\_ARRIVAL \\
&+ \beta_6 UNIVERSITY + \beta_7 ELP\_ARRIVAL + \beta_8 ENGLISHTRAIN \\
&+ \beta_9 ENGLISHTRAIN\_TYPE + \beta_{10} EMPLOY\_ARRIVAL + \beta_{11} JOBTRAIN \\
&+ \beta_{12} DETENTION + \beta_{13} MILITARY + \beta_{14} SEC\_MIGRATION + \beta_{15} HH\_SIZE \\
&+ \beta_{16} HH\_SIX + \beta_{17} HH\_SIXTEEN + \beta_{18} HOME\_OWN + \varepsilon
\end{aligned}$$

In the equation above, y represents the predicted mean time to first employment, β_0 (constant) represents the predicted mean time to employment given all independent variables are set to zero, and ε represents the error term. This model is run using only those respondents in the sample who reported having ever worked since coming to the US.

RQ III: Hours worked per week

$$\begin{aligned}
y = \beta_0 &+ \beta_1 GENDER + \beta_2 MARITAL + \beta_3 DISABILITY + \beta_4 REGION + \beta_5 RES\_TIME \\
&+ \beta_6 EDUC\_ARRIVAL + \beta_7 UNIVERSITY + \beta_8 ELP\_CURRENT \\
&+ \beta_9 ENGLISHTRAIN + \beta_{10} ENGLISHTRAIN\_TYPE + \beta_{11} EMPLOY\_ARRIVAL \\
&+ \beta_{12} JOBTRAIN + \beta_{13} DETENTION + \beta_{14} MILITARY + \beta_{15} SEC\_MIGRATION \\
&+ \beta_{15} HH\_SIZE + \beta_{17} HH\_SIX + \beta_{18} HH\_SIXTEEN + \beta_{19} HOME\_OWN + \varepsilon
\end{aligned}$$

In the equation above, y represents the predicted mean number of hours worked per week, β_0 (constant) represents the predicted mean number of hours worked given all independent variables are set to zero, and ε represents the error term. This model is run using only those respondents in the sample who reported being currently employed.

RQ IV: Hourly wage

$$\begin{aligned}
y = \beta_0 &+ \beta_1 GENDER + \beta_2 MARITAL + \beta_3 DISABILITY + \beta_4 REGION + \beta_5 RES\_TIME \\
&+ \beta_6 EDUC\_ARRIVAL + \beta_7 UNIVERSITY + \beta_8 ELP\_CURRENT \\
&+ \beta_9 ENGLISHTRAIN + \beta_{10} ENGLISHTRAIN\_TYPE + \beta_{11} EMPLOY\_ARRIVAL \\
&+ \beta_{12} JOBTRAIN + \beta_{13} DETENTION + \beta_{14} MILITARY + \beta_{15} SEC\_MIGRATION \\
&+ \beta_{15} HH\_SIZE + \beta_{17} HH\_SIX + \beta_{18} HH\_SIXTEEN + \beta_{19} HOME\_OWN + \varepsilon
\end{aligned}$$

In the equation above, y represents the predicted mean hourly wage, β_0 (constant) represents the predicted mean hourly wage given all independent variables are set to zero, and ε represents the error term. This model is run using only those respondents in the sample who reported being currently employed.

Model building and testing. In consideration of this study's relatively large sample size (n=1,429), each of the four statistical models is first tested using all independent variables that show a statistically significant bivariate relationship with the dependent variable, as well as all independent variables that have been identified as statistically significant in previous empirical studies. These previously identified variables include the following: *Gender, marital status, disability status, region of origin, length of residence in the US, level of education upon arrival to the US, university enrollment in the US, English language proficiency on arrival to the US,*

current English language proficiency, employment history on arrival to the US, participation in job search and training activities, secondary migration within the US, household size, number of children under 6 in the household, and number of children under 16 in the household. Variables are entered into the model using a multi-level stepwise procedure, as illustrated in table 6 below.

Table 6. Independent Variables by Multi-Level Model Step

Step 1: Demographic Factors	Step 2: Pre-Arrival Factors	Step 3: Post-Arrival Factors	Step 4: Household Factors
Gender	Education	Length of residence	Household size
Marital status	ELP on arrival	University enrollment	Children under 6
Disability status	Employment history	Current ELP	Children under 16
Region of origin	Detention history	ELT enrollment	Home ownership
	Military history	ELT provider type	
		Job training/assistance	
		Secondary migration	

At each step, variable coefficients that meet the alpha threshold of 0.05 are flagged for significance. The adjusted R^2 value is compared as each additional step is added to the model. After completing the stepwise procedure, interaction testing is undertaken for particular pairs of variables, based on previous literature and the results of bivariate testing. These interaction terms are evaluated for inclusion in the final statistical models using their significance levels, along with restricted vs. full testing. Final summary models are then presented, which include all independent variables that demonstrate statistical significance at the conclusion of the stepwise procedure. The following chapter details the results of this model building process, as well as the results of univariate and bivariate analysis.

IV. FINDINGS

This chapter details the results of univariate, bivariate, and multivariate analyses undertaken to address the guiding research questions of the study. In order to facilitate interpretation of the statistical findings, an abridged codebook—which outlines the dependent and independent variable coding systems—is presented below.

Table 7. Outcome and Independent Variable Coding System

Outcome Variables

Variable	Coding	Description
Employment Status	0	Not currently employed
	1	Currently employed
Time to First Employment	months	Time to first employment
Hours Worked per Week	hours	Hours worked per week
Hourly Wage	dollars	Hourly wage

Independent Variables: Demographics

Variable	Coding	Description
Gender	0	Male
	1	Female
Marital Status	0	Not married
	1	Married
Disability Status	0	Not Disabled
	1	Disabled
Region of Origin	1	Africa
	2	East Europe
	3	Latin America
	4	Middle East
	5	Southeast/South Asia
	6	Former Soviet Union

Independent Variables: Pre-Arrival

Variable	Coding	Description
Education on Arrival	0	None
	1	Primary
	2	Secondary/Technical
	3	Post-Secondary/University
ELP on Arrival	0	Not at all
	1	Not well
	2	Well
	3	Very well
Employment History on Arrival	0	No Employment
	1	Agricultural
	2	Self-Employment
	3	All other employment
History of Detention	0	Not detained

	1	Detained
Military History	0	No military history
	1	Military history

Independent Variables: Post-Arrival

Variable	Coding	Description
Length of Residence	months	Length of residence in US
University Enrollment	0	No enrollment
	1	Enrolled/completed
Current ELP	0	Not at all
	1	Not well
	2	Well
	3	Very well
ELT Enrollment	0	None
	1	Previous/current enrollment
ELT Provider Type	1	Refugee services organization
	2	School/university
	3	Religious organization
	4	Other
Job Training/Assistance	0	Did not receive training
	1	Received training
Secondary Migration	0	Has not moved states
	1	Has moved states

Independent Variables: Household

Variable	Coding	Description
Household Size	number of people	Household size
Children under 6	number of people	Number of children under 6
Children under 16	number of people	Number of children under 16
Home Ownership	0	Does not own home
	1	Owns home

Univariate Descriptives

Outcome Variables

Descriptive analyses were first conducted on the four outcome variables utilized in the study: employment status, elapsed time to first employment, hours worked per week, and hourly wage. 621 (43.6%) individuals in the sample reported being currently employed at the time of data collection, while 802 (56.4%) were not. Of those individuals in the sample that reported having worked at some point since arriving to the US (n=858), their mean elapsed time to first employment was 5.13 months (SD=3.42). The mean number of hours worked per week for the

entire sample, including those not currently working, was calculated at 19.43 hours (SD=18.50). Among those currently employed who reported income (n=775), their mean hourly wage was calculated at $9.27 (SD=2.62).

Table 8. Outcome Variable Descriptive Statistics

	Frequency	Percent
Employment Status (n=1423)		
Not currently employed	621	43.6%
Currently employed	802	56.4%
	Mean	SD
Time to First Employment (n=858)	5.13	3.42
Hours Worked per Week (n=1412)	19.43	18.50
Hourly Wage (n=775)	9.27	2.62

Independent Variables

Demographics. The gender distribution in the sample was 50.7% (n=725) male and 49.3% (n=704) female, with 70.6% (n=1009) of all respondents reporting that they were married. 18.1% (n=258) of individuals in the sample indicated they had a disability that either hindered their ability to work, or prohibited it altogether. 46.1% (n=659) of respondents originated from Southeast/South Asia, followed by 21.6% (n=308) from the Middle East, 16.2% (n=232) from Africa, 15.6% (n=223) from Latin America, and 0.5% (n=7) from the former Soviet Union. Due to the small number of individuals originating from Former Soviet territories, this particular factor was not included in multivariate inferential testing.

Table 9. Demographic Univariate Statistics

Demographics		
	Frequency	Percent
Gender (n=1429)		
Male	725	50.7%
Female	704	49.3%
Marital Status (n=1429)		
Not married	420	29.4%
Married	1009	70.6%
Disability Status (n=1423)		
Not disabled	1165	81.9%
Disabled	258	18.1%
Region of Origin (n=1429)		
Africa	232	16.2%
Latin America	223	15.6%
Middle East	308	21.6%
Southeast/South Asia	659	46.1%
Former Soviet Union	7	0.5%

Pre-arrival. Univariate analysis of respondents' pre-arrival factors revealed that more than half of the sample did not hold a secondary school diploma. 30.9% (n=439) of those surveyed had received no formal schooling, 20.7% (n=294) had completed primary school, 39.0% (n=554), held a secondary or technical school diploma as their highest certificate, and 9.4% (n=134) had obtained a post-secondary or university-level degree. On arrival to the US, 54.8% (n=780) of individuals reported speaking no English at all, 32.6% (n=464) spoke English 'not well,' 10.7% (n=152) spoke English 'well,' and only 1.9% (n=27) spoke English 'very well.' Consistent with the general trend among the sample toward limited formal education, 55.4% (n=783) of respondents reported having never worked prior to arriving in the US. Of the remaining individuals, 11.0% (n=154) had agricultural employment backgrounds, 9.6% (n=133) reported being self-employed, and 24.0% (n=337) reported having worked as private employees. Finally, 4.9% (n=70) of respondents reported having been previously detained in a prison or reeducation camp, and only 0.3% (n=4) claimed to have actively served in a military. Due to the small number of individuals with a history of military service, this particular factor was not included in bivariate or multivariate inferential testing.

Table 10. Pre-Arrival Univariate Statistics

Pre-Arrival		
	Frequency	Percent
Level of Education on Arrival (n=1421)		
None	439	30.9%
Primary	294	20.7%
Secondary/Technical	554	39.0%
Post-Secondary/University	134	9.4%
ELP on Arrival (n=1423)		
Not at all	780	54.8%
Not well	464	32.6%
Well	152	10.7%
Very well	27	1.9%
Employment History on Arrival (n=1407)		
None	783	55.4%
Agricultural	154	11.0%
Self-Employed	133	9.6%
Other Employment	337	24.0%
History of Detention (n=1424)		
Not detained	1354	95.1%
Detained	70	4.9%
Military History (n=1421)		
Not enlisted	1417	99.7%
Enlisted	4	0.3%

Post-arrival. Univariate analysis of factors related to respondents' post-arrival experiences revealed a relatively low rate of university enrollment, at only 6.4% (n=91). With regard to current language proficiency, 30.3% (n=432) reported speaking no English at all (down

from 54.8% on arrival. 38.6% (n=550) of respondents rated their English language proficiency as 'not well,' 25.5% (n=363) as 'well,' and 5.7% (n=81) as 'very well' (up from 1.9% on arrival). The observed differences between current English language proficiency and proficiency on arrival may be explained by participation in English language training, with 55.0% (n=784) of the sample having enrolled at some point since arriving to the US. Of those who attended language training, 59.6% (n=448) received the instruction from a refugee service organization, 26.2% (n=197) from a school or university, 11.4% (n=86) from a religious organization, and 2.8% (n=21) from another type of organization. In addition, 31.3% (n=446) of sampled respondents reported participating in some sort of job training or assistance program since arriving to the US. Finally, the mean length of residence in the US for sampled respondents was calculated at 12.58 months (SD=3.02), with 49.8% (n=705) reporting that they had moved to a new state since being initially resettled.

Table 11. Post-Arrival Univariate Statistics

Post-Arrival		
	Frequency	Percent
University Enrollment in US (n=1425)		
None	1334	93.6%
Prior/current enrollment	91	6.4%
Current ELP (n=1426)		
Not at all	432	30.3%
Not well	550	38.6%
Well	363	25.5%
Very well	81	5.7%
ELT Enrollment (n=1425)		
None	641	45.0%
Previous/current enrollment	784	55.0%
ELT Provider Type (n=752)		
Refugee service organization	448	59.6%
School/university	197	26.2%
Religious organization	86	11.4%
Other	21	2.8%
Job Training/Assistance (n=1425)		
Did not receive training	979	68.7%
Received training	446	31.3%
Secondary Migration (n=1415)		
Has not moved states	710	50.2%
Has moved states	705	49.8%
	Mean	SD
Length of Residence in US (n=1429)	12.58	3.02

Household. Univariate analysis of household characteristics revealed a low rate of home ownership among sampled respondents, at only 1.3% (n=19). The mean household size of the sample was calculated at 4.76 individuals (SD=2.03). Within households, the mean number of

children under the age of 6 was calculated at 0.55 (SD=0.78), while the mean number of children under 6 was 1.53 (SD=1.39).

Table 12. Household Univariate Statistics

Household		
	Frequency	Percent
Home Ownership (n=1425)		
Does not own home	1406	98.7%
Owns home	19	1.3%
	Mean	SD
Household Size (n=1429)	4.76	2.03
Children under 6 (n=1429)	0.55	0.78
Children under 16 (n=1429)	1.53	1.39

Bivariate Analysis

RQ 1

Bivariate testing between current employment status (binary)—the outcome of interest for research question 1—and the independent variables identified in the previous chapter, was conducted using Chi-square and *t*-testing. Within the demographics variable cluster, statistically significant relationships were identified with gender, disability status, and region of origin, all at the p<0.01 level. Within the pre-arrival variable cluster, significant relationships were identified with level of education and employment history at the p<0.01 level, and history of detention at the p<0.05 level. In the post-arrival variable cluster, significant relationships were identified at the p<0.01 level with university enrollment, current English language proficiency, and job training participation, and at the p<0.05 level with English language training enrollment. At the household level, significant relationships were identified at the p<0.01 level with overall household size and number of children under 16, and at the p<0.05 level with number of children under 6.

Table 13. RQ 1 Bivariate Relationships: Employment Status

Demographics			
	x^2	df	Sig.
Gender	115.8**	1	<0.001
Male: 70%			
Female: 42%			
Marital Status	1.8	1	0.18
Disability Status	228.3**	1	<0.001
Not Disabled: 66%			
Disabled: 14%			
Region of Origin	42.8**	4	<0.001
Africa: 59%			
Latin America: 75%			
Middle East: 50%			
Southeast/South Asia: 53%			

Pre-Arrival			
	χ^2	df	Sig.
Level of Education on Arrival	111.9**	3	<0.001
None: 37%			
Primary: 55%			
Secondary/Technical: 70%			
Post-Secondary/University: 67%			
Employment History on Arrival	82.3**	4	<0.001
None: 46%			
Agricultural: 62%			
Self Employed: 77%			
Other Employment: 69%			
History of Detention	5.6*	1	0.02
Not Detained: 56%			
Detained: 70%			

Post-Arrival			
	χ^2	df	Sig.
University Enrollment in US	20.0**	1	<0.001
None: 58%			
Prior/Current Enrollment: 34%			
Current ELP	56.0**	3	<0.001
Not at All: 43%			
Not Well: 58%			
Well: 66%			
Very Well: 73%			
ELT Enrollment	6.8*	1	0.01
None: 53%			
Previous/Current Enrollment: 60%			
ELT Provider Type	2.1	3	0.55
Job Training/Assistance	183.7**	1	<0.001
Did Not Receive Training: 44%			
Received Training: 83%			
Secondary Migration	0.1	1	0.71
	t	df	Sig.
Length of Residence in US	0.51	1421	0.61

Household			
	χ^2	df	Sig.
Home Ownership	3.0	1	0.09
	t	df	Sig.
Household Size	8.10**	1421	<0.001
Not Employed: 5.2			
Employed: 4.4			
Children under 6	2.61*	1421	0.01
Not Employed: 0.6			
Employed: 0.5			
Children under 16	3.36**	1421	<0.001
Not Employed: 1.7			
Employed: 1.4			

Note: *p<0.05, **p<0.01

RQ 2

Bivariate testing between time to first employment—the outcome of interest for research question 2—and the independent variables identified in the previous chapter, was conducted using ANOVA, Pearson's Correlation, and *t*-testing. Within the demographics variable cluster, statistically significant relationships were identified with gender and region of origin, both at the p<0.01 level. Within the pre-arrival variable cluster, a significant relationship was identified with level of education at the p<0.01 level, as well as history of detention and employment history at the p<0.05 level. In the post-arrival variable cluster, significant relationships were identified at the p<0.05 level with English language training enrollment and having moved states since arriving to the US (secondary migration). At the household level, significant relationships were identified at the p<0.01 level with overall household size and number of children under 16.

Table 14. RQ 2 Bivariate Relationships: Time to First Employment

Demographics			
	t	df	Sig.
Gender	4.88**	856	<0.001
Male: 4.7 mos.			
Female: 5.9 mos.			
Marital Status	0.28	856	0.78
Disability Status	0.71	855	0.48
	F	df	Sig.
Region of Origin	13.5**	4	<0.001
Africa: 6.5 mos.			
Latin America: 3.9 mos.			
Middle East: 5.2 mos.			
Southeast/South Asia: 5.2 mos.			
Pre-Arrival			
	t	df	Sig.
History of Detention	2.35*	855	0.02
Not Detained: 5.2 mos.			
Detained: 4.1 mos.			
	F	df	Sig.
Level of Education on Arrival	8.1**	3	<0.001
None: 6.1 mos.			
Primary: 5.3 mos.			
Secondary/Technical: 4.7 mos.			
Post-Secondary/University: 4.8 mos.			
Employment History on Arrival	3.3*	4	0.01
None: 5.5 mos.			
Agricultural: 4.4 mos.			
Self-Employed: 4.6 mos.			
Other Employment: 5.2 mos.			
ELP on Arrival	0.3	3	0.83
Post-Arrival			
	t	df	Sig.
University Enrollment in US	0.22	856	0.83
ELT Enrollment	2.57*	856	0.01
None: 5.1 mos.			

Previous/Current Enrollment: 5.3 mos.

Job Training/Assistance	0.87	856	0.38
Secondary Migration	2.71*	847	0.01
Has Not Moved States: 5.5 mos.			
Has Moved States: 4.8 mos.			
	F	**df**	**Sig.**
ELT Provider Type	1.5	3	0.20

Household			
	t	**df**	**Sig.**
Home Ownership	0.42	853	0.68
	R	**SE**	**Sig.**
Household Size	0.17**	0.04	<0.001
Children under 6	0.05	0.03	0.19
Children under 16	0.13**	0.04	<0.001

Note: *p<0.05, **p<0.01

RQ 3

Bivariate testing between hours worked per week—the outcome of interest for research question 3—and the independent variables identified in the previous chapter, was conducted using ANOVA, Pearson's Correlation, and *t*-testing. Within the demographics variable cluster, statistically significant relationships were identified with gender, disability status, and region of origin, all at the p<0.01 level. Within the pre-arrival variable cluster, significant relationships were identified with history of detention, level of education, and employment history, all at the p<0.01 level. In the post-arrival variable cluster, significant relationships were identified at the p<0.01 level with university enrollment, job training participation, and current English language proficiency. At the household level, significant relationships were identified at the p<0.01 level with overall household size and number of children under 16, and at the p<0.05 level with number of children under 6.

Table 15. RQ 3 Bivariate Relationships: Hours Worked per Week

Demographics			
	t	**df**	**Sig.**
Gender	12.38**	1410	<0.001
Male: 25 hrs.			
Female: 14 hrs.			
Marital Status	1.32	1410	0.19
Disability Status	15.29**	1406	<0.001
Not Disabled: 18 hrs.			
Disabled: 12 hrs.			
	F	**df**	**Sig.**
Region of Origin	13.6**	4	<0.001
Africa: 19 hrs.			
Latin America: 27 hrs.			
Middle East: 16 hrs.			
Southeast/South Asia: 19 hrs.			

Pre-Arrival			
	t	**df**	**Sig.**
History of Detention	3.72**	1408	<0.001
Not Detained: 19 hrs.			
Detained: 27 hrs.			
	F	**df**	**Sig.**
Level of Education on Arrival	36.8**	3	<0.001
None: 13 hrs.			
Primary: 19 hrs.			
Secondary/Technical: 24 hrs.			
Post-Secondary/University: 23 hrs.			
Employment History on Arrival	23.0**	4	<0.001
None: 15 hrs.			
Agricultural: 23 hrs.			
Self-Employed: 26 hrs.			
Other Employment: 24 hrs.			

Post-Arrival			
	t	**df**	**Sig.**
University Enrollment in US	4.98**	1408	<0.001
None: 20 hrs.			
Previous/Current Enrollment: 10 hrs.			
ELT Enrollment	1.80	1408	0.07
Job Training/Assistance	13.01**	1408	<0.001
Did Not Receive Training: 15 hrs.			
Received Training: 28 hrs.			
Secondary Migration	0.12	1398	0.90
	F	**df**	**Sig.**
Current ELP	13.7**	3	<0.001
Not at All: 15 hrs.			
Not Well: 20 hrs.			
Well: 23 hrs.			
Very Well: 24 hrs.			
ELT Provider Type	0.4	3	0.78
	R	**SE**	**Sig.**
Length of Residence in US	0.01	0.03	0.47

Household			
	t	**df**	**Sig.**
Home Ownership	1.73	1407	0.09
	R	**SE**	**Sig.**
Household Size	-0.21**	0.03	<0.001
Children under 6	-0.06*	0.03	0.02
Children under 16	-0.10**	0.03	<0.001

Note: *p<0.05, **p<0.01

RQ 4

Bivariate testing between hourly wage—the outcome of interest for research question 4—and the independent variables identified in the previous chapter, was conducted using ANOVA, Pearson's Correlation, and t-testing. Within the demographics variable cluster, a statistically significant relationship was identified with gender, at the $p<0.01$ level. Within the pre-arrival variable cluster, a significant relationship was identified with level of education, also at the $p<0.01$ level. In the post-arrival variable cluster, a significant relationship was identified at the $p<0.01$ level with current English language proficiency. Finally, at the household level, one relationship was identified with significance at the $p<0.05$ level: overall household size.

Table 16. RQ 4 Bivariate Relationships: Hourly Wage

Demographics			
	t	df	Sig.
Gender	3.16**	773	<0.001
Male: $9.50			
Female: $8.88			
Marital Status	0.42	773	0.68
Disability Status	1.14	772	0.26
	F	df	Sig.
Region of Origin	1.6	4	0.18
Pre-Arrival			
	t	df	Sig.
History of Detention	0.69	771	0.49
	F	df	Sig.
Level of Education on Arrival	7.6**	3	<0.001
None: $9.03			
Primary: $9.12			
Secondary/Technical: $9.16			
Post-Secondary/University: $10.54			
Employment History on Arrival	1.5	4	0.20
Post-Arrival			
	t	df	Sig.
University Enrollment in US	0.51	773	0.61
ELT Enrollment	1.78	772	0.08
Job Training/Assistance	0.02	772	0.99
Secondary Migration	0.28	763	0.78
	F	df	Sig.
Current ELP	9.7**	3	<0.001
Not at All: $8.98			
Not Well: $9.06			
Well: $9.41			
Very Well: $11.00			
ELT Provider Type	1.6	3	0.19
	R	SE	Sig.
Length of Residence in US	0.05	0.04	0.16

Household			
	t	df	Sig.
Home Ownership	0.48	770	0.63
	R	SE	Sig.
Household Size	-0.08*	0.03	0.02
Children under 6	0.06	0.03	0.07
Children under 16	-0.04	0.03	0.31

Note: *p<0.05, **p<0.01

Summary

As evidenced above, the outcome variables for employment status and number of hours worked per week appeared to hold a greater number of statistically significant relationships with the independent variables than did time to first employment and hourly wage. This observation was later confirmed during regression model testing. As mentioned previously, independent variables were selected for inclusion in regression model testing based on either holding a statistically significant bivariate relationship with the outcome variable in the current study, or having been reliably linked to refugee economic incorporation in past empirical studies.

Multivariate Analysis

RQ 1: Predictors of Employment Status

Research question 1 was addressed using multivariate binary logistic regression model testing. As outlined in the previous chapter, independent variables were added to the model for testing by cluster level: demographics, pre-arrival, post-arrival, and household. With each of the four iterations, independent variable coefficients were evaluated for significance, along with the Nagelkerke Pseudo R^2 value of the model as a whole.

Level 1. Testing demographic characteristics in the regression model first required the creation of dummy variables to represent the categorical variable, region of origin. Of the four regions slated for multivariate testing, Southeast/South Asia was chosen as the reference category—due to it being the most frequent—and the remaining three were recoded as individual binary variables. These regional dummy variables were used for all four regression models tested in the study.

When demographic characteristics were run in the regression model alone, three variables were found to have statistically significant coefficient estimates: gender, disability status, and Latin American origin. Female identity and having a disability were both associated with lower odds of employment, while Latin American origin was associated with higher odds. With a Nagelkerke Pseudo R^2 value of 0.33, this single-level model was able to explain roughly 1/3 of the sample's variance in employment status.

Table 17. RQ1 Employment Status Multiple Logistic Regression Model Testing: 1 Level

Nagelkerke Pseudo R^2: 0.33

Level 1: Demographics

Variable	β	Wald χ^2	Sig.	OR	95% CI
Gender	-1.33	105.9**	<0.001	0.27	0.21-0.34
Marital Status	-0.10	0.5	0.47	0.90	0.68-1.19
Disability Status	-2.55	157.4**	<0.001	0.08	0.05-0.12
Region: Africa	0.11	0.4	0.54	1.12	0.79-1.59
Region: Latin America	1.25	36.7**	<0.001	3.47	2.32-5.20
Region: Middle East	-0.09	0.3	0.58	0.91	0.67-1.25
Constant	1.25	62.4	<0.001	3.49	

Note: *p<0.05, **p<0.01

Level 2. Within the pre-arrival cluster, dummy variables were created to represent the categorical variable, employment history on arrival. 'Other employment' was chosen as the reference group, in order to isolate the potential predictive power of the three remaining categories: none, agricultural, and self-employed. Similar to the regional groups referenced above, these employment history dummy variables were utilized for analysis across all four research questions.

When pre-arrival characteristics were added to the regression model predicting employment status, two variables were found to have statistically significant coefficient estimates. Rather intuitively, higher levels of education were associated with higher odds of employment, and having no employment history on arrival was associated with lower odds of employment. The addition of this second level also led to one demographic variable—Middle Eastern origin—becoming a statistically significant predictor, associated with lower odds of employment. The Nagelkerke Pseudo R^2 value at level two was calculated at 0.38, an addition of roughly 5% from the previous model iteration.

Table 18. RQ1 Employment Status Multiple Logistic Regression Model Testing: 2 Levels

Nagelkerke Pseudo R^2: 0.38 ΔR^2: 0.05

Level 1: Demographics

Variable	β	Wald χ^2	Sig.	OR	95% CI
Gender	-1.12	66.3**	<0.001	0.33	0.25-0.43
Marital Status	-0.19	1.7	0.20	0.82	0.61-1.11
Disability Status	-2.40	124.0**	<0.001	0.09	0.06-0.14
Region: Africa	0.14	0.5	0.47	1.15	0.78-1.70
Region: Latin America	0.75	11.2**	<0.001	2.12	1.37-3.29
Region: Middle East	-0.63	11.5**	<0.001	0.53	0.37-0.77

Level 2: Pre-Arrival

Variable	β	Wald χ^2	Sig.	OR	95% CI
Level of Education on Arrival	0.42	29.8**	<0.001	1.52	1.31-1.77
Employment History: None	-0.63	13.5**	<0.001	0.53	0.38-0.74
Employment History: Agricultural	-0.41	2.8	0.09	0.66	0.41-1.07
Employment History: Self	0.46	2.7	0.10	1.59	0.92-2.74
Detention	0.10	0.1	0.76	1.10	0.58-2.09
Constant	1.19	25.0	<0.001	3.30	

Note: *p<0.05, **p<0.01

Level 3. When post-arrival characteristics were added to the regression model predicting employment status, two variables were found to have statistically significant coefficient estimates: university enrollment and participation in job training or assistance. Having enrolled in a university program since arriving in the US was negatively predictive of employment status, while participation in job training or assistance was associated with higher odds of employment.

At level three, the coefficient p-values for Middle Eastern origin and lack of employment history both rose above the $p<0.05$ threshold, and were no longer statistically significant. However, marital status became a significant predictor, and was negatively associated with the odds of employment. In addition, the Nagelkerke Pseudo R^2 value of the model rose by approximately 10%, to 0.48.

Table 19. RQ1 Employment Status Multiple Logistic Regression Model Testing: 3 Levels

Nagelkerke Pseudo R^2: 0.48 $\quad\quad\quad\quad\quad\quad$ ΔR^2: 0.10

Level 1: Demographics

Variable	β	Wald x^2	Sig.	OR	95% CI
Gender	-1.11	54.9**	<0.001	0.33	0.25-0.44
Marital Status	-0.39	4.8*	0.03	0.68	0.48-0.96
Disability Status	-2.52	118.5**	<0.001	0.08	0.05-0.13
Region: Africa	0.18	0.7	0.42	1.20	0.78-1.85
Region: Latin America	1.22	23.7**	<0.001	3.38	2.07-5.52
Region: Middle East	-0.41	3.8	0.05	0.67	0.44-1.00

Level 2: Pre-Arrival

Variable	β	Wald x^2	Sig.	OR	95% CI
Level of Education on Arrival	0.29	9.7**	<0.001	1.34	1.11-1.60
Employment History: None	-0.37	3.9	0.05	0.69	0.48-1.00
Employment History: Agricultural	-0.07	0.1	0.81	0.94	0.55-1.59
Employment History: Self	0.49	2.9	0.09	1.63	0.93-2.86
Detention	0.14	0.2	0.69	1.15	0.57-2.31

Level 3: Post-Arrival

Variable	β	Wald x^2	Sig.	OR	95% CI
Length of Residence in US	0.04	1.6	0.21	1.05	0.98-1.12
University Enrollment	-1.78	33.7**	<0.001	0.17	0.09-0.31
Current ELP	0.19	3.0	0.08	1.22	0.98-1.51
ELT Enrollment	0.20	1.8	0.19	1.22	0.91-1.63
Job Training/Assistance	1.48	79.5**	<0.001	4.41	3.18-6.12
Secondary Migration	-0.07	0.1	0.72	0.93	0.62-1.39
Constant	0.07	0.1	0.90	1.07	

Note: *p<0.05, **p<0.01

Level 4. All of the household characteristics added to the regression model in level four were found to be significant predictors of employment status: household size, number of children under 6, and number of children under 16. The addition of these three variables also led to a number of changes in the overall model. Middle Eastern origin reemerged as a negative predictor of employment, and increased English language proficiency was found to be associated with higher odds of employment. Furthermore, the Nagelkerke Pseudo R^2 value of the model rose by approximately 2%, to 0.50.

Table 20. RQ1 Employment Status Multiple Logistic Regression Model Testing: 4 Levels

Nagelkerke Pseudo R^2: 0.50			ΔR^2: 0.02		

Level 1: Demographics

Variable	β	Wald $\mathcal{X}^2$	Sig.	OR	95% CI
Gender	-1.14	56.5**	<0.001	0.32	0.24-0.43
Marital Status	-0.44	5.3*	0.02	0.64	0.44-0.94
Disability Status	-2.49	112.2**	<0.001	0.08	0.05-0.13
Region: Africa	0.06	0.1	0.80	1.06	0.67-1.69
Region: Latin America	0.93	12.8**	<0.001	2.53	1.52-4.22
Region: Middle East	-0.61	8.0*	0.01	0.54	0.36-0.83

Level 2: Pre-Arrival

Variable	β	Wald $\mathcal{X}^2$	Sig.	OR	95% CI
Level of Education on Arrival	0.28	8.4**	<0.001	1.32	1.09-1.59
Employment History: None	-0.31	2.7	0.10	0.73	0.51-1.06
Employment History: Agricultural	-0.17	0.4	0.53	0.84	0.50-1.44
Employment History: Self	0.55	3.5	0.06	1.73	0.98-3.07
Detention	0.13	0.1	0.71	1.14	0.56-2.34

Level 3: Post-Arrival

Variable	β	Wald $\mathcal{X}^2$	Sig.	OR	95% CI
Length of Residence in US	0.04	1.2	0.28	1.04	0.97-1.11
University Enrollment	-1.80	31.9**	<0.001	0.17	0.09-0.31
Current ELP	0.24	4.5*	0.03	1.28	1.02-1.60
ELT Enrollment	0.14	0.9	0.35	1.15	0.86-1.55
Job Training/Assistance	1.47	76.3**	<0.001	4.34	3.12-6.04
Secondary Migration	-0.15	0.5	0.46	0.86	0.57-1.29

Level 4: Household

Variable	β	Wald $\mathcal{X}^2$	Sig.	OR	95% CI
Household Size	-0.24	20.0**	<0.001	0.79	0.71-0.88
Children under 6	-0.25	4.8*	0.03	0.78	0.62-0.97
Children under 16	0.26	8.4**	<0.001	1.29	1.09-1.54
Constant	1.18	3.4	0.07	3.25	

Note: *p<0.05, **p<0.01

Interaction testing. Based on author hypothesis and observations made in the Office of Refugee Resettlement's FY2013 annual report (2014), a variable was constructed to test for a potential interaction effect between gender and marital status. This interaction term was tested in all four of the study's regression models.

The gender x marital status interaction variable was found to be a statistically significant predictor of the odds of employment. Specifically, being a married female was found to be negatively predictive of employment status. The inclusion of the interaction term also led to both gender and marital status no longer being statistically significant predictors on their own. Including the gender x marital status interaction term raised the Nagelkerke Pseudo R^2 value of the model to 0.51.

Table 21. RQ1 Employment Status Multiple Logistic Regression Model Testing: 4 Levels + Interaction

Nagelkerke Pseudo R^2: 0.51			ΔR^2: 0.01		

Level 1: Demographics

Variable	β	Wald x^2	Sig.	OR	95% CI
Gender	-0.71	2.2	0.14	0.49	0.19-1.26
Marital Status	0.28	1.1	0.30	1.32	0.78-2.22
Disability Status	-2.57	116.5**	<0.001	0.08	0.05-0.12
Region: Africa	-0.28	0.7	0.39	0.76	0.40-1.43
Region: Latin America	0.97	13.2**	<0.001	2.63	1.56-4.43
Region: Middle East	-0.53	6.17*	0.01	0.59	0.39-0.89

Level 2: Pre-Arrival

Variable	β	Wald x^2	Sig.	OR	95% CI
Level of Education on Arrival	0.29	9.2**	<0.001	1.34	1.11-1.62
Employment History: None	-0.21	1.2	0.27	0.81	0.55-1.18
Employment History: Agricultural	-0.08	0.1	0.77	0.92	0.53-1.59
Employment History: Self	0.46	2.4	0.12	1.59	0.88-2.84
Detention	0.03	0.1	0.94	1.03	0.50-2.11

Level 3: Post-Arrival

Variable	β	Wald x^2	Sig.	OR	95% CI
Length of Residence in US	0.04	1.2	0.26	1.04	0.97-1.12
University Enrollment	-1.68	29.0**	<0.001	0.19	0.10-0.34
Current ELP	0.26	5.0*	0.03	1.30	1.03-1.63
ELT Enrollment	0.13	0.8	0.39	1.14	0.85-1.55
Job Training/Assistance	1.49	60.6**	<0.001	4.43	3.05-6.44
Secondary Migration	-0.19	0.8	0.38	0.83	0.55-1.26

Level 4: Household

Variable	β	Wald x^2	Sig.	OR	95% CI
Household Size	-0.29	20.6**	<0.001	0.75	0.66-0.85
Children under 6	-0.27	5.2*	0.02	0.77	0.61-0.96
Children under 16	0.26	8.5**	<0.001	1.30	1.09-1.54

Interaction Term

Variable	β	Wald x^2	Sig.	OR	95% CI
Gender x Marital	-1.29	14.5**	<0.001	0.28	0.14-0.53
Constant	0.86	1.6	0.21	2.36	

Note: *p<0.05, **p<0.01

Summary of significant predictors. After completing the five rounds of model iterations outlined above, a final regression was run using only those variables found to be statistically significant predictors in the full model. The resulting model was then re-run until all remaining variable coefficients met the p<0.05 significance threshold. The results of this regression—with a Nagelkerke Pseudo R^2 value of 0.48—are presented below, along with basic interpretations of each variable's odds ratio.

Table 22. RQ1 Employment Status Multiple Logistic Regression Model Testing: Significant Variables

Nagelkerke Pseudo R^2: 0.48

Variable	β	Wald x^2	Sig.	OR	95% CI
Gender x Marital Status	-1.37	88.6**	<0.001	0.25	0.19-0.34
Disability Status	-2.55	132.6**	<0.001	0.08	0.05-0.12
Region: Latin America	1.12	24.3**	<0.001	3.05	1.96-4.76
Region: Middle East	-0.45	5.94*	0.02	0.64	0.44-0.92
Education on Arrival	0.18	4.2*	0.04	1.19	1.01-1.42
University Enrollment	-1.83	42.9**	<0.001	0.16	0.09-0.28
Current ELP	0.21	4.4*	0.04	1.23	1.03-1.50
Job Training/Assistance	1.58	92.9**	<0.001	4.86	3.52-6.70
Household Size	-0.13	13.9**	<0.001	0.87	0.82-0.94
Constant	0.92	14.1	<0.001	2.50	

Note: *p<0.05, **p<0.01

Results of the logistic regression model tested in RQ1 can be summarized as follows: 1) Married women are 75% less likely to be employed than their counterparts. 2) Individuals with disabilities are 92% less likely to be employed than their fully-able counterparts. 3) Individuals from Latin America are 3.05 times more likely to be employed than their South/Southeast Asian counterparts. 4) Individuals from the Middle East are 36% less likely to be employed than their South/Southeast Asian counterparts. 5) Individuals are 1.19 times more likely to be employed, for each additional level of schooling they hold upon arrival to the US. 6) Individuals who have enrolled in university study since arriving to the US are 84% less likely to be employed than those who have not. 7) Individuals are 1.23 times more likely to be employed, for each additional level of their self-reported English language proficiency. 8) Individuals who have received job training or assistance since their arrival to the US are 4.86 times more likely to be employed than those who have not. 9) Individuals are 13% less likely to be employed, for each additional person living in their household.

RQ 2: Predictors of Elapsed Time to First Employment

Research question 2 was addressed using hierarchical multivariate regression model testing. As outlined in the previous chapter, independent variables were added to the model for testing by cluster level: demographics, pre-arrival, post-arrival, and household. With each of the four iterations, independent variable b coefficients were evaluated for statistical significance, along with the Adjusted R^2 value of the model as a whole. This procedure was repeated for RQ3 and RQ4 analysis.

Prior to interpreting the results of model testing, the data for RQ2, RQ3, and RQ4 were checked for compliance with the fundamental assumptions of linear regression. The RQ2 data was found to meet the necessary assumptions, without any need for transformation. Functional form of the predicted line and constant variance of errors were both checked and confirmed using a residual-fitted scatterplot. Normality of the error distribution was assessed and confirmed using a normal probability plot. Through casewise diagnostics, eight observations were flagged as outliers, displaying standardized residuals with an absolute value greater than 3.0. However, leverage values for these eight cases fell below 0.20, and their Cook's Distance values were all

below the threshold of 1.0. Using these two measures, it was confirmed that the eight outliers were neither significantly leveraging nor influencing the predicted regression equation.

Level 1. When demographic characteristics were run in the regression model alone, three variables were found to have statistically significant b coefficient estimates: gender, African origin, and Latin American origin. Female identity and African origin were both associated with longer elapsed times to first employment, while Latin American origin was associated with shorter times. The single-level model was found to have an Adjusted R^2 value of 0.09.

Table 23. RQ2 Time to First Employment Multiple Regression Model Testing: 1 Level

Adjusted R^2: 0.09

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	1.37	0.91,1.83	5.79**	<0.001	0.19
Marital Status	0.20	-0.31,0.70	0.77	0.44	0.03
Disability Status	0.48	-0.40,1.36	1.08	0.28	0.04
Region: Africa	1.28	0.63,1.92	3.90**	<0.001	0.14
Region: Latin America	-1.48	-2.08,-0.89	4.90**	<0.001	-0.18
Region: Middle East	0.10	-0.52,0.71	0.31	0.76	0.01
Constant	4.52	3.96,5.07	16.00	<0.001	

Note: *p<0.05, **p<0.01

Level 2. When pre-arrival characteristics were added to the regression model predicting time to first employment, none of these second level variables showed statistically significant b coefficient estimates. However, the addition of these variables did lead the demographic estimates to become more precise, and resulted in an Adjusted R^2 value increase of 0.01, which was found to be significant at the p<0.01 level.

Table 24. RQ2 Time to First Employment Multiple Regression Model Testing: 2 Levels

Adjusted R^2: 0.10 ΔR^2: 0.01**

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	1.17	0.69,1.66	4.73**	<0.001	0.17
Marital Status	0.27	-0.26,0.80	1.00	0.32	0.04
Disability Status	0.41	-0.48,1.29	0.91	0.37	0.03
Region: Africa	1.17	0.49,1.84	3.38**	<0.001	0.13
Region: Latin America	-1.34	-2.05,-0.64	3.75**	<0.001	-0.16
Region: Middle East	0.31	-0.38,0.99	0.87	0.38	0.04

Level 2: Pre-Arrival

Variable	b	95% CI	t	Sig.	β
Education on Arrival	-0.25	-0.55,0.05	1.67	0.10	-0.07
ELP on Arrival	-0.10	-0.47,0.27	0.53	0.60	-0.02
Employment History: None	0.35	-0.21,0.92	1.23	0.22	0.05
Employment History: Agricultural	-0.58	-1.40,0.25	1.38	0.17	-0.06
Employment History: Self	-0.26	-1.01,0.48	0.69	0.49	-0.03
Detention	-0.29	-1.27,0.68	0.59	0.56	-0.02
Constant	4.90	4.08,5.73	16.00	<0.001	

Note: *p<0.05, **p<0.01

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Level 3. When post-arrival characteristics were added to the regression model predicting time to first employment, two variables were found to have *b* coefficient estimates significant at the p<0.05 level: job training participation and secondary migration. Having received job training and having moved states since arriving to the US were both found to be predictive of shorter elapsed times to first employment. The addition of level three variables also resulted in a statistically significant increase of 1% to the Adjusted R^2 value, bringing it to 0.11.

Table 25. RQ2 Time to First Employment Multiple Regression Model Testing: 3 Levels

Adjusted R^2: 0.11			ΔR^2: 0.01*		

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	1.14	0.65,1.62	4.59**	<0.001	0.16
Marital Status	0.27	-0.26,0.80	1.00	0.32	0.04
Disability Status	0.41	-0.47,1.30	0.91	0.36	0.03
Region: Africa	1.24	0.56,1.92	3.60**	<0.001	0.14
Region: Latin America	-1.32	-2.05,-0.58	3.53**	<0.001	-0.16
Region: Middle East	0.31	-0.38,1.00	0.87	0.38	0.04

Level 2: Pre-Arrival

Variable	b	95% CI	t	Sig.	β
Education on Arrival	-0.27	-0.56,0.03	1.78	0.08	-0.07
ELP on Arrival	-0.07	-0.44,0.30	0.39	0.70	-0.02
Employment History: None	0.40	-0.17,0.96	1.38	0.17	0.06
Employment History: Agricultural	-0.50	-1.32,0.32	1.20	0.23	-0.05
Employment History: Self	-0.25	-1.00,0.32	0.66	0.51	-0.03
Detention	-0.25	-1.22,0.72	0.50	0.62	-0.02

Level 3: Post-Arrival

Variable	b	95% CI	t	Sig.	β
University Enrollment	0.37	-0.84,1.58	0.60	0.55	0.02
ELT Enrollment	0.27	-0.20,0.74	1.12	0.26	0.04
Job Training/Assistance	-0.51	-0.97,-0.06	2.22*	0.03	-0.08
Secondary Migration	-0.55	-1.00,-0.10	2.41*	0.02	-0.08
Constant	5.21	4.29,6.13	11.12	<0.001	

Note: *p<0.05, **p<0.01

Level 4. When household characteristics were added to the regression model, overall household size was found to be significantly predictive of time to first employment, at the p<0.05 level. According to the *b* coefficient estimate, each additional household member was predictive of an increase in mean time to first employment. The addition of household level variables once again resulted in a statistically significant increase of 1% to the Adjusted R^2 value, bringing it to 0.12.

Table 26. RQ2 Time to First Employment Multiple Regression Model Testing: 4 Levels

Adjusted R^2: 0.12			ΔR^2: 0.01*		

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	1.13	0.65,1.62	4.57**	<0.001	0.16
Marital Status	0.14	-0.43,0.72	0.49	0.62	0.02
Disability Status	0.39	-0.49,1.27	0.88	0.38	0.03
Region: Africa	1.24	0.54,1.94	3.47**	<0.001	0.14
Region: Latin America	-1.06	-1.81,-0.30	2.75*	0.01	-0.13
Region: Middle East	0.47	-0.24,1.17	1.30	0.20	0.05

Level 2: Pre-Arrival

Variable	b	95% CI	t	Sig.	β
Education on Arrival	-0.25	-0.54,0.05	1.63	0.10	-0.07
ELP on Arrival	-0.09	-0.46,0.29	0.46	0.65	-0.02
Employment History: None	0.34	-0.23,0.90	1.18	0.24	0.05
Employment History: Agricultural	-0.39	-1.21,0.43	0.93	0.35	-0.04
Employment History: Self	-0.33	-1.07,0.42	0.86	0.39	-0.03
Detention	-0.23	-1.20,0.74	0.46	0.65	-0.02

Level 3: Post-Arrival

Variable	b	95% CI	t	Sig.	β
University Enrollment	0.30	-0.90,1.51	0.49	0.62	0.02
ELT Enrollment	0.26	-0.21,0.74	1.09	0.28	0.04
Job Training/Assistance	-0.55	-1.00,-0.09	2.37*	0.02	-0.08
Secondary Migration	-0.45	-0.91,-0.01	1.97*	0.04	-0.07

Level 4: Household

Variable	b	95% CI	t	Sig.	β
Household Size	0.19	0.03,0.36	2.35*	0.02	0.12
Children under 6	0.05	-0.34,0.44	0.26	0.80	0.01
Children under 16	-0.02	-0.32,0.28	0.12	0.90	-0.01
Constant	4.33	3.25,5.42	7.83	<0.001	

Note: *p<0.05, **p<0.01

Interaction testing. The gender x marital status interaction variable was not found to be a statistically significant predictor of elapsed time to first employment. Furthermore, adding the variable to the model did not result in a statistically significant change in the Adjusted R^2 value. Therefore, this particular model iteration was discarded, and final analytical conclusions were made using the previous (level 4) model.

Table 27. RQ2 Time to First Employment Multiple Regression Model Testing: 4 Levels + Interactions

Adjusted R^2: 0.12			ΔR^2: 0.001		

Level 1: Demographics

Variable	*b*	95% CI	*t*	Sig.	β
Gender	0.76	-0.08,1.60	1.78	0.08	0.11
Marital Status	-0.11	-0.86,0.63	0.30	0.77	-0.02
Disability Status	0.41	-0.48,1.29	0.90	0.37	0.03
Region: Africa	1.21	0.51,1.92	3.39**	<0.001	0.13
Region: Latin America	-1.07	-1.83,-0.32	2.78*	0.01	-0.13
Region: Middle East	0.47	-0.23,1.18	1.31	0.19	0.06

Level 2: Pre-Arrival

Variable	*b*	95% CI	*t*	Sig.	β
Education on Arrival	-0.24	-0.53,0.06	1.55	0.12	-0.07
ELP on Arrival	-0.11	-0.48,0.27	0.56	0.58	-0.02
Employment History: None	0.32	-0.25,0.88	1.10	0.27	0.05
Employment History: Agricultural	-0.39	-1.21,0.43	0.93	0.35	-0.04
Employment History: Self	-0.32	-1.06,0.43	0.84	0.40	-0.03
Detention	-0.21	-1.18,0.76	0.43	0.67	-0.02

Level 3: Post-Arrival

Variable	*b*	95% CI	*t*	Sig.	β
University Enrollment	0.27	-0.94,1.48	0.44	0.66	0.02
ELT Enrollment	0.26	-0.21,0.74	1.09	0.28	0.04
Job Training/Assistance	-0.55	-1.01,-0.10	2.38*	0.02	-0.08
Secondary Migration	-0.45	-0.90,-0.02	1.97	0.04	-0.07

Level 4: Household

Variable	*b*	95% CI	*t*	Sig.	β
Household Size	0.19	0.03,0.36	2.35*	0.02	0.12
Children under 6	0.06	-0.33,0.44	0.29	0.77	0.01
Children under 16	-0.01	-0.31,0.29	-0.05	0.96	-0.01

Interaction Terms

Variable	*b*	95% CI	*t*	Sig.	β
Gender x Marital Status	0.55	-0.47,1.56	1.06	0.29	0.07
Constant	4.51	3.38,5.64	7.81	<0.001	

Note: *p<0.05, **p<0.01

Summary of significant predictors. After completing the five rounds of model iterations outlined above, a final regression was run using only those variables found to be statistically significant predictors in the full, 4-level model. The resulting model was then re-run until all remaining variable coefficients met the p<0.05 significance threshold. The results of this regression—with an Adjusted R^2 value of 0.11—are presented below, along with basic interpretations of each variable's *b* coefficient estimate.

Table 28. RQ2 Time to First Employment Multiple Regression Model Testing: Significant Variables

Adjusted R^2: 0.11

Variable	b	95% CI	t	Sig.	β
Gender	1.26	0.80,1.71	5.46**	<0.001	0.18
Region: Africa	1.17	0.58,1.76	3.88**	<0.001	0.13
Region: Latin America	-1.34	-1.91,-0.78	4.68**	<0.001	-0.16
Job Training/Assistance	-0.55	-1.00,-0.11	2.46*	0.01	-0.08
Secondary Migration	-0.46	-0.90,-0.02	2.06*	0.04	-0.07
Household Size	0.22	0.11,0.33	3.89**	<0.001	0.13
Constant	4.05	3.43,4.66	12.98	<0.001	

Note: *p<0.05, **p<0.01

Results of the linear regression model tested in RQ2 can be summarized as follows: 1) Female identity predicts a mean increase of 1.26 months in elapsed time to first employment. 2) African origin predicts a mean increase of 1.17 months in elapsed time to first employment, compared to counterparts of Southeast/South Asian origin. 3) Latin American origin predicts a mean decrease of 1.34 months in elapsed time to first employment, compared to counterparts of Southeast/South Asian origin. 4) Having received job training or assistance predicts a mean decrease of 0.55 months in elapsed time to first employment. 5) Having moved states since arrival to the US predicts a mean decrease of 0.46 months in elapsed time to first employment. 6) Each additional household member predicts a mean increase of 0.22 months in time to first employment.

RQ 3: Predictors of Hours Worked per Week

Prior to interpreting the results of model testing, the RQ3 data was found to meet the assumptions necessary for linear regression, without any need for transformation. Functional form of the predicted line and constant variance of errors were both checked and confirmed using a residual-fitted scatterplot. Normality of the error distribution was assessed and confirmed using a normal probability plot. Through casewise diagnostics, four observations were flagged as outliers, displaying standardized residuals with an absolute value greater than 3.0. However, leverage values for these four cases fell below 0.20, and their Cook's Distance values were all below the threshold of 1.0. Using these two measures, it was confirmed that the four outliers were neither significantly leveraging nor influencing the predicted regression equation.

Level 1. When demographic characteristics were run in the regression model alone, four variables were found to have statistically significant *b* coefficient estimates: gender, disability status, Latin American origin, and Middle Eastern origin. Female identity and having a disability were both associated with working fewer hours per week on average, while Latin American origin and Middle Eastern origin were associated with more work hours. The single-level model was found to have an Adjusted R^2 value of 0.26, explaining just over ¼ of the variation in hours worked per week.

Table 29. RQ3 Hours Worked per Week Multiple Regression Model Testing: 1 Level

Adjusted R^2: 0.26

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	-10.66	-12.37,-8.96	12.26**	<0.001	-0.29
Marital Status	-1.14	-3.04,0.76	1.18	0.24	-0.03
Disability Status	-16.43	-18.64,.14.22	14.58**	<0.001	-0.34
Region: Africa	-0.79	-3.28,1.70	0.62	0.53	-0.02
Region: Latin America	8.33	5.84,10.82	6.56**	<0.001	0.16
Region: Middle East	.2.48	-4.69,-0.26	2.20*	0.03	-0.06
Constant	27.96	25.85,30.07	26.01	<0.001	

Note: *p<0.05, **p<0.01

Level 2. When pre-arrival characteristics were added to the regression model predicting hours worked per week, two variables showed statistically significant *b* coefficient estimates: level of education on arrival and lack of employment history. Higher levels of education were found to be predictive of more hours worked per week, while having no employment history upon arrival to the US was found to be predictive of working fewer hours. The addition of the pre-arrival variable cluster also led to marital status showing a statistically significant *b* coefficient estimate, with married individuals appearing to work fewer hours per week. With the addition of level 2 variables, the Adjusted R^2 value of the model showed a statistically significant increase of 3%, to 0.29.

Table 30. RQ3 Hours Worked per Week Multiple Regression Model Testing: 2 Levels

Adjusted R^2: 0.29 ΔR^2: 0.03**

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	-8.76	-10.53,-7.00	9.74**	<0.001	-0.24
Marital Status	-2.14	-4.07,-0.20	2.16*	0.03	-0.05
Disability Status	-14.30	-16.58,-12.03	12.31**	<0.001	-0.30
Region: Africa	-0.97	-3.52,1.58	0.74	0.46	-0.02
Region: Latin America	5.10	2.37,7.83	3.66**	<0.001	0.10
Region: Middle East	-5.64	-8.03,-3.26	4.64**	<0.001	-0.13

Level 2: Pre-Arrival

Variable	b	95% CI	t	Sig.	β
Education on Arrival	2.51	1.51,3.51	4.93**	<0.001	0.14
Employment History: None	-5.07	-7.29,-2.84	4.46**	<0.001	-0.14
Employment History: Agricultural	-2.50	-5.73,0.73	1.52	0.13	-0.04
Employment History: Self	0.96	-2.30,4.22	0.58	0.56	0.02
Detention	3.32	-0.64,7.28	1.64	0.10	0.04
Constant	28.22	25.14,31.31	17.95	<0.001	

Note: *p<0.05, **p<0.01

Level 3. When post-arrival characteristics were added to the regression model predicting hours worked per week, two variables were found to have *b* coefficient estimates significant at the p<0.05 level: university enrollment in the US and job training participation. Having enrolled in a university-level program since arriving to the US was found to be associated with lower mean levels of hours worked per week, while job training participation predicted more hours

worked on average. The addition of level three variables also resulted in a statistically significant increase of 7% to the Adjusted R^2 value, bringing it to 0.36.

Table 31. RQ3 Hours Worked per Week Multiple Regression Model Testing: 3 Levels

Adjusted R^2: 0.36		ΔR^2: 0.07**			
Level 1: Demographics					
Variable	***b***	**95% CI**	***t***	**Sig.**	**β**
Gender	-8.05	-9.75,-6.35	9.30**	<0.001	-0.22
Marital Status	-3.12	-5.05,-1.19	3.17**	<0.001	-0.08
Disability Status	-13.94	-16.17,-11.71	12.26**	<0.001	-0.29
Region: Africa	-0.68	-3.17,1.81	0.54	0.59	-0.01
Region: Latin America	7.39	4.66,10.13	5.30**	<0.001	0.15
Region: Middle East	-4.09	-6.44,-1.73	3.41**	<0.001	-0.09
Level 2: Pre-Arrival					
Variable	***b***	**95% CI**	***t***	**Sig.**	**β**
Education on Arrival	1.56	0.49,2.63	2.86**	<0.001	0.08
Employment History: None	-3.26	-5.41,-1.11	2.98**	<0.001	-0.09
Employment History: Agricultural	-0.79	-3.95,2.37	0.49	0.62	-0.01
Employment History: Self	1.28	-1.82,4.38	0.81	0.42	0.02
Detention	3.51	-0.26,7.28	1.83	0.07	0.04
Level 3: Post-Arrival					
Variable	***b***	**95% CI**	***t***	**Sig.**	**β**
Length of Residence in US	0.35	-0.05,0.74	1.73	0.08	0.06
University Enrollment	-13.31	-16.86,-9.76	7.35**	<0.001	-0.17
Current ELP	1.09	-0.18,2.36	1.68	0.09	0.05
Job Training/Assistance	7.99	6.19,9.79	8.70**	<0.001	0.20
Secondary Migration	0.72	-1.62,3.06	0.60	0.55	0.02
Constant	20.23	13.51,26.95	5.91	<0.001	

Note: *p<0.05, **p<0.01

Level 4. When household characteristics were added to the regression model, all three variables in the cluster were found to be significantly predictive of hours worked per week, at the p<0.05 level. According to the *b* coefficient estimates, each additional household member was predictive of a decrease in mean hours worked per week, as was each additional child under 6 years of age in the house. In contrast, each additional child under 16 was found to be predictive of more hours worked per week. The addition of household level variables resulted in a statistically significant increase of 1% to the Adjusted R^2 value, bringing it to 0.37.

Table 32. RQ3 Hours Worked per Week Multiple Regression Model Testing: 4 Levels

Adjusted R^2: 0.37 $\qquad\qquad\qquad\qquad\qquad$ ΔR^2: 0.01**

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	-8.08	-9.76,-6.39	9.38**	<0.001	-0.22
Marital Status	-3.25	-5.28,-1.22	3.15**	<0.001	-0.08
Disability Status	-13.46	-15.71,-11.20	11.72**	<0.001	-0.28
Region: Africa	-1.39	-3.98,1.20	1.05	0.29	-0.03
Region: Latin America	5.87	3.08,8.66	4.13**	<0.001	0.12
Region: Middle East	-5.12	-7.49,-2.74	4.22**	<0.001	-0.11

Level 2: Pre-Arrival

Variable	b	95% CI	t	Sig.	β
Education on Arrival	1.44	0.37,2.51	2.64*	0.01	0.08
Employment History: None	-2.80	-4.94,-0.66	2.57*	0.01	-0.08
Employment History: Agricultural	-1.19	-4.35,1.98	0.74	0.46	-0.02
Employment History: Self	1.54	-1.54,4.62	0.98	0.33	0.02
Detention	3.25	-0.49,7.00	1.70	0.09	0.04

Level 3: Post-Arrival

Variable	b	95% CI	t	Sig.	β
Length of Residence in US	0.32	-0.07,0.71	1.60	0.11	0.05
University Enrollment	-12.76	-16.33,-9.20	7.02**	<0.001	-0.17
Current ELP	1.28	0.01,2.55	1.98	0.05	0.06
Job Training/Assistance	7.71	5.92,9.51	8.41**	<0.001	0.19
Secondary Migration	0.26	-2.08,2.60	0.22	0.83	0.01

Level 4: Household

Variable	b	95% CI	t	Sig.	β
Household Size	-1.27	-1.84,-0.71	4.42**	<0.001	-0.14
Children under 6	-1.46	-2.77,-0.16	2.20*	0.03	-0.06
Children under 16	1.37	0.40,2.33	2.76*	0.01	0.10
Constant	25.97	18.87,33.07	7.18	<0.001	

Note: *p<0.05, **p<0.01

Interaction testing. The gender x marital status interaction variable was found to be a statistically significant predictor of hours worked per week. Specifically, being a married female was found to be associated with fewer mean hours worked. The inclusion of the interaction term also led to both gender and marital status no longer being statistically significant predictors on their own. Including the gender x marital status interaction term raised the Adjusted R^2 value of the model to 0.37, and this increase was found to be significant at the p<0.01 level.

Table 33. RQ3 Hours Worked per Week Multiple Regression Model Testing: 4 Levels + Interactions

Adjusted R^2: 0.37 $\quad\quad\quad\quad\quad\quad\quad\quad$ ΔR^2: 0.008**

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	-2.88	-5.83,0.07	1.91	0.06	-0.08
Marital Status	0.68	-2.04,3.40	0.49	0.62	0.02
Disability Status	-13.64	-15.88,-11.40	11.95**	<0.001	-0.29
Region: Africa	-1.16	-3.74,1.41	0.88	0.38	-0.02
Region: Latin America	5.70	2.92,8.47	4.03**	<0.001	0.11
Region: Middle East	-5.10	-7.46,-2.74	4.23**	<0.001	-0.11

Level 2: Pre-Arrival

Variable	b	95% CI	t	Sig.	β
Education on Arrival	1.41	0.34,2.47	2.59*	0.01	0.08
Employment History: None	-2.28	-4.42,-0.14	2.09*	0.04	-0.06
Employment History: Agricultural	-1.00	-4.15,2.14	0.63	0.53	-0.02
Employment History: Self	1.44	-1.63,4.50	0.92	0.36	0.02
Detention	2.97	-0.76,6.69	1.56	0.12	0.04

Level 3: Post-Arrival

Variable	b	95% CI	t	Sig.	β
Length of Residence in US	0.32	-0.07,0.70	1.60	0.11	0.05
University Enrollment	-12.56	-16.11-9.02	6.95**	<0.001	-0.16
Current ELP	1.39	0.13,2.66	2.17*	0.03	0.07
Job Training/Assistance	7.53	5.74,9.32	8.26**	<0.001	0.19
Secondary Migration	0.04	-2.28,2.37	0.04	0.97	0.01

Level 4: Household

Variable	b	95% CI	t	Sig.	β
Household Size	-1.33	-1.89,-0.77	4.66**	<0.001	-0.15
Children under 6	-1.45	-2.74,-0.15	2.19*	0.03	-0.06
Children under 16	1.32	0.36,2.29	2.69*	0.01	0.10

Interaction Terms

Variable	b	95% CI	t	Sig.	β
Gender x Marital Status	-7.50	-11.00,-4.00	4.21**	<0.001	-0.19
Constant	23.46	16.31,30.62	6.44	<0.001	

Note: *p<0.05, **p<0.01

Summary of significant predictors. After completing the five rounds of model iterations outlined above, a final regression was run using only those variables found to be statistically significant predictors in the full, 4-level+interaction model. The resulting model was then re-run until all remaining variable coefficients met the p<0.05 significance threshold. The results of this regression—with an Adjusted R^2 value of 0.37—are presented below, along with basic interpretations of each variable's *b* coefficient estimate.

Table 34. RQ3 Hours Worked per Week Multiple Regression Model Testing: Significant Variables

Adjusted R^2: 0.37

Variable	b	95% CI	t	Sig.	β
Gender x Marital Status	-9.52	-11.22,-7.81	10.94**	<0.001	-0.25
Disability Status	-13.47	-15.64,-11.30	12.18**	<0.001	-0.28
Region: Latin America	6.77	4.17,9.38	5.10**	<0.001	0.13
Region: Middle East	-4.66	-6.81,-2.51	4.26**	<0.001	-0.10
Education on Arrival	1.35	0.32,2.38	2.56*	0.01	0.07
Employment History: None	-3.24	-4.91,-1.57	3.81**	<0.001	-0.09
University Enrollment	-12.64	-16.10,-9.18	7.17**	<0.001	-0.17
Current ELP	1.34	0.17,2.51	2.24*	0.03	0.06
Job Training/Assistance	7.73	5.95,9.50	8.54**	<0.001	0.19
Household Size	-0.82	-1.24,-0.41	3.89**	<0.001	-0.09
Constant	26.29	23.37,29.22	17.65	<0.001	

Note: *p<0.05, **p<0.01

Results of the linear regression model tested in RQ3 can be summarized as follows: 1) Being a married female predicts a mean decrease of 9.52 hours worked per week. 2) Having a disability predicts a mean decrease of 13.47 hours worked per week. 3) Latin American origin predicts a mean increase of 6.77 hours worked per week, compared to counterparts of Southeast/South Asian origin. 4) Middle Eastern origin predicts a mean decrease of 4.66 hours worked per week, compared to counterparts of Southeast/South Asian origin. 5) Each additional level of education completed prior to resettlement predicts a mean increase of 1.35 hours worked per week. 6) Having no employment history prior to resettlement predicts a mean decrease of 3.24 hours worked per week compared to counterparts who were previously employed. 7) Having enrolled in a university program since arriving to the US predicts a mean decrease of 12.64 hours worked per week. 8) Each additional level of self-reported English language proficiency predicts a mean increase of 1.34 hours worked per week. 9) Having received job training or assistance predicts a mean increase of 7.73 hours worked per week. 10) Each additional household member predicts a mean decrease of 0.82 hours worked per week.

RQ 4: Predictors of Hourly Wage

Prior to interpreting the results of model testing, the RQ4 data was found to meet the assumptions necessary for linear regression, without any need for transformation. Functional form of the predicted line and constant variance of errors were both checked and confirmed using a residual-fitted scatterplot. Normality of the error distribution was assessed and confirmed using a normal probability plot. Through casewise diagnostics, eight observations were flagged as outliers, displaying standardized residuals with an absolute value greater than 3.0. However, leverage values for these eight cases fell below 0.20, and their Cook's Distance values were all below the threshold of 1.0. Using these two measures, it was confirmed that the eight outliers were neither significantly leveraging nor influencing the predicted regression equation.

Level 1. When demographic characteristics were run in the regression model alone, two variables were found to have statistically significant *b* coefficient estimates: gender and Middle Eastern origin. Female identity was associated with lower mean hourly wage, while Middle Eastern origin was associated with higher mean wages. The single-level model was found to have an Adjusted R^2 value of 0.01, explaining only 1% of the observed variation in hourly wage.

Table 35. RQ4 Hourly Wage Multiple Regression Model Testing: 1 Level

Adjusted R^2: 0.01

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	-0.56	-0.96,-0.16	2.74*	0.01	-0.10
Marital Status	0.07	-0.35,0.50	0.34	0.73	0.01
Disability Status	-0.53	-1.43,0.37	1.15	0.25	-0.04
Region: Africa	-0.02	-0.56,0.53	0.06	0.96	0.01
Region: Latin America	-0.08	-0.58,0.43	0.29	0.77	-0.01
Region: Middle East	0.54	0.02,1.07	2.02*	0.04	0.08
Constant	9.37	8.91,9.84	39.91	<0.001	

Note: *p<0.05, **p<0.01

Level 2. When pre-arrival characteristics were added to the regression model predicting hours worked per week, one variable showed a statistically significant *b* coefficient estimate: level of education on arrival. Higher levels of education were found to be predictive of increased hourly wage. The addition of the pre-arrival variable cluster also led to Middle Eastern origin no longer significantly predicting hourly wage. With the addition of level 2 variables, the Adjusted R^2 value of the model showed a statistically significant increase of 1%, to 0.02.

Table 36. RQ4 Hourly Wage Multiple Regression Model Testing: 2 Levels

Adjusted R^2: 0.02 ΔR^2: 0.01*

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	-0.54	-0.95,-0.13	2.57*	0.01	-0.10
Marital Status	0.13	-0.31,0.57	0.57	0.57	0.02
Disability Status	-0.45	-1.35,0.46	0.97	0.33	-0.04
Region: Africa	0.21	-0.37,0.78	0.71	0.48	0.03
Region: Latin America	-0.17	-0.72,0.38	0.60	0.55	-0.03
Region: Middle East	0.52	-0.05,1.10	1.78	0.08	0.08

Level 2: Pre-Arrival

Variable	b	95% CI	t	Sig.	β
Education on Arrival	0.33	0.10,0.55	2.86**	<0.001	0.12
Employment History: None	-0.13	-0.61,0.36	0.51	0.61	-0.02
Employment History: Agricultural	0.20	-0.48,0.88	0.58	0.56	0.03
Employment History: Self	-0.59	-1.23,0.06	1.79	0.07	-0.08
Constant	8.93	8.24,9.62	25.39	<0.001	

Note: *p<0.05, **p<0.01

Level 3. When post-arrival characteristics were added to the regression model predicting hours worked per week, one variable was found to have a *b* coefficient estimate significant at the p<0.05 level: current English language proficiency. Higher levels of proficiency were found to be predictive of higher mean hourly wages. However, the addition of the post-arrival variable cluster led to education level no longer significantly predicting hourly wage. Though relatively small, the addition of level three variables resulted in a statistically significant increase of 1% to the Adjusted R^2 value, bringing it to 0.03.

Table 37. RQ4 Hourly Wage Multiple Regression Model Testing: 3 Levels

Adjusted R^2: 0.03		ΔR^2: 0.01*			

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	-0.55	-0.97,-0.14	2.65*	0.01	-0.10
Marital Status	0.27	-0.19,0.72	1.15	0.25	0.05
Disability Status	-0.42	-1.33,0.48	0.92	0.36	-0.03
Region: Africa	0.16	-0.42,0.73	0.53	0.59	0.02
Region: Latin America	0.18	-0.41,0.78	0.60	0.55	0.03
Region: Middle East	0.46	-0.14,1.05	1.50	0.13	0.07

Level 2: Pre-Arrival

Variable	b	95% CI	t	Sig.	β
Education on Arrival	0.17	-0.09,0.42	1.30	0.19	0.06
Employment History: None	-0.03	-0.51,0.46	0.10	0.92	0.01
Employment History: Agricultural	0.46	-0.24,1.16	1.29	0.20	0.06
Employment History: Self	-0.52	-1.16,0.12	1.59	0.11	-0.07

Level 3: Post-Arrival

Variable	b	95% CI	t	Sig.	β
Length of Residence in US	0.07	-0.02,0.17	1.54	0.12	0.08
University Enrollment	-0.51	-1.52,0.49	1.01	0.31	-0.04
Current ELP	0.41	0.11,0.70	2.68*	0.01	0.13
Job Training/Assistance	-0.07	-0.46,0.32	0.34	0.74	-0.01
Secondary Migration	0.27	-0.28,0.82	0.97	0.33	0.05
Constant	7.45	5.83,9.06	9.03	<0.001	

Note: *p<0.05, **p<0.01

Level 4. When household characteristics were added to the regression model, overall household size was found to be significantly predictive of hourly wage, at the p<0.05 level. According to the *b* coefficient estimate, each additional household member was predictive of a decrease in mean hourly wage. The addition of household level variables once again resulted in a small, yet statistically significant increase of 1% to the Adjusted R^2 value, bringing it to 0.04.

Table 38. RQ4 Hourly Wage Multiple Regression Model Testing: 4 Levels

Adjusted R^2: 0.04			ΔR^2: 0.01*		

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	-0.49	-0.90,-0.07	2.31*	0.02	-0.09
Marital Status	0.13	-0.37,0.63	0.52	0.60	0.02
Disability Status	-0.35	-1.25,0.55	0.76	0.45	-0.03
Region: Africa	0.10	-0.50,0.70	0.33	0.74	0.01
Region: Latin America	0.11	-0.50,0.73	0.36	0.72	0.02
Region: Middle East	0.37	-0.24,0.98	1.18	0.24	0.05

Level 2: Pre-Arrival

Variable	b	95% CI	t	Sig.	β
Education on Arrival	0.17	-0.09,0.42	1.27	0.21	0.06
Employment History: None	-0.01	-0.49,0.48	0.02	0.98	0.01
Employment History: Agricultural	0.38	-0.33,1.08	1.05	0.29	0.05
Employment History: Self	-0.46	-1.10,0.18	1.40	0.16	-0.06

Level 3: Post-Arrival

Variable	b	95% CI	t	Sig.	β
Length of Residence in US	0.08	-0.02,0.17	1.59	0.11	0.09
University Enrollment	-0.48	-1.48,0.52	0.94	0.35	-0.03
Current ELP	0.43	0.13,0.73	2.84**	<0.001	0.14
Job Training/Assistance	-0.02	-0.41,0.37	0.11	0.91	0.01
Secondary Migration	0.20	-0.35,0.74	0.70	0.48	0.04

Level 4: Household

Variable	b	95% CI	t	Sig.	β
Household Size	-0.13	-0.27,-0.01	1.91*	0.04	-0.10
Children under 6	0.29	-0.03,0.62	1.76	0.08	0.08
Children under 16	0.04	-0.22,0.29	0.29	0.77	0.02
Constant	7.89	6.21,9.56	9.22	<0.001	

Note: *p<0.05, **p<0.01

Interaction testing. The gender x marital status interaction variable was not found to be a statistically significant predictor of hourly wage. Furthermore, inclusion of the interaction term in the model did not impact the statistical significance of any of the previously included independent variable coefficients. Including the gender x marital status interaction term had no observable effect on the Adjusted R^2 value of the regression model. Therefore, this particular model iteration was discarded, and final analytical conclusions were made using the previous (level 4) model.

Table 39. RQ4 Hourly Wage Multiple Regression Model Testing: 4 Levels + Interactions

Adjusted R^2: 0.04		ΔR^2: 0.00			

Level 1: Demographics

Variable	b	95% CI	t	Sig.	β
Gender	-0.50	-0.88,-0.09	2.42*	0.02	-0.09
Marital Status	0.07	-0.57,0.71	0.22	0.83	0.01
Disability Status	-0.35	-1.25,0.55	0.76	0.45	-0.03
Region: Latin America	0.11	-0.51,0.73	0.35	0.73	0.02
Region: Middle East	0.37	-0.24,0.98	1.18	0.25	0.05

Level 2: Pre-Arrival

Variable	b	95% CI	t	Sig.	β
Education on Arrival	0.17	-0.09,0.43	1.29	0.20	0.06
Employment History: None	-0.01	-0.49,0.48	0.97	0.97	-0.01
Employment History: Agricultural	0.38	-0.32,1.08	1.06	0.29	0.05
Employment History: Self	-0.45	-1.10,0.19	1.38	0.17	-0.06

Level 3: Post-Arrival

Variable	b	95% CI	t	Sig.	β
Length of Residence in US	0.08	-0.02,0.17	1.60	0.11	0.09
University Enrollment	-0.49	-1.49,0.55	0.96	0.34	-0.04
Current ELP	0.43	0.13,0.73	2.82*	0.01	0.14
Job Training/Assistance	-0.02	-0.41,0.37	0.11	0.91	-0.01
Secondary Migration	0.20	-0.35,0.75	0.71	0.48	0.04

Level 4: Household

Variable	b	95% CI	t	Sig.	β
Household Size	-0.13	-0.27,-0.01	1.91*	0.04	-0.10
Children under 6	0.29	-0.03,0.62	1.77	0.08	0.08
Children under 16	0.04	-0.21,0.30	0.32	0.75	0.02

Interaction Terms

Variable	b	95% CI	t	Sig.	β
Gender x Marital Status	0.14	-0.72,1.00	0.32	0.75	0.02
Constant	7.92	6.23,9.61	9.20	<0.001	

Note: *p<0.05, **p<0.01

     Summary of significant predictors. After completing the five rounds of model iterations outlined above, a final regression was run using only those variables found to be statistically significant predictors in the full model. The resulting model was then re-run until all remaining variable coefficients met the p<0.05 significance threshold. The results of this regression—with an Adjusted R^2 value of 0.04—are presented below, along with basic interpretations of each variable's *b* coefficient estimate.

Table 40. RQ4 Hourly Wage Multiple Regression Model Testing: Significant Variables

Adjusted R^2: 0.04

Variable	b	95% CI	t	Sig.	β
Gender	-0.57	-0.95,-0.19	2.95**	<0.001	-0.10
Current ELP	0.45	0.25,0.66	4.27**	<0.001	0.15
Household Size	-0.10	-0.19,-0.01	2.26*	0.02	-0.08
Constant	9.39	8.89,9.90	36.44	<0.001	

Note: *p<0.05, **p<0.01

Results of the linear regression model tested in RQ4 can be summarized as follows: 1) Being a female predicts a mean decrease of $0.52 in hourly wage. 2) Each additional level of self-reported English language proficiency predicts a mean increase of $0.45 in hourly wage. 3) Each additional household member predicts a mean decrease of $0.10 in hourly wage.

V. DISCUSSION

A number of insights can be drawn from findings related to the study's guiding research questions. This chapter presents an overview of these findings and their relevance, followed by a discussion of their implications for research, practice, and policy.

Overview of Major Findings

Employment Status

Research questions 1 and 3 can essentially be viewed as two methods of inquiry regarding a single topic: the current employment status of recently resettled refugees in the US. As such, their individual findings can be viewed and explored in tandem. With R^2 values of 0.48 and 0.37, these two models are able to explain a great deal of the variation in employment statuses. The large majority of explanatory power for both of these models comes from demographic factors, followed distantly by post-arrival characteristics. Pre-arrival and household characteristics also offer explanatory power, but in very measured amounts.

A number of factors were found to be predictive of lower odds of employment among the sample and, by extension, the refugee population. Two of these factors—disability status and university enrollment—are somewhat intuitive. The association between increased household size and lower likelihood of employment was a significant finding, but the odds of employment were found to decrease only 13% with each additional household member, and the confidence interval associated with this estimate came somewhat close to an odds ratio of 1 on the upper bound (0.94). More striking were the findings related to married females, with an odds ratio estimate of 0.25. This large reduction in odds of employment warrant thoughtful examination, and will be explored later in the chapter.

As with the predictors of lower employment odds, some variables found to be significantly predictive of higher employment odds seem somewhat intuitive. For example, higher levels of education on arrival to the US and higher levels of self-reported English language proficiency were found to predict higher likelihoods of being currently employed. Further, while participation in job training and assistance programs would be expected to increase the likelihood of employment among refugees, the actual odds ratio estimate produced by the model is noteworthy. It is estimated that those who have participated in such programs are almost five times more likely to be employed than those who have not. This finding is particularly encouraging through a programming lens, and its implications will be further expanded upon.

A number of factors found to predict lower odds of employment, unsurprisingly, also were found to predict fewer hours worked per week. These factors include being a married female, having a disability, university enrollment in the US, and increased household size. Married females were found to work almost 10 hours less per week, on average. The RQ3 regression model includes two predictors of lower employment levels that did not appear in RQ1 or RQ2 results: Lack of employment history and Middle Eastern origin. While the link between a

lack of employment history and fewer hours per week seems fitting, the finding that Middle Eastern origin predicts almost 5 hours less work per week warrants further exploration.

The factors found to predict higher levels of employment in RQ3 are identical to those found to predict higher odds of employment in RQ1, somewhat appropriately. Indeed, Latin American origin, higher levels of education on arrival to the US, higher levels of self-reported English language proficiency, and participation in job training or assistance programs were all found to be associated with more hours worked per week, on average. Latin American origin and job training appear to be particularly strong indicators, with *b* coefficient estimates of 6.8 hours and 7.7 hours, respectively.

In synthesizing results from research questions 1 and 3, a number of factors were found to increase employment levels and the overall likelihood of employment, including Latin American origin, higher levels of pre-resettlement education, higher levels of English proficiency, and participation in job training or assistance programming. In contrast, factors found to decrease employment levels and/or the likelihood of employment include being a married female, having a disability, Middle Eastern origin, lack of employment history, university enrollment in the US, and increased household size.

Table 41. Summary of Factors Predictive of Employment Status

Explanatory Power: Strong	
Increased Employment	**Decreased Employment**
Latin American Origin	Married Female
Higher Level of Education	Disabled
Higher English Language Proficiency	Middle Eastern Origin
Job Training or Assistance	No Employment History
	University Enrollment in US
	Increased Household Size

Time to Employment

Research question 2 involved inquiry into the time it took for recently resettled refugees—specifically the subset of the sample that had worked since arriving in the US—to secure employment. With an Adjusted R^2 value of 0.11, the regression model was able to explain a fair amount of variance in lengths to employment. As with other regression models, demographic variables accounted for the largest portion of explained variance in time to first employment, at 9%. Each of the three remaining variable clusters explained approximately 1% of variance.

Three variables were found to be predictive of longer elapsed times to first employment among the sample of refugees: Female gender, African origin, and household size. These variables—with the exception of African origin—were also found to be associated with lower odds and levels of employment. The coefficient estimates for female gender, African origin, and household size—that is, the increase in mean months to employment associated with them—ranged from 0.22 to 1.26 months.

Consistent with finding related to employment status, Latin American origin and participation in job training or assistance programs were both associated with shorter mean times

to first employment. In addition, refugees who moved to another state after initial resettlement were found to secure employment faster than those who did not, on average. This notable finding may suggest a trend of individuals purposefully moving across country for work. While this potential hypothesis is difficult to confirm without specific data on resettlement and secondary locations, it will be explored in further detail.

Table 42. Summary of Factors Predictive of Time to First Employment

Explanatory Power: Fair	
Decreased Time to Employment	**Increased Time to Employment**
Latin American Origin	Female
Job Training or Assistance	African Origin
Secondary Migration	Increased Household Size

Hourly Wage

Inquiry into predicting the wages of recently resettled refugees who are currently employed yielded sparse results. With an Adjusted R^2 value of 0.04, this model was the least robust in the study, suggesting that the true explanation of wage variation lies in a number of unexplored factors. Each of the four variable clusters in the regression model appear to have contributed somewhat equally to the total explained variance of 4%. While this total is less than ideal, insights can nevertheless be drawn from the regression findings. Identifying as female and increased household size were both found to be significantly predictive of lower hourly wages, with *b* coefficient estimates of $-0.57 and $-0.10, respectively. Somewhat intuitively, on the other hand, increased self-reported English language proficiency was found to be predictive of higher hourly wages, approximately $0.45 per additional level.

Table 43. Summary of Factors Predictive of Hourly Wage

Explanatory Power: Weak	
Increased Hourly Wage	**Decreased Hourly Wage**
Higher English Language Proficiency	Female
	Increased Household Size

The following table provides a full, summary view of independent variables found to be significant predictors of the various economic incorporation outcomes explored in the study. This table offers a view into the relative degree to which each outcome can be predicted, as well as the relative frequency with which various factors display statistical significance.

Table 44. Summary of Significant Predictors Across RQs 1-4

	Employment Status (OR)	Months to Employment (*b*)	Hours per Week (*b*)	Hourly Wage (*b*)
Demographic Factors				
Female	-	1.26	-	-0.57
Married	-	-	-	-
Female*Married	0.25	-	-9.52	-
Disability	0.08	-	-13.47	-
Latin American Origin	3.05	-1.34	6.77	-
African Origin	-	1.17	-	-
Middle Eastern Origin	0.64	-	-4.66	-
Pre-Arrival Factors				
Education Level	1.19	-	1.35	-
English Level on Arrival	-	-	-	-
Employment History: None	-	-	-3.24	-
Employment History: Agricultural	-	-	-	-
Employment History: Self-Employed	-	-	-	-
Detention History	-	-	-	-
Post-Arrival Factors				
Length of Residence	-	-	-	-
University Enrollment	0.16	-	-12.64	-
English Level Current	1.23	-	1.34	0.45
English Training	-	-	-	-
English Training Type	-	-	-	-
Job Training	4.86	-0.55	7.73	-
Secondary Migration	-	-0.46	-	-
Household Factors				
Household Size	0.87	0.22	-0.82	-0.10
Children under 6	-	-	-	-
Children under 16	-	-	-	-
Home Ownership	-	-	-	-

Limitations

While the present study was designed to be as rigorous as possible, it nonetheless was subject to a number of limitations, many of which were beyond the scope of control. As a cross-sectional inquiry, the study is limited in its ability to paint a rich and detailed portrait of refugee incorporation. A longitudinal design, with the capacity to track individuals over the course of multiple years, would have undoubtedly offered more robust findings. As a one-time analysis, this study is also limited in its long-term applicability. While the sample conditions are appropriate to generalize to the entire population of recently resettled refugees in the US, the longevity of this generalizability is limited. As the ethnic and national populations resettled by the USRP continue to change and evolve over time, these findings may become less relevant, as has been the case with previous waves of refugee research.

This study was also limited by the data confidentiality measures put in place through the FOIA request process. A number of crucial individual-level factors were scrubbed from the data prior to transfer, including age, religion, geographic location, and specific country of origin. These factors—if included as variables in regression modeling—would have likely contributed to explaining variation in economic incorporation outcomes. The case of country of origin was particularly limiting, as regional aggregation made it difficult to interpret some findings with nuance.

On a more fundamental level, this study was subject to many of the limitations inherent in any analysis of secondary data. While the FOIA file transfer included a detailed codebook, it is impossible to independently verify the consistency and reliability of the survey data collection process. For example, as is typical in a stratified random sampling scheme, the data file obtained through the FOIA request included multiple sampling weights. Weights were included to adjust for sampling rates by arrival cohort (year of entry) and region of origin. The cohort weight was discarded for the purposes of this study, due to the decision to limit the sampling frame to an 18-month arrival window. However, the regional sampling weight would have been appropriate to utilize in analysis. Upon thorough examination and spot-checking of the regional weight values, multiple inconsistencies became apparent. As such—and with no possibility of communicating with the primary data compilers—the regional sampling weight was excluded from analysis, in favor of raw observed data.

Finally, the rigor of the inquiry process was naturally shaped by the limits of the inherited data. That is, the study's research questions could only be addressed to the degree allowed by the existing survey questionnaire. This limitation manifested in a number of ways, most notably in assessing respondents' ability to secure employment. Without any questionnaire item designed to filter the pool of unemployed individuals, it is not possible to identify who, in fact, does not have a desire or need to work. In that sense, research questions 1 and 3 are limited in that they center on the assumption that all sampled respondents are either employed, or want to be employed.

Although this study was undoubtedly subject to certain limitations, the findings recorded offer a rich lens into the economic incorporation of recently resettled refugees in the United States. Indeed, these findings yield a number of significant implications for research, practice, and policy.

Research Implications

This study sought to address four distinct yet related research questions, with the goal of empirically identifying predictors of various economic incorporation indicators for refugees in the United States. The following factors were found to predict positive incorporation outcomes: Latin American origin, increased levels of education on arrival, increased English language proficiency, participation in job training or assistance programs, and—to a limited degree—secondary migration after resettlement. In contrast, the following factors were found to be negatively predictive of economic incorporation: Female gender (particularly when combined with marriage), having a disability, African origin, Middle Eastern origin, lack of employment history on arrival, enrollment in a university program, and increased household size.

Furthermore, results indicate that the greatest predictive power lies in demographic, non-modifiable factors, all of which are fixed before refugees enter the United States and begin receiving resettlement services. These findings contribute significantly to the current scope of knowledge in refugee research, both theoretical and empirical.

Theoretical

This study's primary contribution to the refugee research theory base was through its testing of Kuhlman's (1991) integration model, outlined previously. Factors were tested for their ability to predict economic incorporation, from four of Kuhlman's domains: 1) Characteristics of Refugees, 2) Flight-Related Factors, 3) Residence in Host Country, and 4) Non-Economic Dimensions of Integration. Only factors from two domains, characteristics of refugees and non-economic dimensions of integration, were found to be predictive in any of the four regression models. These factors included demographics, pre-arrival traits, and household composition.

The inability of this study to verify two of Kuhlman's (1991) integration domains does not necessarily serve to invalidate his model as a legitimate theoretical framework. Rather, these findings speak to concerns raised in the initial discussion of the model, regarding its applicability to permanent resettlement contexts. Kuhlman's theoretical model was designed to explain and predict refugee integration patterns in temporary host countries, most often developing nations themselves. Its failure to align with the results of this nationally representative empirical study is an indication that additional theory must be developed around refugee incorporation in permanent, developed resettlement countries. The hybrid theoretical framework presented in chapter 2 appears to be a promising first step toward such development. As hypothesized in the framework, indicators from the social axis (e.g. English language proficiency), as well as the wellness axis (e.g. disability) were found to be predictive of incorporation across the economic axis. Further empirical inquiry is necessary to bolster the validity of this theoretical framework, and is discussed in more detail below.

Empirical

This study served to address empirical gaps in refugee resettlement research in three ways: 1) through the use of an exhaustive, adequately sized, randomly sampled and nationally representative respondent base, 2) through the use of recently collected data on current refugee populations, and 3) through the use of survey data collected with a validated instrument and in respondents' native languages. Through the closing of these gaps, much of the prior empirical research on refugee economic incorporation was able to be confirmed and adjusted accordingly.

Study findings validated the predictors of economic incorporation identified in the North American studies previously reviewed (Potocky & McDonald, 1995; Potocky, 1997; Potocky-Tripodi, 2001; Potocky-Tripodi, 2003). These predictors included gender, disability status, level of education, and household composition. Findings from the international studies (Bakker, Dagevos, & Engbersen, 2014; Bevelander, 2011; Correa-Velez, Barnett, & Gifford, 2013; De Vroome & Van Tubergen, 2010) were slightly less consistent with the results of the current inquiry. While most of the predictors from these studies were confirmed—such as gender, marital status, region of origin, level of education, work history, language proficiency, and job

training participation—two factors were not found to be significantly predictive in any of the four models: length of residence and secondary migration.

It appears likely that a minority of factors manifest differently in other national contexts than they do in the US. However, given the large degree of overlap between confirmation of North American and international findings, this study serves to bridge these two worlds, and suggests the possibility of a unified field of refugee research across permanent resettlement countries. Such unification would ultimately strengthen academic inquiry and cooperation in the field, and help to address the current dearth of scholarly work.

Future Directions

Future research on refugee economic incorporation should strive to further the progress initiated by this study. Specifically, future inquiry should work to tighten the link between the hybrid theoretical framework suggested previously, and empirical analysis. These two avenues should serve to bolster and check one another, as researchers embark on the process of strengthening the field of refugee incorporation scholarship. As such, future research should explore refugee incorporation holistically, beyond only the economic axis.

On the quantitative end, inquiry into refugee incorporation should involve the use of data collection instruments that encompass all three axes: economic, social, and wellness. This will allow not only for more robust testing of employment and wage predictors, but also for empirically identifying predictors of a wide range of incorporation indicators, such as social capital development, civic engagement, mental health, and others.

In order to ensure full extraction of meaning, future research should utilize mixed methods of inquiry, incorporating qualitative components, such as in-depth interviewing. Such components would offer insight into quantitative findings that are not readily explainable and, in turn, would help inform the development of further quantitative methods. For example, this study would have benefited immensely from qualitative data exploring the unique circumstances of married females, and those of Latin American origin. These factors repeatedly emerged as statistically significant predictors of employment outcomes but, without a qualitative component to the study, they cannot be interpreted to their full potential.

Finally, future research on refugee incorporation should utilize longitudinal methods, whenever possible. Incorporation is not a static or singular process, and it therefore warrants long-term tracking and analysis. Longitudinal design would allow researchers to move beyond identifying predictors of incorporation and, instead, move toward identifying trajectories of incorporation. Such inquiry would also foster the development of a richer theory base.

Practice Implications

This study's findings offer a number of valuable takeaways and implications for refugee resettlement front-line staff and managers. First, findings for research questions 1-3 have shed light on the degree to which different groups of factors and traits weigh on refugees' employment prospects and outcomes. Regression results indicate that the vast majority of

predictive power centers on individuals' demographic characteristics, such as gender, marital status, disability status, and region of origin. These results can help inform program planning, particularly when weighing static and modifiable client factors. Results indicate that a refugee client's employment prospects are largely shaped by factors that accompany them on day one of resettlement. This finding calls for in-depth, exhaustive client assessment and triage at the onset of the resettlement process. Service plans should be devised with potential risk factors in mind, and clients exhibiting these traits (e.g. a married Iraqi female) should be supported accordingly. This study has also offered clear evidence of the importance of job training and assistance, as well as improved English language proficiency, in securing employment. As such, these program components should be leveraged to the fullest extent possible. Resettlement service administrators should invest time and resources to ensure that front-line staff are trained in the latest and most effective evidence-based curricula and modalities. Generally speaking, findings confirm the likely ineffectiveness of a one-size-fits-all service model for refugee clients, and suggest the need for adaptable, holistic programming. Refugee service programs should be built around harnessing the demographic and pre-arrival assets identified in this study, while mitigating the effects of known risks.

Resettlement Service Framework

As evidenced above, the results yielded from this study present a unique opportunity to inform specific refugee resettlement practices, and to begin the development of an evidence-based, holistic service framework. Such a framework would play a pivotal role in the current landscape of refugee resettlement, due to its rooting in both theoretical and empirical findings. These findings can be leveraged to inform a three-stage resettlement service framework: Assessment, Planning and Implementation, and Evaluation of Outcomes.

As mentioned in Chapter II's review, the process of permanently resettling refugees in the United States is subject to a general lack of effective individual assessment, beyond basic physical health screenings and security clearances. However, findings from this study suggest that the majority of economic incorporation prediction stems from demographic, pre-resettlement factors. Indeed, these are precisely the factors that must be assessed upon engagement with refugee clients, in order to ensure effective service. Empirical findings point to specific factors to highlight in any such assessment, including gender, marital status, disability status, region of origin, education level, and employment history. In addition, the hybrid theoretical framework outlined previously suggests assessment for overall wellness and strength of social bonds. Such assessment should be completed universally with refugee service recipients, in order to tailor programming to individual assets and risk factors.

In order to provide effective resettlement services and maximize economic self-sufficiency, practitioners must leverage the assessment criteria above to collaboratively form specialized, individual service plans with clients. Findings from this study suggest that, in order to maximize the likelihood of employment—and reduce the timeframe to obtaining it—service plans should be centered on English language instruction and job readiness training. While these two programming arms are widely practiced in refugee resettlement agencies around the country, they are rarely designed to address unique client needs and opportunities. In this sense, service planning and implementation must be coupled with the assessment process outlined above.

Findings suggest that it is inappropriate to provide the same training and instruction to refugee clients across the board, given the identification of significant assets and risk factors. As such, multiple service trajectories should be established, with some clients transitioning directly into the workforce and general economic fold, and others given additional time and space to resolve pre-existing challenges. In order to take root, this decentralization of programming must be reinforced by the public agencies funding services. This point will be further explored below.

Resettlement service providers, in addition to implementing holistic assessments and diverse program planning, must also embrace rigorous and ongoing outcome evaluation. Rigorous evaluations of refugee service interventions are quite rare to date, with a small number of notable exceptions from the academic community (Barraket, 2007; Doughney & Pike, 2004; Mestan & Laurence, 2008; Torezani, 2008). However, effort should be made to foster such study within the direct service context itself. Further, evaluation should be grounded in the holistic framework outlined above, utilizing a variety of evidence and theory-informed outcomes, both economic and non-economic in nature.

Policy Implications

In order to solidify and reinforce practices of rigorous assessment and holistic service planning, such directives must ultimately come from the public sector administrators funding refugee resettlement programs around the country. Although the driving mission of the federal US Refugee Program is clear—to promote the economic self-sufficiency of its clients—its primary objectives do not include ongoing evaluation of refugee incorporation services and interventions. Due to the large-scale devolution of resettlement services to the nonprofit sector, this lack of uniformity is further compounded. The result is a somewhat inconsistent refugee resettlement process, which lacks a clearly delineated evidence base (Ives, 2007; Martin, 2005). Resettlement organizations are instructed by the federal government to place refugee clients in positions of gainful employment as quickly as possible (U.S. Department of State, 2007). However, they do not operate under a common standard of practice, nor are they evaluated on the long-term incorporation of their service recipients. Indeed, a great deal of variation exists in the types and quality of services available to refugees, across state and local lines (Martin, 2005; Smith, 2008). Without an institutionalized expectation of successful incorporation to guide practice, organizations serving refugees' needs provide assistance in a context largely devoid of research-based evidence (Smith, 2008). In order to ensure fidelity to its mission of promoting economic self-sufficiency, the US Resettlement Program should address these inconsistencies through a renewed emphasis on meaningful evaluation and outcome-driven accountability.

This study has explored refugee incorporation through the lens of the US Resettlement Program and Office of Refugee Resettlement. That is, full employment—and the speed with which it is secured—was chosen as the driving outcome. However, the study's implications, along with the theoretical model informing them, have shed light on the importance of expanding focus beyond simple measures of employment. Results of the study address questions of when and why refugees secure employment, but do not address the relative effectiveness of this employment-first focus in promoting holistic incorporation. Multiple observers (Montgomery, 1996; Mott, 2010; Potocky-Tripodi, 2003) have questioned the overall wisdom and effectiveness of the URSP's self-sufficiency model. Critique of the model centers on the difficulty of pursuing

rapid employment and economic adjustment as a refugee, while simultaneously coping with past trauma and the stressors of forced migration. Indeed, findings from this study highlight the varying degrees to which refugees arrive in the United States prepared to effectively enter the workforce. Resettlement policy and funding structures should be adjusted to accommodate for these differing levels of preparedness, with the understanding that not all refugees can or should be expected to secure employment within the same timeframe. Rather, public sector policy-makers, funders, and administrators must support direct resettlement service providers in the process of holistic client assessment and benchmarking, and maintain clear lines of communication regarding the unique needs and challenges of particular subpopulations. This call echoes the appeal made previously for refugee research and service delivery that spans all three axes of incorporation: economic, social, and wellness. Indeed, policy-makers and public administrators should be at the forefront of such a movement, investing in practices and methods to promote the long-term, sustainable incorporation of refugees in the United States.

Conclusion

This study began with an overview of the nature of refugee incorporation, and also offered a hybrid theoretical framework to explain the dynamics and interconnectedness of its multiple axes. In order to address gaps in existing research, the study sought to identify factors and characteristics—at the individual and household levels—that predict the economic incorporation of refugees. For the purposes of this research, economic incorporation was operationalized through employment status and hours worked, elapsed time to first employment, and hourly wage.

Multivariate logistic and ordinary least squares regression model testing was utilized to identify and quantify the explanatory power of these predictors. Results indicated a strong influence of demographic factors—such as gender, marital status, and region of origin—on employment outcomes, as well as evidence of the importance of English language proficiency and job training services in securing employment. In addition, increased household size was consistently found to be a predictor of poorer employment outcomes.

This study served to confirm the results of limited existing empirical research conducted in North America, as well as permanent resettlement countries worldwide. Through this dual verification, results of the study indicate a strong potential for generalizing findings across both of these settings. Furthermore, results were used to test Kuhlman's (1991) seminal model of refugee integration in the context of permanent resettlement, with limited convergence. This fact suggests the need for an updated, resettlement-specific theoretical framework of refugee incorporation, for which the model presented at the onset of the study is a strong candidate.

This study offered a number of insights and implications for refugee resettlement practice and policy. In the practice context, findings suggest a strong need for holistic client assessment and service planning that takes into account the unique assets and risk factors identified through analysis. Findings also confirm the importance providing effective English language instruction and job training within the resettlement practice setting. The pivotal nature of these interventions calls for rigorous evaluation and accountability, in both the practice and policy settings. In addition, findings call for a reassessment of the one-size-fits-all employment-first refugee service

model, both in the direct service and public sector contexts. This study serves not only as a quantitative inquiry into the current state of refugee economic incorporation, but also as an appeal for stakeholders at multiple levels to engage in the process of examining outcome choices and timelines, honing services and programming, and instituting foundational research and evaluation practices.

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