THE ECONOMIC IMPACT OF REFUGEES ON A HOST COUNTRY

by

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November 26, 2018
Dedication

For all the Refugees around the world, who are enforced to leave their own country because of the political instability in their region, I dedicate my dissertation work.

I dedicate this dissertation to the Soul of my Mother Alsharifeh Suaad Bint Abdulrahim!

I also dedicate this dissertation to my great country Jordan!

November 26, 2018
Abstract
THE ECONOMIC IMPACT OF REFUGEES ON A HOST COUNTRY

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Refugee numbers are increasing around the world due to political instability. Host countries are encountering several issues such as socioeconomic challenges as a result of refugees. Therefore, it is essential to investigate the effects of the economic impact of refugees. The Middle East region has taken in a high number of these refugees, especially Jordan. This empirical research studies the impact for countries receiving refugees to help policy makers effectively regulate and deal with this challenge. This study analyzes the impact of refugees on the economy using Jordan as a case study. However, this research can be applied to other countries/regions that are receiving a large influx of refugees such as Europe. Panel Data Analysis is used in this study to explore the impact of refugees on the economy. In addition, different governorates, with different Syrian camps, is analyzed throughout the same periods (2010-2016) to provide evidence and solutions to mitigate the negative impact in the host country.
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Chapter 1

Introduction

“Everyone has the right to seek and to enjoy in other countries asylum from persecution”

(Universal Declaration of Human Rights, Article 14, 1951)

1.1 Background

Despite living in an age that has witnessed increased interconnectivity and transnational movement of people, the world is still faced with humanitarian challenges. An underlying factor causing the current displacements are the conflicts in Yemen, Somalia, South Sudan, Syria, Iraq, and Afghanistan. The United Nation Refugee Agency reports that conflicts have contributed 68.5 million refugees with over 85 percent being in protracted situations (UNHCR 2018). According to the United Nation Refugee Agency about 57 percent of refugees worldwide came from three countries: South Sudan, Afghanistan, and Syria (Figure 1.1) (UNHCR 2018). This refugee world crisis is having a major impact on many countries and regions, including the Middle East Region and Western Europe. Refugees are creating several challenges for the host countries internally. For example, the Middle East region has encountered a significant socioeconomic impact due to the political crises and war. In many cases, refugees’ cross borders and enter neighboring countries. Most refugees are placed in refugee camps where they experience a long-term residency. The crisis in the Middle East has impacted the whole world by creating refugee camps on an almost global scale. However, the state-centric values have failed to address the ever-growing problem of the refugee crisis, as evidenced by mass influx of refugees to Europe, where an estimated 1 million refugees have arrived from Syria (Hampshire, 2016). Although the war in Syria has reached countries across the globe, the impact has been extensive in the Middle East region.
Today, the complex Syrian crisis is putting great pressure on the Middle East and the international community. The majority of refugees escaping the Syrian war go to neighboring countries looking for a safe haven. When they arrive, they live primarily in camps. Only a small percentage live with residents in cities and are integrated into the local economies. The existence of refugee camps has been on a steady rise over the last decades. Accommodating large numbers of refugees is increasingly becoming an issue of importance, especially for developing nations (Arouri, 2009; European Commission, 2010; World Bank, 2011).
Since the inception of the Syrian war in 2011, Jordan has become one of the countries most affected by this crisis due to receiving a large number of refugees. According to the Ministry of Planning and Corporation of Jordan, by 2016, the country had taken in the highest number of refugees around the world. There are about 2.8 million refugees in Jordan who are registered at the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) and the United Nations High Commissioner for Refugees (UNHCR) (UNHCR 2016). In fact, about 680 thousand of these refugees are Syrians. Also, there are about 720 thousand Syrians who live in Jordan who are not registered as refugees according to the Directorate of General Security of Jordan. However, as the international community is not sufficiently contributing to supporting the refugee host countries, absorbing a high volume of refugees has resulted in socioeconomic issues such as in Jordan (Ministry of Planning and Corporation of Jordan, 2016). It is important to explore the effects of the economic impact of refugees for these nations.

1.2 Refugees and Refugee Camps

Refugee camps are established to be temporary, but the fact is that many of them are becoming semi-permanent or even permanent homes with no end sight (Hailey, 2009). According to UNRWA, 2016, a refugee camp is defined as "The plots of land on which the recognized camps were set up are either state land or, in most cases, land leased by the host government from local landowners. This means that the refugees in camps do not 'own' the land on which their shelters were built but have the right to 'use' the land for a residence" (UNRWA 2016). A definition of refugees was adopted on July 28, 1951 by the Convention of the Status of the Refugees in Geneva. This convention wrote the document that determines a refugee's rights, duties, and commitments towards the refugees' host country. It notes that the "refugee is the one who is subjected to
persecution for his race or religion or his political affiliation social class or due to his political opinions as well as the wards and refugees' fear of staying home and wish to flee to another country” (UNHCR, 2011). Refugee camps require provision of services by the host country. Generally, when countries provide services to refugees which include water, food, fuel, and land. This impacts local resources.

1.3 Problem Statement and the significance of research

1.3.1 Economic Impact

Large numbers of refugees have an economic impact on the host countries (Arouri, 2009; European Commission, 2010; World Bank, 2011). The negative impacts may include high unemployment rates, high population growth, and consumption of local resources. The macroeconomic impacts of refugees in camps are relatively complex. It is unclear if per capita income would increase due to existence of refugees (Arouri, 2009; European Commission, 2010; World Bank, 2011). The presence of a high population of refugees in a given country, especially in the rural areas, unavoidably puts a strain on the local authorities. The regional and national authorities of the host country set aside considerable manpower and resources from the urgent and pressing demands of their citizens to maintain the welfare of the refugees and ensure that the displaced persons have adequate security. Whereas many governments that host refugees do show the willingness to bear the costs of keeping refugees, they are understandably reluctant to offset the bill as an exchange for giving refuge and the cost of additional infrastructure that would accommodate many refugees (Taylor et al., 2016).

A country is considered successful if its National Gross Domestic Product (GDP) is strong. The country is also said to be on the right growth pattern if its GDP is growing at a rate faster than that of other countries in the region or internationally. Hence, GDP growth has become an
important indicator for consideration with regard to the success or failure of economies of the world (Thomas, 1961; Thomas, 1973). Studies have shown that a refugee can have either a positive or negative effect on a country’s GDP; therefore, refugees can be either good or bad for an economy (Thomas, 1961; Thomas, 1973).

1.4 Different Challenges that Refugees Place on Host countries

1.4.1 Population Growth

From the time they arrive into the host country, the refugees begin competing with the native inhabitants for limited resources that include housing, access to water, land, food, and medical services. As time goes by, their presence exerts more significant demands on the available natural resources, health facilities, education, energy, social services, employment, and transportation (Taylor et al., 2016). Moreover, the refugees also cause pressure of inflation on the prices of commodities as well as depress wages (Taylor et al., 2016).

In some instances, the presence of refugees can substantially change the flow of services and goods for the society of the host country. Furthermore, hosting refugees has implications on the balance of payment for the country that is hosting them as well as undermine the initiatives of structural adjustment. One instance where there would be market disturbance is when the situation arises out of rent accommodations for residential and office purposes that would serve both the expatriates and the locally engaged employees (Shellito, 2016).

For example, when the war in Syria erupted, the Lebanese willingly welcomed the refugees from Syria with the hope that the conflict would soon end, and the refugees would return to their country of origin. However, with the never-ending war in Syria, the Lebanese people have had to cope with the burgeoning population that local resources cannot support. The doubling in population has exerted immense pressure on educational services, management of waste, and
health services. The Lebanese have long complained of lack of jobs because the Syrians are available and willing to work for less. Nearly, 100,000 Lebanese youths have lost the opportunity to secure employment because of the presence of cheap labor from the Syrians (Taylor et al., 2016).

The influx of refugees into a given country also leads to an upsurge in the construction industry. Such an increase in the construction sector benefits the people who own property and severely impacts the impoverished among the host community as well as those that rely on fixed and meagre incomes (Taylor et al., 2016). Large-scale acquisition of quantities of building materials render them unobtainable or scarce for the natives, and that can cause inflation. Similarly, the sharp increase in the demand of most of the commodities, including food, leads to an increase in the market prices of products. Albeit stimulating some growth in the local economy, such gains do not trickle down to the poorest (Taylor et al., 2016). In addition, it is known that population growth inversely impacts the economic growth and development (Arouri, 2009; European Commission, 2010; World Bank, 2011).

1.4.2 Infrastructure

The introduction of a substantial cohort of refugees to a host community creates a massive and sudden demand for limited natural and artificial resources. Some of the resources that suffer the greatest impact include land, increased pressure on existing sewer lines, the transportation sector, water infrastructure as well as the shortage of shelter materials. The increased overexploitation of these resources such as vegetation and water resources may even reduce their chances of regeneration for the future generations (UNHCR Standing Committee, 1997). Other long-term challenges on the existing infrastructure include a reduction in soil fertility especially in the refugee camps and an increase in soil erosion (UNHCR Standing Committee, 1997).
For instance, wood consumption in the rural areas of Somalia for cooking stands at 2.4 meters per head for one year (UNHCR Standing Committee, 1997). Presumably, there is a modest consumption of wood for refugees and taking half the regular consumption of wood, if the refugees are modest in how they use the wood for cooking in the camp. The quantity of wood used by the refugees on an annual basis is at 10000 meters (UNHCR Standing Committee, 1997). The amount of timber found in the woodlands of the savanna takes close to 50 meters of trees in a hectare (UNHCR Standing Committee, 1997). That implies that one camp of the refugees has the potential of depleting 600 hectares of land within the first year of their settlement. That explains the reason why, in and around the refugee camps, there has been a massive clearance of shrubs and trees. The environment forms a vital form of natural infrastructure whereby continued degradation will lead to a shortage of other resources such as water and climate change (UNHCR Standing Committee, 1997).

1.4.3 Water Use

As a result of providing services, pressure is placed on the local community resources (Dowty and Loescher, 1996). Water, for example, is a very limited resource in many countries. When governments aid an increased population of refugees, they are forced to reduce water use of local communities to meet the increased demand. This places an extreme burden on the permanent residents of the country. There are more than 680,000 documented Syrian refugees in Jordan who have contributed to an already existing shortage of water. Arrival of refugees in large numbers cost the government of Jordan $2.4 million in addition to straining the water supply of the country (Altunkaynak, Özger, & Çakmakci, 2005).

Additionally, the influx of Syrian refugees on Turkish cities has exerted more pressure on the municipal services such as supply and distribution of water. Municipalities receive their
budgets based on the population they serve. With the arrival of the Syrian refugees, they have to spread the use of their limited resources they have to serve more people than they anticipated and deliver water to every household including those not counted (Altinkaynak, Özger, & Çakmakci, 2005). This is difficult because there is not enough water. The per capita water demand in the major cities of Turkey, such as Istanbul, is currently 198.9 liters a day. Municipalities would have been able to meet the water demand if it were only supplying the water needs of the Turkish citizens. The arrival of the refugees resulted in a decrease in the amount of water supplied by the water providers to 90 liters of water per day (Altinkaynak, Özger, & Çakmakci, 2005).

1.4.4 Social Services

An additional example of how refugees may impact local communities is social services. For instance, more schools and hospitals might be needed which increases the burden on the host country government. The refugees can and often impose a strain on the service systems of the countries that host them. The strain happens in the duties of receiving and processing refugees and also integrating them into the new environment of the host country. Moreover, the quality of service delivery may decline because of how much it is strained to serve more people. For instance, in Turkey, the rising number of refugees from Syrian has resulted in the decline in the quality of healthcare and education. Since the children of the refugees also need education and development of their skills, there was a need to integrate them into the Turkish education system (Shellito, 2016). However, the move came with disastrous effects on the Turkish nationals. More than two-thirds of school-age children in Turkey do not have enough access to school because of the influx of refugees (Shellito, 2016). Thus, the situation does not help the children become valuable and productive in the society and makes them prime targets for those recruiting more people into the terrorist networks.
The issue of overcrowding in the country that hosts refugees also places a strain on the available services. When many refugees concentrate in one place, the likelihood of disease outbreak increases (Shellito, 2016). The UN reports that the problem of overcrowding has converted refugee centers in Southern Sudan from people who had the intention of welcoming refugees to squalid encampments that contain outbreaks of various diseases such as cholera hepatitis, jaundice, and malaria (Shellito, 2016). The prevalence of these diseases may have long-term economic impact and negative implications on the health of infants and mothers, even among the population of the host country.

Inadequate physical space may displace natives within the local markets starting from housing to food and finally influence the prices. For instance, Turkey has experienced an irregular increase in the prices of rental houses because of the crisis of refugees (Shellito, 2016). Opportunistic and unscrupulous landlords have turned away Turkish tenants of low income in favor of the refugees from Syria who are willing and able to pay (Shellito, 2016). The social and economic decline may continue because of the potential conflict between the refugees and the local population.

1.4.5 Cultural – religion

Moreover, the socio-culture of a local community is also impacted, adding to the long list of issues around receiving refugees (Dowty and Loescher, 1996). It is important to note that refugees often come in with new skills and ideas. They bring new ethnic, cultural, religious, and even linguistic composition that can generate new values in local communities that receive refugees (Dowty and Loescher, 1996). This change can affect the behavior of local residents permanently, which might require a holistic adjustment to the system. Therefore, refugee communities may turn into a political power that affects policies within a country and among countries of the same region.
(Dowty and Loescher, 1996). The longer the refugees stay in camps, the stronger a change agent they become. The entrance of refugees into a given country in most cases leads to disruption of the existing cultural life within the host community. When refugees get the chance to move freely out of camps and interact with the local host community, there is an increased likelihood of intermarriages between the host community and the refugees. Interestingly, the refugees and host community, with time, start attending social events together such as funerals, weddings, and child naming ceremonies among many more. Such types of interaction create harmony and the positive impact of the interaction of different cultures (Shellito, 2016).

However, on many occasions, the existence of refugees leads to the development of negative and undesirable changes in the cultural practices of the host community (Shellito, 2016). Some of the negative cultural impacts include security issues, moral degradation, changes of systems of belief, and worship.

There are numerous complaints among the host communities that refugees are a source of security challenges and the escalation of crime rates such as murder and theft (Shellito, 2016). Concurrently, other cultural and social vices such as alcoholism and prostitution also arise in the areas occupied by the refugees. High rates of abject poverty and excessive idleness among the youth in the refugee centers escalate the problem of theft and robbery (Shellito, 2016). The provision of economic aid by donor organizations may spur economic growth, and that may attract young people from their countries to cross the border as refugees and settle in the camps. While young people may benefit from the economic expansion, they may also contribute in perpetuating these vices. Moral decadence leads to reluctance in how people commit themselves to their religious beliefs. A sudden influx of people into an area from a different religion may also lead to
the exchange of views on how each community or group of people worship a deity, and that may lead to increased cases of people changing their religion (Shellito, 2016).

Positive and negative impacts of receiving refugees are numerous as shown in the literature review. Nevertheless, they are mostly qualitative studies and give no quantitative indication of the ideas discussed including panel data. Moreover, there is only small amount of research on the Middle East region experiences with the influx from refugees and their camps. This study includes the areas that are not found in the literature and provides insight and data on the impact of refugee camps.

1.5 Research Purpose and Questions

This study emphasizes the economic impact of refugees on the host communities, specifically the country of Jordan. This study serves two folds: providing an extensive literature review analysis of the refugees’ issues to provide recommendations based on that; and use a quantitative technique to expand our knowledge of the impact of refugees by examining the effects of refugees on the economy of the twelve governorates in the nation of Jordan. It is also anticipated that the study gives insight into the tipping point of refugees from a positive or neutral impact to a negative impact on the host country. The research aims at providing empirical evidence of the tipping point where the number of refugees reverses the impact on a host country.

The study uses panel data analysis, an advanced econometrics method, that uses together cross-sectional and time series analysis with the twelve governorates and annual data for the 2010 to 2016 period. The main purpose of this research is to study the economic impact of refugees with Jordan providing an in-depth case study. The influx of refugees to the hosting countries indicates the beginning of rivalry of the inadequate resources among the refugees and the local community (Miguel, Satyanath & Sergenti, 2004). The resource includes security
services, energy, shelter, health facilities, education, land, water, housing, food, and medical services. The more refugees stay in the hosting countries, the more the increased demand for the basic essentials of a common citizen such as health facilities, natural resources, transport, social amenities, employment and education. The refugees in a country result in inflation that decreases wages (Taylor et al., 2016). Refugees generates an uneven payment and declines structural adjustment initiatives (Miguel, Satyanath & Sergenti, 2004). In this research, a quantitative method is employed to address the research hypotheses and the objectives of the study. The followings are the research questions:

The research questions are used to answer the concerns which are:

1. Do the increased number of refugees have an effect on the economy of Jordan due to the placing of a burden on the already strained economic sectors?
2. Do refugee’s numbers affect the job market in the host country and reverse the impact on the economy?

According to the research questions, the null hypotheses are:

1. There is no relationship between the number of refugees and the economy.
2. There is a tipping point where the number of refugees reverse the impact one's it reaches a certain percent of the total population.
Chapter 2

Review of the Literature

Researchers note that refugees affect both the GDP levels and the size of the population per capita. Thus, there have been a number of research studies that have identified the negative implications of refugee camps to economic growth such as the introduction of low skilled workers and the burden on public services of the host country.

The Neoclassical Model of Economic Growth is the most obvious manner by which to examine refugee camps in regard to a growth model (Arouri, 2009; European Commission, 2010; World Bank, 2011). Under this model, it is assumed that the GDP of a given country is a function of labor and capital for the host country. As a result, the theory implies that a higher growth rate of the labor force, which may be a result of the high refugee levels, results in a higher GDP growth for that economy (Owen and Pamuk, 1998). For example, the joint EC-FAO mission conducted a study in Guinea to study the impact of refugees on the environment and the economy. They proved that refugees can have a positive effect when they participate in agricultural activities, become a cheap workforce, and when resident merchants provide basic goods. This provides an opportunity for local residents (Refugee Survey Quarterly, 2005).

The theory was brought forth in the 1920s by theorist Fredrick Tailor and Henry Gannt who spent their time conducting research on how a particular job is done, the steps involved in getting a particular job done, and the time taken to complete a particular task using different methods. The theorist found the most effective way of completing a particular task- is the classical management. The assumption of the theorist was that managers and workers could meet halfway regarding their attitudes on standardization. Neoclassical theory addresses the following key concepts: economic growth, equalization of factor prices, individuals maximizing utilities, the
level of wages, economic disparities, and labor supply or demand (Rüegger, & Bohnet, 2018). The effect of the refugees on these concepts is felt by the influx of their population. Some hosting countries have experienced shortages regarding the supply of labor and demand due to the competition from the refugees with the local host population. Some studies have reported that refugees in hosting countries are a source of cheap labor as they work for low wage payments. The hosting countries benefit from this economically because of the ease of acquiring labor due to the presence of the refugees (Rüegger, & Bohnet, 2018).

2.1 Different Refugees Theories

2.1.1 Refugee Aid and Development Theories

For the past two decades, the discussion of refugees has shifted slightly from just their welfare to both their welfare and impact of their presence on the hosting communities. The discussions have taken a turn to a matter that is now clearly defined, one referring to “refugees” and “underdevelopment” as the two most significant problems (Gorman 1994). Consequently, the perception that exists is the active link between the two issues that one cannot solve either of the two without putting into account the other (Gorman 1994). There have been various debates on the development of assistance and the probable solutions of the refugee issues within UNHCR’s mandate. As a result, the Refugee Aid and Development (RAD) came into being. The theory of Refugee Aid and Development focuses primarily on infrastructure development to facilitate hosting of the refugees and taking into account the needs of both refugees and local residents (Molsa et al., 2018).
2.1.2 Relevant empirical research.

RAD theories succeeded in drawing the attention of the United Nations to the situation where the host community felt that the refugees are a burden rather than an opportunity to the host community. Mehta, with regards to this, asked why is it that the refugees are often referred to as welfare people in need of relief and care rather than people who are ready to go to any extent to survive, and prepared to put their energies to work in various industries to benefit the community hosting them (Molsa et al., 2018).

There has been a considerable debate as to whether refugee aid and development theory is the best approach for alleviating not only the plight of refugees, but also to reduce the pain, hunger, and suffering that bedevils most of the developing countries. Micro and macro data are readily available for making a case regarding some of the foreign aid programs (Hassoun, 2010). Macro-level data conveys the information concerning the manner in which aid impacts all countries. Micro-level data shows how the small projects are impacting the lives of the target population such as the refugees or the vulnerable members of the society. Thus, macro-level data is critical in concluding as to whether aid is good or bad. Micro-data is useful in determining how good or bad is a given aid program (Hassoun, 2010).

There are some related studies by Peter Boone that indicate that non-military aid towards resettling refugees does not assist in reducing infant mortality, increase elementary schooling, and life expectancy (Hassoun, 2010). Arjan Verschoor contradicts this view and states that aid benefits the pro-poor spending refugee camps and in countries that have low income and also lowers down infant mortality and income poverty (Hassoun, 2010). Additionally, Arjan finds that funding has a positive effect on poverty levels within the refugee camps if there is no corruption (Hassoun, 2010).
2.1.3 **Group Identity and Simple Scarcity Theory.**

Identification of individuals by their cultures is very rampant. Hosting societies may at times view refugees as individuals who are socially unacceptable. The reasons may range from economic fears, on matters to do with resource usage to cultural incompatibilities (Molsa et al., 2018). Familiar cultures help in the development of solidarity bonds between the hosts and the refugees. However, competition for opportunities, resources, and services result in conflicts between the two groups. The more significant problem lies in sharing of the caseload of the refugees between donor nations and the developing nations which do not have the social, economic, and political capabilities of dealing with the urgent refugee crisis of resettling them in large numbers (Molsa et al., 2018).

In the 1991 work by Homer-Dixon, “On the Threshold: Environmental Changes as Causes of Severe Conflict,” Homer-Dixon discusses the movement of induced population (Sunderland et al., 2015). Homer-Dixon’s reasoning on possible conflict as a result of significant people is brought out in the Group Identity Theory. In this theory, social psychology is used to explain ethnic, religious, and national conflicts. According to this theory, the conflicts to do with group identity may arise from populations of a large-scale movement as a result of environmental changes, social strife, and disputes (Sunderland et al., 2015). The theory stresses that as individuals from different ethnic groups are propelled together in the event of stress and deprivation circumstances, inter-group hostility comes up, whereby different groups would emphasize individuals of their identity while discriminating against others. The theory focuses on the way different groups insist on reinforcing their own identities and the resulting cleavages (Sunderland et al., 2015). Homer-Dixon further uncovers that intergroup conflict and social psychology forces such social groups to become tighter when faced with deprivation conditions and self-esteem threats.
2.1.4 The World System Theory

The World System Theory posits that underdeveloped countries are preyed upon by the developed ones who benefit by exploiting the citizens and the available resources of those countries (Mölsä et al., 2018). The study model recognizes the benefits for the low-status nations (Mölsä et al., 2018). The theory was put forward by Immanuel Wallerstein, a sociologist. argues that economic development is taking place in a particular state depending on the integration of that specific state into the world capital system (Mölsä et al., 2018)

Developed countries have different significant levels of urbanization and industrialization (Mölsä et al., 2018). They have advanced technology, wages, capital and there are lower levels of capital exploitation. The core countries control economic agreements and world trade and they own the majority of the world’s technology and capital. They attract intellectuals and artists. They can access raw materials for their industries at lower costs. The countries can set prices for agricultural goods exported by the peripheral countries without considering the prices on the markets. In most cases, this has forced the small-scale farmers to abandon farming because of the high cost of production and the minimal benefits (Mölsä et al., 2018).

Usually, peripheral countries have low literacy levels, and their capital needs depend mainly on the core countries (Rüegger & Bohnet,2018). Furthermore, they are less urbanized, and their industrialization growth is slow. Rich countries gain from the cheap labor services offered by the poor. Core countries exploit both the semi-peripheral and the peripheral countries while the semi-peripheral nations exploit the peripheral countries (Rüegger & Bohnet,2018).

The theory views migration as a natural outcome of the globalization of the economy, because businesses and companies can operate across all borders. In this theory, scholars suggest that the economic disturbances in the peripheral nations and their inclusion in the growing world
capitalist economy have facilitated movement of large international populations into the developed nations. The model suggests that migration is most likely to take place between peripheral countries and their colony states because of the existing links such as cultural identities, linguistic commonalities, administrative links, and communication infrastructure as well as transportation links (Rüegger, & Bohnet, 2018). Structural factors contribute to the inconsistent development of the states that send and receive migrants. The economic dependence between them is strongly emphasized by the World System Theory. However, the role of families and individuals in the process of migration is lacking (Rüegger, & Bohnet, 2018).

2.1.5 Dependency theory

The Dependency Theory refers to the notion that usually resources move from the periphery and from underdeveloped countries to the developed countries. The developed countries benefit at the expense of the underdeveloped countries. The theory came about as a reaction to the modernization theory which suggests that all societies go through the same stages regarding progress. The impact of refugees on the host countries’ economy is controversial in the use of this theory.

UNHCR has placed over 15 million refugees under accommodation in the developing states. The World Food Program (WFP) gives the refugees food as humanitarian assistance. Monte Carlo Simulation methods report that money given to refugees causes substantial revenue spillovers to trade of the host states (Rüegger, & Bohnet, 2018). Some studies suggest that refugees have no substantial impacts while others suggest impacts that are heterogeneous. The evidence has placed a large gap between the direct effects of the refugees on matters regarding the key concepts brought out by the dependence theory. The concepts include: the economic development causes
that are endogenous among nations; causes of underdevelopment in the peripheral states; and, the issues to do with capitalist world economy (Rüegger, & Bohnet, 2018).

2.1.6 Modernization Theory

Rostow, an American economist, proposed that every state must pass through five stages towards their economic development (Schock, 2016). They include traditional societies, precondition for takeoff, take off, drive to maturity, and the time of massive consumption. Traditional societies include little industry, or agriculture and there is no modern technology (Schock, 2016). A precondition for takeoff represents a stage when countries prepare for the transition. Take off describes a time when states overcome resistance to growth. At this stage, there is an increase in agricultural productivity, new industries come up, and there is a significant increase in savings and investments. The drive to maturity stage is marked with a period of sustained progress, with the application of the modern technologies and expansion of industries. The age of high mass consumption is a stage where the per capita income and consumption increases and there are consumer goods that are durable (Schock, 2016).

Modernization theory discusses the industrialization pathway that is universal for the underdeveloped nations. Agricultural technology transformation and finances of the migrants, cash transfers on a significant level, and advances in technology are the fundamental concepts of this theory. The migration of technicians and professionals to the advanced countries from developing countries has received considerable attention today because of the numbers involved rather than the cultural and economic impacts. The migration process marks a significant loss for the sending states that spend their little resources on educating youths who leave when they receive their credentials (Schock, 2016).
2.1.7 *Human Capital Theory*

Human Capital Theory is the agglomeration of knowledge, skills, personal and social attributes symbolized in the ability to create innate and measurable economic value (Rüegger, & Bohnet, 2018). The theory portrays individuals as economic units anchoring the economy. The role of human capital finds various significance in innovation, productivity analysis, public policy, economic development, and education (Rüegger, & Bohnet, 2018).

The fundamental underpinning of Human Capital Theory is that investing in a person is something that is mathematically measurable and is dependent on the economic value that they add to society. Human capital has subcategories of cultural capital, economic capital, the social and symbolic capital. The economic capital is measurable by the capacity to perform labor that yields economic value. Acquiring education, marketable talents, and job training are some of the ways humans enhance their potential of earning higher wages and generate knowledge. Cultural and social capital is the influence and relationships that persons contribute to the society. Despite the difficulties in measuring cultural, social, and symbolic capital, understanding their existence is very important. There is value in every human capital, and the combination of all types produce total human capital (Rüegger, & Bohnet, 2018). Refugees impact the human capital of the host community, however scarce, by reducing the prospects of school attainment. For instance, the exposure of the children of the hosting community to the vast arrival of the refugees in the Kagera region of Tanzania reduced the rate of resident children going to school by 7.1% and literacy levels by 7%. Furthermore, the refugees impacted the human capital of Kagera by undermining the overall child health of the region (Baez, 2011).
2.1.8 Cumulative Causation Theory

The theory’s fundamental concepts include the asymmetrical growth between the nations sending and those receiving the refugees. The backwash effects caused by migration includes; reliance on remittance and the loss of human capital (Sunderland et al., 2015). The theory addresses the society’s context of migration; migration in the view of economic diversification and sharing of risks and making investments in production platforms that are profitable.

2.1.9 Transnational Migration Theory

The theory describes globalization, ties and relationships across borders; transnational identities and communities; and, circular migration and remittances. Furthermore, the theory explains the resources resulting from networking and their translation into financial or human capital (Balkan & Tumen, 2016). According to this theory, the interaction of the refugees and the host community result in networks that have far reaching effects. Transnationalism explores the networks that are crucial for people across borders. Moreover, it focusses less on the locality and the new destination of the refugees and more on the connections that the refugees establish with the host community once they start interacting with one another (Balkan & Tumen, 2016).

2.1.10 Neoliberalism Theories

Fundamental concepts addressed in Neoliberalism Theories include economic growth that is market led; structural adjustment; non-state approach; decentralization; liberalization; and, privatization and financial remittances. Some theories focus on explaining the reasons for migration of the refugees while others describe the effects of the refugees in the hosting countries. Research on various impacts of immigration is also fragmented between the contexts of developing and developed countries and between the macro and micro approaches. Furthermore, different theories have different analysis levels (Balkan & Tumen, 2016). The Neoliberalism policy model
underscores the importance of free market competition. However, there is a sizable debate as to features that define neoliberal practice and thought because of the connections it has with laissez-faire economics.

Neoliberalism has the characteristics of a belief in the economic growth being sustainable as a way of attaining human progress. Neoliberalism is grounded in the policies of removing trade tariffs and barriers. The influence of neoliberalism has freed the cross-border movement of capital and curtailed the influence of trade unions. With the reduction of trade barriers and movement of human capital from one country to another, it makes it easier for refugees to move goods from their country of origin and trade with the host community without many restrictions (Balkan & Tumen, 2016).

Several theories were used in the literature to explain the relationship between refugee camps and the economy. While the number of refugees may have risen in recent years, the challenge is not a unique case as asylum seeking is an age-old problem. Nevertheless, a major issue in the contemporary development is the failure of state-centric policies, where responses have traditionally been designed to promote the interest of the host country (Rose, 2016). International relations theory suggests that the primary focus of any state should be power maximization through protecting boundaries and self-sufficiency (Rose, 2016). However, the state-centric values have failed to address the ever-growing problem of the refugee crisis, as evidenced by high numbers of refugees in Europe, where an estimated 1 million refugees have arrived from Syria (Hampshire, 2016). The burden is deepened by economic immigrants from troubled economies around the world. The movement is supported by the theory of economic opportunism, where people and business are likely to shift to areas that offer better means of self-improvement (Hampshire, 2016).
2.2 State-Centric Values

State-Centric Values are sets of rules of a particular nation that remain pivotal players regarding the establishment and operating of state partnerships and strategies. Some states like the EU countries have always lived in a dual world. Universal values are professed strongly and their ability to give room to the mundane interests of their member states. With growing migration, some countries have been at a crossroads as whether to comply with the dominant state centric push and restrict the inflow of the refugees or whether to take on their humanitarian obligation (Koma, 2018).

The idea that states can serve their interests while discarding the values that underpin their integration is wrong. For example, countries in the EU are known for fundamental freedoms such as free movement of individuals and also the fragile policy of foreign consensus (Lavenex, 2017). The illusion that the problems with the refugees can be solved by separating the EU from its neighbors is regressive. The EU should never be a closed hub as this would impact it negatively (Lavenex, 2017). Taking such a path would destroy the positive image of the state and also adversely affect its economy. Furthermore, the building of fences by some states hosting refugees does not solve the problem. Instead, this temporarily moves the problem to other states and consequently causes more strain on the public and private services such as physical overcrowding which leads to an increase in the societal conflicts in those states (Lavenex, 2017).

The most important aspect of sharing a burden is equity regarding the distribution of refugees among the member states. If the member states are willing to accept the recommended number of refugees voluntarily, then obligatory quotas would not exist. Unfortunately, some member states refuse the quotas and they do not offer alternative solutions (Koma, 2018). Nonetheless, most states push for stabilization of the nations at war such as Syria as a measure of
solving the problem of refugees. This is a strategy that is long-term. Still, even though the move is successful, the short-term problem of the refugees at the borders and inside the hosting nations does not go away. The absorption capacity of some hosting states such as Germany and Sweden are at their limits, and the only possible solution is the voluntary transfer of refugees to other EU countries (Koma, 2018). The countries would be forced not to comply with the state-centric push and take action regarding their humanitarian obligation (Koma, 2018).

The rise of economic nationalism calls for a more unified approach when dealing with the refugees’ issues. States should be tough on protecting refugees and themselves and not just on what would be of benefit to the states. There has been a threat posed on the EU and the “Schengen zone,” by the unwillingness of some of the EU’s members in sharing the burdens and benefits of being members. Solidarity should permeate all corners of the hosting states and their refugee policies (Lavenex, 2017). What is needed by the hosting countries in their approach to refugee issues is a re-orientation away from viewing the refugees as a security threat or a plaque. Indeed, the hosting states should not turn a blind eye to the security issues that arise as a result of migration, but they should view the crisis with refugees as a humanitarian disaster and seriously consider the security issues of the refugees. The hosting states should also remember that refugees did not flee to them with a purpose of destroying their values, but because they are running from torture, rape, persecution, or the hopeless situation in their camps (Koma, 2018).

Moving forward, hosting nations should work with the public since it is their trust in the policies about refugees that needs renewal. Improvement in the public debates is necessary: First, it is essential to differentiate between economic migrants and refugees since most people confuse the two. Second, the focus should be shifted from political discourse to the low level of security threats by the refugees to the economy of host states. Additionally, hosting nations should open
legal routes for the refugees who need them. The host nations should stop insisting on the danger resulting from the ‘pull factors’. Furthermore, there should be sufficient integration into the labor market and filling of the demographic gaps that are needed by host countries. Finally, the refugees being productive producers and consumers should facilitate the expansion of the bilateral trade with their countries of origin (Lavenex, 2017).

Although the number of refugees may have gone up in recent years, there is no unique thing about situations where people run away from their countries of origin to go and seek refugee elsewhere. Unfortunately, a major issue has arisen in recent years with the continuing flow of refugees from Syria where the state-centric policies seem to be failing. The intentions of the state-centric policies seem only to promote the interests of the country that are hosting the refugees (Ip, 2010).

The centrality develops from realism that is considered an international relations theory and recommends that the primary focus of any state or country should be maximizing their hold or power and influence through self-sufficiency and protection of boundaries (Ip, 2010). Nonetheless, the reliance on state-centered values has failed to solve the ever-growing problem of the refugee crisis. There is a manifestation of the failure of the state-centric values in Europe where about 1 million refugees from Syria have arrived in Europe seeking refuge (Ip, 2010).

The economic refugees from politically unstable and troubled countries have deepened the burden of supporting and welcoming many refugees by other nationalities. The theory of finding economic opportunities supports the movement of the refugees to other places. The reality of life is that people and business tend to relocate to places that offer higher chances and better means of improving oneself (Ip, 2010).
State-centric values encompass the conventional models of realism and neorealism (Lin, 2011). The concept takes into consideration the views of the theorists regarding international relations and the normative values that form the basis of their opinions. Furthermore, they also take into consideration how the values and the explanations find relevance with each other in each theory.

The state plays a major role in the realm of international relations. The state-centric values blend with realism because of how it considers international relationships to be a competition among states. Therefore, realism discourages close international relations that can encourage the movement of people and businesses across borders (Lin, 2011). The proponents of realism do not want the cross-border movement of labor because of fears that it could render the natives jobless or even escalate the levels of unemployment and competition for resources. Therefore, realism does not support the idea of seeking refuge in another country because of political instability in one’s county of origin. The concept is awareness of the economic pressure that the influx of people will have on the economy of the country that accepts to host them (Lin, 2011).

Neorealism acknowledges international relations as a means of expanding global economic corporation (Lin, 2011). The worldwide economic issues come into play because of the downfall of the supremacy of the U.S. The state occupies a central role as a rational actor as well as an indispensable actor when it comes to forging international relations. Neorealists have no problem with the idea of welcoming the refugees into the host country despite the economic and social challenges they may carry along with them. Just like natural scientists pursue how to control nature, neorealists and realists have placed all their focus on the science of international relations and how it can give them practical tools to create stability and order (Lin, 2011). Despite the pretension that realism and neorealism have at times with regards to value-neutrality, scientific-
outlook, objectivity and rationality, the main concepts underpinning international relations place a premium on values (Lin, 2011). The separation of methods and values creates a scenario of scientific rationality and analytical supremacy that creates the wrong perception of dominance over international relations. Neorealism and realism also reduce the chances of challenges by emphasizing their scientific legitimacy. The supremacy of state-centric models of neorealism and realism led to their peculiar structure where they stress logic and justification, leaving the field in the state of underdevelopment for the critical encounters to these approaches (Lin, 2011).

The idea of state-centric values and how states strive to protect their borders is all about reducing the entry of illegal refugees within the borders of those states. The refugees do enter as refugees, and as usual, the host community feels the pinch if the international organizations or their government does not provide enough resources for the needs of the new inhabitants where there are refugee camps (Lin, 2011).

2.3 Pro / Cons of integrating Refugees

2.3.1 Positive impacts

Some researchers have found that refugee camps can and do have a positive impact on local communities. For example, refugees can bring with them new and innovative ideas for development of different sectors. In addition, positive impacts of refugee camps may include receiving significant amounts of development assistance and money from the international community for the host country (Skinner, 2003; Sassoon, 2009). Since refugee camps’ economies are usually diversified, they often function like cities rather than camps (Winckler, 1997). In fact, refugee camps are not isolated, but are linked to local communities as well as the global market. This results in mutual benefits for both parties (Werker, 2007). For example, Ghana received several waves of refugees. This created lively urban areas that provided a wide
range of services and amenities, as well as trade with rural settlements that had limited access to services and infrastructure (Codjoe S. N. A. et al., 2013).

In addition, refugees have useful skills, commercial connectivity, and assets. This provides them with opportunities to be productive and contribute positively to the community (Werker, 2007). Native residents can benefit from living within refugee camps, by providing service, or receiving aid just like refugee camps’ populations (Werker, 2007). Therefore, it is reasonable to say that refugee camps can have a positive impact and have been shown to have a direct and indirect impact on countries' economy growth and development.

The rising refugee crisis is filling up columns and flooding headlines because of the humanitarian and other forms of economic crisis it causes to the host country. However, the arrival of refugees into the host country in large numbers could also come with positive results. Nowadays, refugees bring with them new skills from abroad that are critical in bridging the gap in skills that could be lacking from the local host community. As more educated and skilled refugees seek refuge, they will have a profound contribution to the delivery of services in the sectors such as healthcare and security that often do not have enough native residents willing or able in certain areas to work (UNHCR Standing Committee, 1997).

2.3.2 Sustenance of economic growth.

Policies that seek to integrate the refugees into the local population through programs such as mandatory language courses may have a huge impact that can easily spur the economic growth of the country by a substantial margin (UNHCR Standing Committee, 1997). Despite the security implications of admitting many refugees into the country, there are also economic gains that they bring into the country. For instance, in the United States the National Bureau of Economic Research released a working paper that sought to demonstrate how the refugees contribute
immensely to the growth of the economy through the mandatory taxes they pay whenever they get a job placement. The money they remit in taxes refutes the notion that refugees are over-reliant on social benefits or a drag to the economy (UNHCR Standing Committee, 1997).

There has been a significant discussion regarding the initial fiscal costs of welcoming refugees to the United States. The scrutiny of the data compiled by the Census Bureau’s American Community Survey (CBACS) of the U.S. shows that the average cost of resettling a refugee for a period of between 1990 to 2014 was about $15,000, with the inclusion of housing, background checks, job training, and the English lessons (UNHCR Standing Committee, 1997). Nonetheless, the study shows that within eight months of the time they arrive, refugees who have attained the age of an adult start paying more taxes than the amount they received in benefits. Furthermore, as time goes by and the adult refugees live in the U.S. for 20 years, the analysis of data from CBACS shows that they would have paid $21,000 more in taxes than the monetary assistance they received from the government since the time they arrived into the country (UNHCR Standing Committee, 1997).

2.3.3 Negative Impacts

Integrating unlimited numbers of refugees into the population of the host community may have the undesirable outcomes as well. By raising the rate of unemployment especially among the youth. The influx of refugees into a particular country comes with the burden of straining the labor and employment sector. Allowing the refugees to learn the local language and familiarize themselves with the laws of the country are some of the efforts to integrate refugees into the host community (Landau, 2008).

Landau (2008) explains that after successful completion of the orientation and acquiring of relevant work permits, the refugees get the legitimacy to start applying for job opportunities.
Employers consider their credentials alongside those of the local host community. In some instances, the employers may prefer the foreigners to the local people for employment whenever they prove to have more skills and expertise than bona fide citizens. Newcomers compete with residents of the host community for jobs which may create an uneven playing field for the natives (Landau, 2008).

In some cases, refugees may not do the required negotiations with regards to salary and sign contracts at meager wages (Landau, 2008). The employers may take advantage of this and hire more refugees under the disguise of affirmative action but in the real sense taking advantage of this available cheap labor. That leaves the qualified professionals from the host community languishing in poverty and unemployment because of the exploitation of the foreigners by the owners of the local companies (Landau, 2008).

2.3.4  *Difficulties and friction with the local people.*

The local population may have problems accepting the newcomers because of the mistrust and fears, often from the belief, that the refugees may bring the bad elements from their countries of origin and start practicing them in the host country (Landau, 2008). For instance, if the refugees are fleeing from an area that is war-ravaged because of the heightened activities of terrorism, the local population may have a reservation in integrating them into their society. Furthermore, malicious individuals and terrorists may also disguise themselves among the people who are fleeing to a safer country because of the volatile situation in their countries of origin. When they arrive into the host country, the people with terrorist links may start attempting acts of terrorism on the residents of the host country through such things as suicide bombings and setting off explosives (Landau, 2008).
The local community may also have reservations and at times exaggerated perceptions over how costly it would be to receive refugees and the massive social benefits the host government may have to contribute in support of the United Nations initiatives. The citizens of the host country are always worried that refugees take more of their jobs and put more pressure on the available resources and social services. Therefore, such a situation of uncertainty is not good for the residents as it might subject them to undue emotional turmoil (Landau, 2008).

The presence of refugees from Syria in Europe has led to the speculation that terrorists are infiltrating the flow of refugees into the European Union. The concerns further escalated when the passports of Syrian nationals were found near the bodies of the two people who perpetrated the Paris terrorist attack. That implies that when there is no proper identification and thorough checks of the refugees at the border, the radical movement groups can take advantage and enter into the host country and cause terror and suffering (Schmid, 2016).

Another notable example is the complaints raised by the Kenyan government over the suspicions that the refugees are hiding and planning their activities at one of the biggest Somali refugee camps known as Dadaab. The security forces found evidence when they produced a large cache of arms and many phones from the camp believed to be used in the planning of terrorist’s attacks (Hellsten, 2016). The issue of the genuine refugees colluding with the extremist groups also compounds the problem because they fail to report or even produce the persons among them who are planning acts of terrorism. These issues force Kenya to place camps in the south because, integrating the refugees into the northern part of Kenya would even make it easy for the terror groups to launch their attacks on the target population and/or host community (Hellsten, 2016).

While refugee camps have several effects on the growth and development of a country, these effects may be either constructive or harmful. Therefore, it has become increasingly
important to study and explain the economic impact of refugee camps on the economy of a given country and provide solutions to mitigate a negative impact in the host country.

The arrival of refugees to the hosting countries signals the beginning of competition of the limited resources between the refugees and the host community (Miguel, Satyanath & Sergenti, 2004). The resources include land, water, housing, food and medical services. The longer refugees stay in the hosting countries, the greater the increased demand of the basic essentials of a common citizen such as health facilities, natural resources, transport, social amenities, employment and education. The presence of refugees in a country causes inflation resulting in a decrease in the value of wages. Refugees have the potential of inhibiting the smooth flow of products within a given society thus creating an imbalance of payments and undermining structural adjustment initiatives (Miguel, Satyanath & Sergenti, 2004).

The presence of refugees within a given country brings about unnecessary demands such as accommodation for expatriates, local engaged staff, offices that act as their point of reference for their wellbeing etc. The real estate investors take advantage of the situation by increasing rent thus exploiting the poor and creating a divide between the haves and the have nots (Miguel, Satyanath & Sergenti, 2004).

The increased food demand and other essential commodities leads to market price hiking thus stimulating the local economic activity which is a disadvantage to the poor. Security threats, especially when there is an increased number of refugees in the rural setting, is of a major concern to the local administration. The hosting governments tend to incur extra costs in a bid to prevent human suffering, alleviate poverty, and uphold human rights (Miguel, Satyanath & Sergenti, 2004).
The governments hosting refugees have had misconceptions that in the long run the international community will indemnify them for the costs incurred in supporting the refugees through provision of resources such as water, sanitation and security services. Refugees have impacted the hosting countries positively in that they have opened doors of opportunities for development (Miguel, Satyanath & Sergenti, 2004). The positive contribution of refugees to the economy can be seen in terms of purchase of local food and nonfood items, shelter materials, aid workers disbursement, refugee assets, employment opportunities and income gained from the local community (Miguel, Satyanath & Sergenti, 2004). Animosity may exist between the immediate local community and the refugees. Language barriers and culture shocks may bring about misunderstanding between the refugee community and the local community. Insecurity among the local community has always been associated with the presence of refugees within the given locality (Erdoğan, 2014).

Refugee mass movement is a major threat to the ecology due to its inability to provide room for advance and effective planning of the new habitat. Habitation of refugees at a given ecosystem may bring about controlled and uncontrolled modifications and may have adverse effects on the environment unless there is sound planning (UNHCR Standing Committee, 1997).

Competition for limited natural resources; shelter, food, water, land, energy amongst the refugees and the local community has formed a threat to their sustainable regeneration. Loss of soil fertility, erosion and landslide, cases brought about by tree cutting in times of prolonged drought are some of the long-term problems (UNHCR Standing Committee, 1997).

Poor sewage and drainage systems has caused wide spread of diseases within the refugee camps. Increased usage of the transport systems such as roads to deliver the various aids have been negatively impacted the systems leading to their deterioration. Basic public amenities such as
health facilities, education and water have also been heavily impacted (UNHCR Standing Committee, 1997).

2.4 European Union and Humanitarian Crisis

The European Union has adopted a number of responses to deal with the challenge, including leading diplomatic and militaristic interventions to resolve the humanitarian crisis in Syria. Similarly, the union has been offering humanitarian assistance in and outside Europe. As Geddes and Scholten (2016) note, countries are also coordinating relocation and resettling of refugees, as well as deporting illegal immigrants. On the other hand, interventions to reduce protracted displacement have failed, resulting in border closure and deployment of coast guards to tackle the problem of illegal smuggling of humans across the Mediterranean Sea (Freedman, 2016; Hammond, 2015). While the responses and controls are a strategic change from one of the fundamental tenets of the European democracy where the liberal countries have been welcoming refugees, it signifies failure of current strategies, and thus the need for innovative approaches.

Besides the government responses, Europe is also lurching to the right as witnessed by the growing populism against refugees, including the emergence of terrorizing gangs in the streets of major cities (Park, 2015).

Europe’s inability to deal with the refugee crisis highlights the inefficiencies and unsustainability of current responses, where refugee camps are not designed for reintegration. Betts, Bloom, Kaplan, and Omata (2014) highlight the challenge, noting that there is a widespread notion that displaced persons do not have aspirations, talents, and skills and are considered a dependent group. Another perception in the global south is that displaced persons should live in isolated settlements, which are based on existing fault lines such as religion,
ethnicity, or nationality (Arar, 2016). However, Verwimp, and Maystadt (2015) confirm that dense economic interactions characterize most camps.

Despite the perception facing refugees, contexts such as the Kakuma refugee camp in Kenya, highlight that displaced persons have the potential to create a vibrant economic system (Findley, 2016). Oka (2014) confirms the trend by suggesting that refugees are a group with links to existing economic structures. Alfaro, Antràs, Chor, and Conconi (2015) also point out that displaced persons are critical parts of global value chains, an issue that is seconded by Carling (2014) who noted that refugees are one of the primary groups targeted by international money transfer companies.

Another stereotypical element that has affected the integration efforts is the cost-benefit debate, with the focus being the role of asylum seekers in the economy. A well-established body of evidence has confirmed that refugees are not burdensome, with Tumen (2016) pointing out refugees helping to offset the shortage of unskilled labor force in Europe. Similarly, they have increased purchasing power, thus supporting both service and manufacturing sectors. Refugees also form a significant segment of the economy, where they invest money sent as remittances, thus becoming job creators.

Although there are benefits of integrating refugees, the group remains economically isolated, making it vulnerable to overdependence and catastrophic donor fatigue (Tumen 2016). An underlying concern is the diverging political agenda which have prevented the emergency assistance from maturing to durable solutions. Many state systems have not acknowledged the need for reintegrating asylum seekers, Van Hear (2014) points out that refugees spend most of their time in the camps or poor neighborhoods in urban centers. According to Betts, Bloom, Kaplan, and Omata (2014), interventions to promote self-reliance have not realized their goals,
with the status being blamed on resistance by the governments. However, the narrative is rejected by Fayemi and Dasylva (2016) who argue that the central issue is lack of progress due to the duplication of roles and defragmented approaches in humanitarian assistance, where development actors are unwilling to work together. Newland (2016) also suggests that resource allocation has failed to provide for the development projects ensuring refugees remain independent.

Another issue in the constricted space of socioeconomic rights and opportunities is a poor understanding of the refugee population segment. The challenge is evidenced by Betts, Bloom, Kaplan, and Omata (2014) who argue that the refugee economy is a poorly understood subject. An underlying concern is the limited number of studies, where only a few economists are working among displaced people (Betts, Bloom, Kaplan, and Omata, 2014). Similarly, are the minuscule number of economic studies that focus on the impacts of host countries and the livelihood of refugees. The narrow centrality has culminated in a limited stock of knowledge on the economic engagement of displaced persons (Betts, Bloom, Kaplan, and Omata, 2014). Most livelihood projects are poorly conceived. The limited impact is a self-defeating concept on why donors and other actors continue to stress solutions that promote dependency. In his exploration of the problem, Easton-Calabria (2015) notes the main shortcoming is the current top-down perspective, which has narrowly defined policy perspectives as the case of reducing humanitarian efforts to the livelihood of refugees.

In spite of the failures of donors, refugees have embraced self-initiated strategies, where they have become part of the economic system. The contribution of refugees is irreplaceable in both formal and informal settings. Exploring the issue as well as policy adoption has the potential to benefit not only the displaced persons, but also donors and host countries. Refugees
will be a critical part of rebuilding efforts, as in the case of Ecuadorian economic immigrants (Jaramillo, 2015). However, the current organization lacks good data and conceptual clarity. Cheung and Phillimore (2013) challenge the organization and notes that there is a need for a broader view of the role of refugees in the capital and financial markets, including production and consumption.

2.5 Policies, strategies, and actions

2.5.1 Open Door Policy

As some government principals in core countries hosting migrants maintained a policy of open doors, the audit officers in the nations observed the adverse effect of the influx on regional administrative institutions, government offices, and public services (Schock, 2016). The overall reception of the refugees has had numerous faults. The officials working at the reception offices have had to work beyond their capacities, and at some point, the municipalities had to provide accommodations to the refugees (Schock, 2016).

The decentralized structure that came about back in the 1980s, is a result of the agreement between municipal and central government to consider a ‘Disjointed Mult-level Governance system when distributing the refugees. Under the same structure, municipalities had the power to oppose the refugee settlement in their areas. Also, there exists vertical structure including administrative organizations and funding schemes. The Policy domain comprises of both specific and generic policies that are usually not connected (Schock, 2016).

2.5.2 Civic Integration

Sweden serves as a good example of matching policies and strategies to action. For example, the Swedish have a system whose political integration is mainly around the formation of
a program that would be accessible to refugees living in public accommodations between the ages of 20 to 64. The process begins after the refugees settle in their shelters, but some other initiatives are also introduced to expand internships, classes of civic orientation, and languages at the orientation center (Schock, 2016). The programs are not mandatory to the refugees, but they are linked to incentives. In 2010, the traditional character of decentralization was change by the first reform. New Public Approach took away the municipalities’ responsibility; and, coordination shifted to the national level. The objective behind it all was to enhance streamlining labor market-orientation of the new activities. The reform also encouraged individual refugees’ responsibilities to access services (Schock, 2016).

### 2.5.3 Housing

The Swedish “own accommodation” policy of 1994, gave the refugees the freedom to seek their housing as long as they incur the expenses themselves. The policy was a measure to curb the shortages of houses for the refugees after the influx of refugees from Yugoslavia. The policy was later restricted in 2005, when there were signs of overcrowding. The policy also resulted in uneven distribution of the population since the refugees could mostly afford to house in cheaper areas (Hoewe, 2018).

Mostly, the refugees move to regions with various labor markets posing a significant challenge to the municipalities regarding management of the migrants who come and go (Hoewe, 2018). Myberg suggests that this policy has led to an over distribution of the refugees across the different municipalities. Other challenges connected to the “own accommodation” policy include first internal migration of the refugees within the municipalities becoming more frequent, risking fragmentation of the introductory program (Hoewe, 2018). Second, the coming and going of the refugees posed a significant challenge to the hosting community as this hindered accountability by
the management teams. Third, municipalities with a growing number of refugees often experience shortages regarding housing leading to poor housing conditions to accommodate the growing population (Hoewe, 2018).

2.5.4 Healthcare

With regards to health, Person (2017) reported that a survey conducted by the Red Cross, estimated about 30% of the migrants experience induced trauma (Hoewe, 2018). According to Ruist, refugees visit health centers on average 13 times more than the hosting populations. Refugees can access medical care, maternity, and dental care until they receive a residence permit. The children can access free medical services (Hoewe, 2018). Wangdal reported that there were communication challenges between the health care providers and the refugees (Hoewe, 2018). Wangdal further suggested that teach-back concepts could help in finding out whether patients understood the doctor’s explanation (Hoewe, 2018). According to Lundblad, the trauma sessions included by professionals when dealing with the refugee children, tend to “homogenize them as vulnerable and weak”. Counseling and mental health care can be part of the introductory program (Hoewe, 2018). Person (2017) stated that collaboration of different health care partners was insufficient and unnecessary. Hoewe recommended a set of guidelines to be followed when dealing with new refugee arrivals (Hoewe, 2018).

2.5.5 Education

The education policy is comprised of measures that are generic with some particular programs targeting a group of vulnerable individuals (Morina et al., 2016). According to National legislation, all children between the ages of 7 to 16 are entitled to free education. Refugees in this age group can also have full access to education through voluntary terms (Morina et al., 2016). The policies’ aim, since 2015, has been to accelerate children’s integration. Children who run a
risk of failing any subject have a right to be taught in their first language. With regards to this, there is a regulation that when five or more pupils are facing this problem, special teachers are employed to give lessons to the pupils (Morina et al., 2016). The responsibility of enacting such policies is with the schools and the municipalities, and there is no clarity as to whether there is real implementation of such policies (Morina et al., 2016). According to Avery, since the schools are responsible for mother tongue lessons, the tutoring is only offered in particular circumstances. Also, Avery reports that there is a problem in recruiting tutors (Morina et al., 2016).

2.5.6  Enriching the host country with cultural diversity.

The integration of refugees into the cultural practices of the host community has the potential of inspiring creativity and even drive innovations within the populations of the two groups (UNHCR Standing Committee, 1997). The diversity of culture brings more ideas and spurs a variety of services. Every culture or individual has something different and unique to offer. Therefore, merging such ideas creates a platform for the emergence of superior ways of doing business and solving problems (UNHCR Standing Committee, 1997).

Organizations seeking new employees will have a culturally diverse pool of talent to choose from and add value through individual traits recognized by a culture. For example, the elders might have instilled the custom of waking up early and arriving at work or any form of appointment before the set time. The other group promotes cultivation of the virtues of honesty and hard work. Bringing these diverse cultural upbringings together increases the chances of professional growth at both the community and individual levels (UNHCR Standing Committee, 1997).

The merging of several cultures brings cultural sensitivity, more insights, and local knowledge and that can raise the quality of the products and services sold at the shared
marketplaces between the host community and the refugees. Cross-cultural understanding together
with the knowledge of the local markets adds more precise strategies of marketing and trading.
For instance, the refugees and host community can start producing brochures, developing websites
and other assets that have a higher quality with culturally sensitive translations that people from
the two communities can easily understand and make it easy for them to transact business and
acquire customers from across the communal boundaries (UNHCR Standing Committee, 1997).

For instance, the arrival of Syrian refugees has positively impacted the society and
economy of Turkey. The first direct effect is on the public finances. From 2011, the Turkish
government has offered the Syrian refugees aid through the special and contingency temporal
protection policy, and that accounted for 1% of the GDP. The refugees from Syria have become
an active participant in the Turkish economy not just through the supply of labor decisions, but
also through the addition of their entrepreneurial skills. In 2015 alone, 1599 new companies came
into being from just 157 in 2012. The share of the corporate bodies owned by Syrian refugees
reached 26% by 2015 (Esen & Oğuş Binatlı, 2017).

Secondly, the arrival of many refugees from Syria to Turkey has impacted the age structure
of the population of Turkey with the significant impacts on Turkey’s Demographic Window of
Opportunity (DWO) (Esen & Oğuş Binatlı, 2017). The DWO is the period when the age of the
people who are working in a country is large in comparison to the people they need to support or
the dependent population. Such a case occurs when the fertility rates of a country decrease but the
population of the older people is small. Substantive growth occurs at this period as the country
reduces the levels of dependency (Esen & Oğuş Binatlı, 2017). Turkish DWO began in 2010 and
will run until 2030. Although debatable, several economic indicators show the refugees
significantly shifted the DWO of Turkey (Esen & Oğuş Binatlı, 2017).
Most policies in this regard have not been adequately assessed (Morina et al., 2016). According to NAO 2015, there exists an enormous gap between refugees and the hosting populations. Other sources point out that the refugees do not match up to the labor market demand in the hosting states. The refugees upon entry into the hosting states, usually begin working for minimal wages, but later agitate for salary increases because of the expansion of their families and responsibilities (Morina et al., 2016). Moving forward, the hosting nations and other stakeholders such as aid organizations and international communities should implement policies that would help solve the adverse effects as a result of the refugees in the hosting countries while at the same time maximize the positive effects.

2.6 Analytical Techniques

2.6.1 Partial Equilibrium model (PEM).

Partial Equilibrium as a technique applied in the existing literature on the economic impacts of refugees denotes that the analysis of a given market policy action is not directly affected by putting into account the economic interactions between markets of a given economy (Omata & Weaver, 2015). It utilizes minimal data for one to make a decision on a given study. The results obtained from the application of this model can easily be explained and thus making it transparent and easy to implement (Omata & Weaver, 2015).

2.6.2 Local Economy-Wide Impact Evaluation (LEWIE).

Local Economy-Wide Impact Evaluation (LEWIE) as an analytical technique applied in the current literature on the economic impacts of refugees has basically been designed to assess the project and policies’ impacts on households and business within the local economies hosting
refugees. The main purpose of utilization of the LEWIE approach is to measure refugee aid in the hosting countries’ economies (Omata & Weaver, 2015).

2.6.3 Monte Carlo Methods.

Monte Carlo method, also known as Monte Carlo Simulation, is one of the techniques applied in the current literature on the economic impact of refugees. The method uses repetitive random sampling together with a mathematical model to generate simulated data. From the refugee perspective, Monte Carlo simulation is uniquely used with microdata obtained from refugee camps to estimate the impact on the host country economy in comparison with the refugees’ in-kind aid (Omata & Weaver, 2015). For instance, the addition of one refugee within a 10-km radius significantly increases the refugee aid received around two cash camps. The method is rooted in the evaluation of the economic impact in a bid to understand the balance of project and policy impacts in the local economies (Omata & Weaver, 2015).

The Monte Carlo Simulation technique helps in understanding the refugee economic implications in complex systems. The method is only reliable if it reflects a fair view of the simulated system. Secondly, the method portrays that giving refugees an economic interaction creates spillovers on household income in host countries. Third, the use of the partial equilibrium model is advantageous in that data obtained is transparent and can easily be explained. Fourth, in a scenario in which transfer mechanism is superior. LEWIE as a technique can be used as a laboratory to explore the underlying conditions of their productions and welfare impacts. Finally, the primary effects and economic disturbance of any given type can easily be analyzed (Omata & Weaver, 2015).

There is an absence of reliable and factual quantitative data from the literature on refugee impact on hosting countries’ economies (Zetter et al., 2012). The available discussions focus on a
common hypothesis until the time when there is quality empirical data. Difficulty in collecting verified data from self-settled refugees living outside the refugee camps poses the main challenge. As a result, researchers have been prevented from conducting long-term studies. The impact of refugees on hosting countries will experience a paradigm shift over time, and thus their full documentation can be achieved with the availability of sufficient data (Fiddian-Qasmiyeh et al., 2012).

2.6.4 Confounding Factors

Confounding variables should be taken into account when ascertaining refugee impacts on hosting countries’ economies. Treating them in isolation poses difficulty in determining the parameters used in measuring impact. Confounding factors are problematic when it comes to comparing pre-displacement and post-displacement community data. Adapting a comparative approach together with the availability of pre-and post-displacement data can aid in overcoming this methodological problem (Landau, 2008).

2.6.5 Causality

Confounding variables and unavailable reliable data have proven difficult to establish the causal relationship between refugee hosting and the countries’ economies. For example, there are tendencies to equate refugee hosting to slow growth in a country’s GDP, tax revenue loss, increased public expenditure, and the decline in trade and investment (Landau, 2008). Some of the reasons given are not limited to regional trading patterns disruptions, tourism, and foreign direct investment reduction. From the global perspective, there is no direct or causal link between the reasons given to the refugee presence in a given country (Landau, 2008).
2.6.6 Ethical Gaps

Ethical risks have become an inherent menace in as far as measuring impacts related to refugee-hosting is concerned. Research shows that there has been little attention given to the cost-benefit analysis of hosting refugees thus undermining broader obligations of humanitarian imperative (Landau, 2008). Overemphasis on the impact debate has misled the course of the discussion thus causing hosting countries to deviate from original mandates of poverty prevention or alleviation of human suffering while upholding human rights and taking advantage of the economic benefits that refugees bring. Works conducted by social scientists on this topic have been in a bid to challenge the assumptions made by policymakers and the public that refugees are a burden to the hosting country. Most of the research findings show that the cost of hosting refugees is greater than the accrued benefits (Landau, 2008).

2.6.7 Panel Data Analysis

Panel data analysis is a method of statistics that finds relevance in social science, econometrics, and epidemiology to undertake a two-dimensional panel data analysis that is longitudinal and cross-sectional. The data is often gathered over time and for the same individuals. After collection of the data, regression of the two dimensions, that is longitudinal and cross-sectional are done (Foged & Peri, 2016).

The use of longitudinal data for the workers in Denmark starting in 1991 to 2008, and the tracking of outcomes of the labor market of the natives with low skills in response to the external inflow of refugees that have various skills, the panel data analysis improves on the previous strategies by focusing on the refugees across the municipalities according to the refugee dispersal policy between 1986 to 1998 (Foged & Peri, 2016). The outcome of the panel data analysis shows that an upsurge in the refugees in a given country pushed the native workers with little education
to pursue occupations that are not manually intensive. Consequently, the movement of refugees impacted the native unskilled workers positively as well as the occupational mobility and employment (Foged & Peri, 2016). Therefore, both positive and negative impacts of refugees on the host country should be evaluated using panel data analysis to improve the result.

2.6.8 Current Humanitarian

Regardless of the shortfalls in theory, practice, approach, and policy, as well as research, understanding the economic systems of refugees is the essential component to changing the approach to humanitarian assistance. Building a strong base of knowledge on resource allocation strategies focusing on the independence of refugees and increasing opportunities can provide a template for reforming the current market-based model. The research can stimulate the current humanitarian challenges to sustainable opportunities and the need for rethinking refugee economies (Gabiam, 2016). Self-reliance would solve the current problem of the long-term encampments. Exploring ways of expanding the space of basic entitlements such as the right to work, freedom of movement, and increasing economic opportunities would help in solving the problems associated with protracted refugees (Betts, Bloom, Kaplan, & Omata, 2014). Another focus on the economy of refugees should be on diversity, where stakeholders should consider reducing the complexity and crude categorization based on nationality. The reductionism and generalization fail to account for diversity in livelihood, culture, and wealth, thus the host country misses out on unique elements such as spending behavior and culinary values, which can boost local economies.
Chapter 3

Methodology

According to the literature review, both positive and negative impacts of refugees on a host country are established. However, most of the studies are qualitative in nature and provide no quantitative evidence of the concepts discussed. In addition, there is also a limited research on the Middle East region that suffers significantly from refugee waves and camps. This research provides a literature review analysis of the refugees’ problem and covers both areas that are missing from the literature and tries to provide a substantial evidence of the negative impact refugees have over the host country. Although there are many issues related to the refugee dilemma, this research focuses on the economic impact of refugees on host countries utilizing Jordan as a case study. The research questions in this study investigates the relationship between the increased number of refugees and the economic impact on the host country using the following research questions:

1. Do the increased number of refugees have an effect on the economy of Jordan due to the placing of a burden on the already strained economic sectors?

2. Do refugee’s numbers affect the job market in the host country and reverse the impact on the economy?

Based on the existing literature review and theories discussed in Chapter Two, the dependent and independent variables were chosen. In fact, the dependent variable measures the economic health in Jordan using one of the following factors: unemployment rate and employment numbers before and after the Syrian war. The independent variables used as the following: number of Syrian refugees; population growth; Syrian employment permits; water use per capita; number of students in public schools; number of treatment Cases hospital; regional political instability, Gross
National Product for Jordan; and distance of governorate from refugee camps. The research that uses Panel Data analysis covers the period from 2010 to 2016.

3.1 Population sample

The analyzed data is collected from 2010 to 2016. The unit of analysis is the governorates (states) of Jordan. There are twelve governorates in Jordan and all of which are used in this study. The data used for this study is distributed among them (Figure 3.1). Therefore, a slice of a certain time for a certain governorate is used to analyze the economic impact of the Syrian refugee crises in Jordan.

3.2 Data sources

In the first stage of the research design, the literature review was conducted using international organizations’ reports and studies, government documents, secondary sources from past research studies, and articles and reports. The sources that are related to the refugee’s numbers in camps and their impact is studied to build a solid analysis and understand the existing situation. Data collected and used is from the past years. The data is collected from different sources including the United Nations (UNHCR), the University of Uppsala in Sweden (UCSP), the Jordanian Ministry of Labor (MOL), The Jordanian Ministry of Health (MOH), The Jordanian Ministry of Water and Irrigation (MOWAI), Jordanian Central Bank (JCB), and the Jordanian Department of Statistics (DOS). Based on the data that is collected, a comparative analysis of employment and unemployment indicators are studied for data from the pre-and during the Syrian refugees’ crises to analyze the economic impact.
3.2.1 United Nations

The United Nations provides data related to international development issues. The available data includes refugee’s population by country of origin and refugees in a host country. The refugee’s data covers several countries and regions including the Middle East. In addition, the UN sources includes the number of Syrian refugees in Jordan from 2010 to 2018 and Syrian permits.
3.2.2  *Department of Statistics Jordan*

The Department of Statistics (DOS) in Jordan provides a different database on different levels. The data is collected for several issues related to the economy. Data collected from DOS are population growth, number of students at public schools, distance between refugees’ camps and cities, and number of treatment cases in Jordanian public hospitals.

3.2.3  *Jordanian Ministry of Labor and UNHCR*

Workers permit data is collected from the Ministry of Labor in Jordan and the UNHCR. The Jordanian law for the non-Jordanian workers required workers to legally obtain a work permit from the Ministry of Labor. The data includes the number of Syrian refugees in Jordan who have work permits.

3.2.4  *Jordanian Ministry of Health*

The Jordanian Ministry of Health in Jordan provides different data related to health issues in Jordan. The data from this source includes number of hospitals and capacity, number of medical centers, and number of treatment cases.

3.2.5  *Jordanian Ministry of Water and Irrigation*

The Ministry of Water and Irrigation is responsible for all data related to water supply, wastewater system, and water sector. Also, the Ministry provides data related to projects, planning management and the national water strategies and policies. The data for water uses per capita is collected from the Jordanian Ministry of Water and Irrigation.
3.2.6  Uppsala Conflict Data Program (UCDP)

The Uppsala Conflict Data Program is a project created by the Department of Peace and Conflict, the University of Uppsala, Sweden. This database contains violence and conflict data on the Middle East and North Africa Region (MENA) level.

3.3  Case Study: The Economic impact of Refugees on Jordan

This research is based on data gathered from the case study country, Jordan. The World Bank in 2011, classified Jordan as a middle-income country. The country has shown a steady growth in GDP over the years averaging 7.5% per year and the GDP per capita has also been on the rise (World Bank in 2011). However, because of the economic meltdown of 2008, and the instability of the Middle East region, Jordan is now faced with several problems. Some of these challenges include high unemployment rates, susceptibility to the fluctuating international oil markets and the high dependence on remittance from the countries in the Gulf region (Arouiri, 2009; European Commission, 2010; World Bank, 2011). In fact, the GDP per capita started to decrease right after the Syrians war in 2012 as shown in Figure 3.2. However, it started to decrease starting the year after. Fortunately, the GDP per capita increased slightly in 2016.
Figure 3-2: Per Capita GDP (JD) Nominal

Source: Jordanian Central Bank, 2018

Jordan is one of the countries that continue to experience a large influx of refugees due to the political instabilities in the Middle East in different countries such as Palestine, Iraq, and Syria (Owen and Pamuk, 1998). Jordan shares its border with Syria from the north, Iraq from the east, Saudi Arabia from the south and Israel and Palestine from the west as in (Figure 3.3).
Figure 3-3: Jordan Political Map

Source: Wikimedia Foundation website, 2018
Most recently, the conflict in Syria has led to a significant number of refugees in Jordan. The number of Syrians in Jordan exceeds 1,400,000 which includes around 670,000 people registered as refugees. About 514,324 registered refugees are woman and children. In fact, 50% of them are children and 26% are woman (UNHCR). Also, there are about 720,000 Syrians who live in Jordan who are not registered as refugees according to the Directorate of General Security of Jordan (The Directorate of General Security of Jordan 2017). The remaining entered the country by virtue of kinship, work, and trade before the beginning of the Syrian crisis (Murshidi, Hijjawi, Jeriesat, and Eltom, 2013). It is estimated that the number of Syrians is even higher due to the high number of unregistered refugees.

In Jordan, there are different camps that are designated to the Syrian refugees. The largest area and the most populated camp “Zatari Camp” in Mafraq Governorate is in the north east of Jordon. In addition, the "Jordan Emirates Camp" and "Hadiqa" are in Ramtha city which is the furthest north in Jordan. The "cyber city refugee camp" is in Ramtha as well. "Azraq Camp" includes a number of the Syrian and a Syrian- Palestinian in refugee camps located in the Zarqa Governorate in the East part of Jordon and “Mrajeeb Al Fhood” (Murshidi, Hijjawi, Jeriesat, and Eltom, 2013). Different locations might experience different impacts of refugee camps. As shown in Figure 3.4, the north side of the country encounters the most pressure.
Figure 3-4: Jordan Political Map

Zatari" is the best-known Syrian refugee camp ". This camp houses Syrian refugees who came to Jordan after July 2012, at the beginning of the Syrian civil war (Figure 3.5). The camp was established 20 km to the East of Mafraq city in the north east of Jordan. According to the United Nations, the Zatari camp today houses over 80,000 refugees (UNHCR 2017). This has increased the population of Jordan and placed an enormous strain on the country’s already strained sectors and scarce resources. Jordan has a number of permanent and temporary refugee camps primarily housing refugees from Palestine, Iraq, and Syria. Some of these refugees have assimilated into the country while others continue to remain citizens of their source countries.
Despite the challenges of refugee camps, Jordan benefits economically in a number of ways. Jordan receives large amounts of development assistance and money from the international community (Skinner, 2003; Sassoon, 2009). This development assistance is aimed at resettling these refugees and integrating them. As refugees may have an effect on the economy, the economy also plays an important role in refugee camps (Figure 3.6). It is a two-way relationship and hence often difficult to ascertain which one benefits more from the relationship. One of the most significant ways by which refugee camps have supported the
Jordanian economy is by reinforcing and adding more people to its labor pool (Owen and Pamuk, 1998).

*Figure 3-6: Zatari Camp*

![Zatari Camp Image](image)

*Source: United Nation, 2018*

In addition, refugee camps also play an important role in the creation of new jobs for residents, as well as investment opportunities (Owen and Pamuk, 1998). This is due to the increase of population and the increased demand for more services and food. This makes Jordan a highly diversified economy (Figure 3.7). However, there have been concerns about how the refugees, especially those in the refugee camps, place burdens on the social services of the
country, increase population of the country, and hence, create unemployment for the native citizens as they take over jobs at lower wages.

*Figure 3-7: Azraq Camp*

![Image of Azraq Camp](https://example.com/azraq_camp.jpg)

*Source: United Nation, 2018*

The country still faces the problem of high unemployment rates and an ever-growing population. In addition, recent statistics show that the country is exporting skilled labor and importing low skilled labor (La, 2011). Furthermore, of the 300,000 illegal working Syrian refugees, the Ministry of Labor in Jordan has distributed more than 106,000 work authorizations for Syrian refugees to allow them to work legally in Jordan (Ministry of Labor Jordan, 2017). However, it is still unclear whether refugees are beneficial to the country or whether they are a burden. Jordan is a good case study since it has been a haven for refugees having hosted a number
of refugees from Palestine and Iraq prior to the latest influx of Syrians (Mazur, 1979). Refugee camps have played an important role in Jordan’s economy, society, and even politics.

Jordan is a perfect example of how the different forms of mobility can have strong implications on economics and politics both nationally and regionally (Maciejewski, Mansur & Alonso-Gamo, 1996). Meanwhile, refugee camps have become an important aspect in the economic growth and development of the country. However, with the recent large flow of refugees from Syria, there is a concern as to whether refugee camps impact positively or negatively on the economic growth of the country. This research tests this concern by using an economy that has well documented large refugee camps. Consequently, this study aims at finding the relationship between refugees and the economic health in Jordan using one of the following economic factors: unemployment rate, and employment rate. The number of Syrian refugees and Syrian employment permits are used to measure the refugees’ impact. Other control variables that are used include population growth, water use per capita, number of students in public schools, political instability, distance of governorate from refugee camps, GDP, and treatment cases from Hospital.

3.4 Analytical Techniques

This study attempts to extend the prior work in the field of refugees and provide a major contribution to the knowledge of the refugees’ empirical research. Refugees research had seldom employed use of the Panel Data although it provides efficient results. This study uses the Panel Data analysis.

In this research, a quantitative method is employed to address the research hypotheses and the objectives of the study. The research uses the panel data analysis that uses both cross sectional and time series analysis. This method allows for achieving the objectives of the study
and fully explore the two research questions. In general, Panel Data is a great tool for policy investigation and program assessment. There are many benefits for using this type of analysis such as increasing the data points and degree of freedom, allowing time-consistent unobserved variables, estimating fixed distributed lag models, and permitting correlation between unobserved effect and the explanatory variables. However, the type of regression to be used with Panel Data depends on some required tests. The analysis starts with two major tests to assure the type of model needed to be used: the Breusch and Pagan LM test and the Hausman test. The first one determines if the Ordinary Least Square Regression (OLS) or Random Effect to be used based on the difference between the two models. The null hypothesis provides that variances across governorates equals zero. Therefore, if that is the case, then no significant difference appears between the two models and either Random Effect or OLS can be used. Otherwise, only Random Effect Model can be used.

On the other hand, the Hausman test controls the decision for a Fixed Effect Model and a Random Effect Model. The Hausman test indicator is used if there is a substantial difference between the true models and the Fixed Effect must be used. When the test value is equal or less than critical value, then there is a significant difference and the Fixed Effect Model should be used (Wooldridge, 2015). Otherwise, either FE or RE can be used since there is no difference between the two (Wooldridge, 2015). The Hausman test equation is as the following:

\[ (\hat{B}_{RE} - \hat{B}_{FE})' (V(\hat{B}_{RE}) - V(\hat{B}_{FE})) (\hat{B}_{RE} - \hat{B}_{FE}) \]  \hspace{1cm} (1)

where;

\( \hat{B}_{RE} \) = Estimated coefficient for Random Effect
\( \hat{B}_{FE} \) = Estimated coefficient for Fixed Effect

\( V \) = Covariance
The Fixed Effect Model permits different individual fixed effect that differs across individuals to capture the unobserved heterogeneity. Therefore, it is able to explain the unexplained time-invariant variation in the dependent variable that cannot be explained by the regressor. However, since the intercept is time constant, it is permitted to be correlated with the regressors. On the other hand, the Random Effect Model $a_i$ is included in the error term as not permitting correlation with the regressors. In addition, the composite error term and every individual has similar slope. On the contrary of the FE Model, the RE model permits for including time-constant variables as distance and dummy variables as political instability. Also, the third model, the Pooled Model, which ignores the panel data since it has constant coefficients and does not allow for variation, is not be considered in this study (Gujarati, 2003).

Fixed Effect Model general equation:

$$Y_{it} = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \cdots + \beta_k X_{kt} + a_i + U_{it}$$  \hspace{1cm} (2)

Where;

- $i$= Entity, $i=1, \ldots, N$.
- $t$= time (yr), $t=1, \ldots, T$. T is usually small.
- $Y_{it}$ = Dependent variable (DV)
- $\beta_0$ = intercept for each entity
- $a_i$ = Fixed effect term/ Unobserved time consistent variation
- $\beta_k$= Coefficient for explanatory variable
- $X_{kt}$ = Regressor/ Independent variable (IV)
- $U_{it}$ = error term
Random Effect Model general equation:

\[ Y_{it} = \beta_0 + \beta_1 X_{1,lt} + \beta_2 X_{2,lt} + \cdots + \beta_k X_{k,lt} + U_2 D_2 + \cdots + U_n D_n + \varepsilon_{it} \]  \hspace{1cm} (3)

Where;

\( Y_{it} \) = Dependent variable (DV)

\( \beta_0 \) = intercept

\( \beta_k \) = Coefficient for explanatory variable

\( X_{lt} \) = Regressor/ Independent variable (IV)

\( U_n \) = Coefficient for (Binary) dummy variable

\( D_n \) = Binary Regressor/ Independent variable (IV)

\( \varepsilon_{it} \) = Composite error term = \((a_i + e_{it})\);

\( a_i \) = Between − entity error, \( e_{it} \) = Within − entity error

3.4.1 Regression Model

Previous studies indicate that cities with refugee camps encounter a greater impact on the economy than non-refugee host cities. Therefore, refugees number seems to have a correlation with the economy. In addition, political instability in the Middle-East has a significant effect on the economy (Owen and Pamuk, 1998). The increased insatiability boosts the refugee’s numbers. The main purpose of this research is to study the economic impact of refugees and Jordan is used as the case study so that actual data can be used in analysis in examining the theory. The study uses panel data analysis that uses cross-sectional and time series analysis with the twelve governorates of Jordan and annual data for the 2010 to 2016 period.

The dependent variable in this study measures the economic health in Jordan using some of the commonly used indicators. There are several indicators used in economy to measure the
health of the economy such as Gross National Product, Inflation, Employment, and Unemployment. This study uses both the employment rate and the unemployment rate to achieve the targeted analysis. Unemployment rate was used in economic studies to reflect the percent of unemployed people out of the overall workforce. In a healthy economy, the unemployment rate ranges from 3% - 5% (Smith, 2018). Employment number, on the contrary, reflects the number of Jordanian Employed Persons Age 15+ Years. This employment number is calculated using the random multistage annual survey sample. Due to its simplicity to comprehend, employment is considered a popular economic indicator (Weisbrod and Weisbrod, 1997). Therefore, it will be used regardless of the sample size.

On the other hand, the independent variables include factors that influence the economic situation change and their selection is based on both the review theories and the literature. For instance, the refugees result in inflation on the prices of goods and decrease wages (Taylor et al., 2016). Moreover, the impact could affect high unemployment rates, waste of local resources and population growth. (Arouri, 2009; European Commission, 2010; World Bank, 2011). Therefore, refugees compete with residents and share resources that include medical services, social services, water, and education (Taylor et al., 2016). Since this analysis helps determine if refugees have an impact on the economy, the study includes the change before and after the presence of the refugees in Jordan due to the Syrian war for the period 2010-2016.

This study specifically addresses a number of concerns:

• Do refugees have an adverse effect on the economy of Jordan due to the placing of a burden on the already strained economic sectors? Nations with limited economies like Jordan encounter a large-scale effect due to the high number of refugees (Fakih & Ibrahim, 2015). Does the increase of public services provision for the refugees affect the host country? Younger and
older refugees might require the provision of more infrastructure as well as public and social services such as schools and health services. The increased need for providing these services requires more funding by the host country (Fakih & Ibrahim, 2015). Therefore, providing public services adds more pressure on the local community’s resources (Dowty and Loescher, 1996). For instance, governments have to reduce the water per capita share to meet the need of the increasing population of refugees.

• Does refugees employment affect the job market in the host country? Does the increased number of refugees employed affect the economy? It has been asserted that increased refugees’ workers upturn the unemployment rate for residents and decreases wages as they accept lower wages (Jacobsen 2005). In addition, employment effect might vary by sector in the labor market especially with low skilled labor (Fakih & Ibrahim, 2015).

The independent variables that are used in this study are the following:

1. **Number of Syrian Refugees** in Jordan (Refugees) from 2010 to 2016 collected from UNHCR. The number of refugees is defined as Refugees who are recognized from the United Nation under the convention in 1951 relating to the status of refugees. Those granted complementary forms of protection or those enjoying temporary. Also, refugee population includes people in a refugee like situation (UNHCR 2018). Refugees are creating several challenges for the host countries internally. For example, the Middle East region has encountered a significant socioeconomic impact due to the political crises and war.

2. **Population Number** (Pop) collected from the Jordanian Department of Statistics, this variable measures the population number from 2010 -2016. The doubling in population has exerted immense pressure on educational services, management of waste, and health
services. The Lebanese have long complained of lack of jobs because the Syrians are available and willing to work for less (Taylor et al., 2016).

3. **Distance** between governorates and refugee camps (Dist.). This variable is used to measure the length between cities and the refugee’s camps. The data for this variable comes from Distancefromto.net website.

4. The **Number of Students** in public schools (Students) collected from DOS. According to national legislation, all children between the ages of 7 and 16 are entitled to free education. Refugees in this age group can also have full access to education through voluntary terms (Morina et al., 2016). This adds to the pressure on the government.

5. **Syrian Employment Permits** in Jordan (Permits) collected from the Jordanian Ministry of Labor and UNHCR. According to Jordanian law, the non-Jordanian workers are required to legally obtain a work permit from the Ministry of Labor. When the non-Jordanian workers meet all requirements, they become eligible for work. Furthermore, the Ministry of Labor in Jordan has distributed more than 106,000 work authorizations for Syrian refugees in the country to work and support their families (Ministry of Labor Jordan, 2017). This total number is distributed over time. This variable was dropped early in the process due to the availability of data points.

6. **Water Use Per Capita** (WPC) collected from the Jordanian Ministry of Water and Irrigation. There are more than 680,000 documented Syrian refugees in Jordan who have contributed to an already existing shortage of water. Arrival of refugees in large numbers cost the government of Jordan $2.4 million in addition to straining the water supply of the
country (Altunkaynak, Özger, & Çakmakci, 2005). This variable uses the water per capita share during the study period.

7. **Number of Treatment Cases** in the Jordanian public hospitals (Treatment) collected from the Jordanian Ministry of Health. All the data on health statistics in the public and private sectors collected from the Ministry of Health of Jordan. For instance, more schools and hospitals might be needed which increases the burden on the host country government (Shellito, 2016).

8. **Political Instability** in Middle East and North Africa is measuring the conflict impact. The variable is defined as the Incidence of intrastate conflict in all country-years in MENA region with at least one active conflict. The data for this variable was obtained from the Uppsala Conflict Data Program, the University of Uppsala, Sweden.

9. **GDP** collected from world bank. This variable will measure the health economy of the country. Gross national income divided by midyear population, constant 2010 U.S Dollars.

As was mentioned, the study uses panel data regressions with two dependent variables. The regression equations for the two effects will be:

**Fixed Effects:**

\[
\ln(\text{Unemployment Rate or Employment} \, it) = \beta_0 + \beta_1 \text{Refugees}_{it} + \beta_2 \text{Permits}_{it} + \beta_3 \text{Dist}_i + \beta_4 \text{Students}_{it} + \beta_5 \text{Conflict}_t + \beta_6 \text{Pop}_{it} + \beta_7 \text{WPC}_{it} + \beta_8 \text{Treatment}_{it} + \alpha_i + U_{it} \quad (4)
\]

and

**Random Effects:**

\[
\ln(\text{Unemployment Rate or Employment} \, it) = \beta_1 \text{Refugees}_{it} + \beta_2 \text{Permits}_{it} + \beta_3 \text{Dist}_i + \beta_4 \text{Students}_{it} + \beta_5 \text{Conflict}_t + \beta_6 \text{Pop}_{it} + \beta_7 \text{WPC}_{it} + \beta_8 \text{Treatment}_{it} + \varepsilon_{it} \quad (5)
\]
A list of the variables used in both models are shown in Table 3.2. The table have a
definition of each variable in addition to the data sources and predictable association between the
dependent variable and the independent variables.

*Table 3-1: Definition of variables used in the Equation1*

<table>
<thead>
<tr>
<th>Variable abbreviation</th>
<th>Definition</th>
<th>Source</th>
<th>Expected sign</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>Measures the prevalence of unemployment and it is calculated as a percentage by dividing the number of unemployed individuals by all individuals currently in the labor force in each governorate.</td>
<td>Central Bank of Jordan 2010-2016</td>
<td></td>
</tr>
<tr>
<td>Employment Number</td>
<td>Measures the number of employments of Jordanian Employed Persons Age 15+ Years for each governorate using a random multistage annual survey sample</td>
<td>Central Bank of Jordan 2010-2016</td>
<td></td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Crisis Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Syrian</td>
<td>Number of Syrian who granted complementary forms of protection or those enjoying temporary for each governorate</td>
<td>UNHCR 2010-2016</td>
<td>Employment (-)</td>
</tr>
<tr>
<td>Refugees</td>
<td></td>
<td></td>
<td>Unemployment (+)</td>
</tr>
<tr>
<td>Syrian Employment</td>
<td>Number of employment permits for non-citizen Syrian workers met all requirements they will be eligible for work permit for each governorate</td>
<td>Ministry of Labor &amp; UNHCR 2010-2016</td>
<td>Employment (-)</td>
</tr>
<tr>
<td>Permits</td>
<td></td>
<td></td>
<td>Unemployment (+)</td>
</tr>
<tr>
<td>Variable abbreviation</td>
<td>Definition</td>
<td>Source</td>
<td>Expected sign</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------</td>
<td>--------</td>
<td>---------------</td>
</tr>
<tr>
<td>Political Instability</td>
<td>Incidence of intrastate conflict in all country-years within the MENA region with at least one active conflict</td>
<td>University of Uppsala, Sweden 2010-2016</td>
<td>Employment (-) Unemployment (+)</td>
</tr>
<tr>
<td><strong>Sociodemographic variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population Growth</td>
<td>Increase in number of people that reside in a country every year for each governorate</td>
<td>DOS 2010-2016</td>
<td>Employment (-) Unemployment (+)</td>
</tr>
<tr>
<td>Number of Students</td>
<td>All children between the ages of 7 to 16 who are entitled to free education for each governorate</td>
<td>DOS 2010-2016</td>
<td>Employment (+) Unemployment (-)</td>
</tr>
<tr>
<td><strong>Infrastructure variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Water use per capita in each governorate</td>
<td>Ministry of Water and Irrigation 2010-2016</td>
<td>Employment (+) Unemployment (-)</td>
</tr>
<tr>
<td>Treatment Cases</td>
<td>Public and private sectors’ treatment cases of each governorate</td>
<td>Ministry of Health 2010-2016</td>
<td>Employment (+) Unemployment (-)</td>
</tr>
<tr>
<td>Distance</td>
<td>The length between cities and the refugee’s camps represents the distance between the capital city of each governorate and the main Syrian refugees’ camp “Zaatri”</td>
<td>DOS 2010-2016</td>
<td>Employment (-) Unemployment (+)</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross national income of Jordan divided by midyear population, constant 2010 U.S Dollars</td>
<td>World Bank 2010-2016</td>
<td>Employment (-) Unemployment (+)</td>
</tr>
</tbody>
</table>

*Source: Zaid Alfayez, 2018*
3.4.2 Null Hypotheses

1. There is no relationship between the number of refugees and the economy.

2. There is a tipping point where the number of refugees reverse the impact once it reaches a certain percent of the total population.

3.4.3 Alternative Hypotheses

1. There is a relationship between the number of refugees and the economy.

2. There is no tipping point where the number of refugees reverse the impact once it reaches a certain percent of the total population.

In summary, the variables selected for this research are derived from the existing literature and related theories. The data analysis is using Panel Data for the period from 2010 to 2016 and governorates of Jordan using two dependent variables to evaluate the economic impact of refugees on a host country using Jordan as a case study. The two models used the unemployment rate and the employment numbers before and after the Syrian war on the governorate level in Jordan as the dependent variables. The independent variables are the number of Syrian refugees; population growth; Syrian employment permits; water use per capita; number of students in public schools; number of treatment cases in hospitals; regional political instability, Gross National Product for Jordan; and distance of governorate from refugee camps. However, model building process is used in each regression using several statistical tests to examine the regression assumptions and come up with the best model. The Stata software was used to run the models and find the best model that reflects the results of the research hypotheses.
Chapter 4

Results and Discussions

This chapter discusses the tests used to test the regression assumptions. Each test helped in deciding on the independent variables to build the best panel data model. In addition, some of these tests assisted in correcting the data using some popular techniques to have a better model. Consequently, a proper panel data model was used. Moreover, the results of the Panel Data Model are explained and compared to the hypotheses in this chapter.

4.1 Statistical Tests: Independent Variables Selection (Model One)

4.1.1 Summary of Statistics

Table 4.1 provides a summary of the variable used in this study. The table excludes the variables that were eliminated from the study due to either high correlation or data availability. Since the study is strongly balanced, the number of observations for all variables is the same, 84. There are different independent variables in addition to the dependent one. The dependent variable is the unemployment rate for each governorate of Jordan. The unemployment rate mean is 14.2, the standard deviation is 2.2 and the minimum and maximum numbers are 10.2 and 19.6, respectively. Therefore, some economic differences between various governorates exist. In addition to the unemployment rate, the independent variables illustrate some dissimilarities among these governorates for different years. For instance, although the mean of the number of refugees in Jordan is 34489, the minimum number of refugees in a given year for a certain governorate is 23, and the maximum number is 242582. Accordingly, some governorates have a higher share of refugees’ numbers than others.
### Table 4-1: Summary of statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Obs</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemploy</td>
<td>84</td>
<td>14.2</td>
<td>2.2</td>
<td>10.2</td>
<td>19.6</td>
</tr>
<tr>
<td>Refugees</td>
<td>84</td>
<td>34489</td>
<td>62639</td>
<td>23</td>
<td>242582</td>
</tr>
<tr>
<td>PopGrow</td>
<td>84</td>
<td>6.1</td>
<td>2.6</td>
<td>2.5</td>
<td>9.3</td>
</tr>
<tr>
<td>Treat</td>
<td>84</td>
<td>889061</td>
<td>919076</td>
<td>163708</td>
<td>3414861</td>
</tr>
<tr>
<td>WPC</td>
<td>84</td>
<td>156</td>
<td>66</td>
<td>71</td>
<td>304</td>
</tr>
</tbody>
</table>

*Source: Zaid Alfayez, 2018*

#### 4.1.2 Test of Multicollinearity

Using the Variance Inflation Factor, multi-collinearity was examined. Table 4.2 indicates that multicollinearity exists between some independent variables. Since the VIF must be less than 10 and $1/VIF$ no more than 0.1., treatment 60.73, students 55.85, refugees 30.61, permits 0.218732, and Water Per Capita 0.39931 have multicollinearity on different levels. All other independent seems to be within the normal collinearity range from 2.5 and 60.73 with mean of 24.25. Thus, more tests are required to identify the collinear independent variables and correcting for them.

### Table 4-2: VIF Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treat</td>
<td>60.73</td>
<td>0.016467</td>
</tr>
<tr>
<td>Students</td>
<td>55.85</td>
<td>0.017906</td>
</tr>
<tr>
<td>Refugees</td>
<td>30.61</td>
<td>0.032673</td>
</tr>
<tr>
<td>PopGrow</td>
<td>8.07</td>
<td>0.1239</td>
</tr>
<tr>
<td>Dist</td>
<td>7.39</td>
<td>0.135309</td>
</tr>
<tr>
<td>Permits</td>
<td>4.57</td>
<td>0.218732</td>
</tr>
<tr>
<td>WPC</td>
<td>2.5</td>
<td>0.39931</td>
</tr>
<tr>
<td>Mean VIF</td>
<td>24.25</td>
<td></td>
</tr>
</tbody>
</table>

*Note: LnMENA & GDP omitted because of collinearity*

*Source: Zaid Alfayez, 2018*
4.1.3 Pearson Correlation

Another method of measuring for the correlation between the independent variables is used. Variables that have a high correlation (±0.70 to 1.00), are the number of Syrian permits with the number of refugees and the number of students and treatment cases in public hospitals where the last two are highly correlated with each other as well (Students and Treat). This result clarifies the multi-collinearity shown in the previous test. Therefore, based on this correlation matrix (Table 4.3), one of each two highly correlated variables are dropped from the model during the model building process.

Table 4-3: Pearson Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Refugees</th>
<th>Pop</th>
<th>Permits</th>
<th>Students</th>
<th>Dist</th>
<th>GDP</th>
<th>Instability</th>
<th>Treat</th>
<th>WPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refugees</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pop</td>
<td>0.3363</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permits</td>
<td>0.8209</td>
<td>0.6464</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>0.6318</td>
<td>0.0102</td>
<td>0.8188</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dist</td>
<td>-0.4488</td>
<td>-0.0011</td>
<td>-0.6106</td>
<td>-0.5331</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>-0.6634</td>
<td>-0.1817</td>
<td>-</td>
<td>-0.0541</td>
<td>0</td>
<td>-0.7427</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instability</td>
<td>0.3885</td>
<td>-0.0564</td>
<td>-</td>
<td>0.0455</td>
<td>0</td>
<td>-0.0181</td>
<td>0.0103</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Treat</td>
<td>0.6177</td>
<td>0.0082</td>
<td>0.8616</td>
<td>0.9679</td>
<td>-0.6445</td>
<td>-0.0181</td>
<td>0.0103</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>WPC</td>
<td>-0.2579</td>
<td>-0.0102</td>
<td>-0.4605</td>
<td>-0.3311</td>
<td>0.6628</td>
<td>0.0478</td>
<td>-0.0168</td>
<td>-0.4539</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Zaid Alfayez, 2018

4.1.4 Test of Normality

4.1.4.1 Shapiro-Wilk W test for Normal Data

The P value in Shapiro-Wilk W normality indicates the level of significance (Table 4.4). It needs to be higher than 0.05 for the data to be normally distributed (Ghasemi & Zahediasl, 2012).

In this model, the P value is more than that; the dependent variable (unemployment) is 0.406 and the residual is 0.763. Therefore, in this case we accept the null hypothesis since the data was
normally distributed. In addition, other tests will be used to confirm the results including the Q-Q Plot, P-P plot, and the Kernel Density Estimates.

Table 4-4: Shapiro- Wilk W test for Normal Data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>W</th>
<th>V</th>
<th>Z</th>
<th>Prob&gt;z</th>
</tr>
</thead>
<tbody>
<tr>
<td>LnUnEmploy</td>
<td>84</td>
<td>0.98441</td>
<td>1.114</td>
<td>0.237</td>
<td>0.40625</td>
</tr>
<tr>
<td>Resid</td>
<td>84</td>
<td>0.9899</td>
<td>0.721</td>
<td>-0.717</td>
<td>0.76338</td>
</tr>
</tbody>
</table>

*Source: Zaid Alfayez, 2018*

4.1.4.2 P-P and Q-Q plot tests for Normal Data

The P-P test is used to measure the standardized normal probability in this middle range. Also, Q-Q probability plot measures the data normality at the tails. Both the residual and the dependent variable graphs show a slight deviation in the middle but is still considered normally distributed (Figure 4.1 and Figure 4.2). Similarly, both the residual and the dependent variable graphs for the P-P plot demonstrate a normal distribution with slight deviation at the tails (Figure 4.3 and Figure 4.4).
Figure 4-1: P-P Normality Test for Residual

![Graph of P-P Normality Test for Residual](image1)

Source: Zaid Alfayez, 2018

Figure 4-2: P-P Normality Test for Dependent Variable

![Graph of P-P Normality Test for Dependent Variable](image2)

Source: Zaid Alfayez, 2018
Figure 4-3: Q- Normality Test for Residual

Source: Zaid Alfayez, 2018

Figure 4-4: Q-Q Normality Test for Dependent Variable

Source: Zaid Alfayez, 2018
4.1.4.3 Kernel Density Estimate

Normal density is tested using the Kernel Density Estimate. Although the residual plot shows a normal density (Figure 4.5), the dependent variable plot indicates a slight deviation (Figure 4.6) which also includes a shift in the center.

**Figure 4-5: Kernel Normality Test for Residual**

![Kernel density estimate](image)

*Source: Zaid Alfayez, 2018*
4.1.4.4 Test of Homoscedasticity

Homoscedasticity test illustrates if a linear relationship exists within the variables. Heteroscedasticity, on the other hand, exists when the variance of the error term is not equally distributed and a curve or a funnel shapes exists. Figure 4.7 shows that the error term in this sample is randomly distributed and no Heteroscedasticity exists.
4.2 Statistical Tests: Independent Variables Selection (Model Two)

4.2.1 Summary of Statistics

Table 4.5 provides a summary of statistics for Model Two. Once again, the table excludes the variables that were removed from the study due to high correlation or data availability. The study that is strongly balanced has the same number of observations for all variables 84. The dependent variable is the employment numbers for each governorate of Jordan. The employment numbers mean is 3553, the standard deviation is 4632 and the minimum and maximum numbers are 532 and 20028, respectively. Thus, a variation among different governorates exists. Moreover, the independent variables have variations among these governorates for each year. For example, the mean of the number of the GDP in Jordan is 34489, the minimum number in a
given year for a Jordan is 1676, and the maximum number is 2103. Hence, some years have a higher GDP than others.

**Table 4-5**: Summary of statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Obs</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>84</td>
<td>3553</td>
<td>4632</td>
<td>532</td>
<td>20028</td>
</tr>
<tr>
<td>Refugees</td>
<td>84</td>
<td>34489</td>
<td>62639</td>
<td>23</td>
<td>242582</td>
</tr>
<tr>
<td>PopGrow</td>
<td>84</td>
<td>889061</td>
<td>919076</td>
<td>163708</td>
<td>3414861</td>
</tr>
<tr>
<td>Treat</td>
<td>84</td>
<td>1885</td>
<td>163</td>
<td>1676</td>
<td>2103</td>
</tr>
</tbody>
</table>

Source: Zaid Alfayez, 2018

### 4.2.2 Test of Multicollinearity

Since the same independent variables from Model One are used in this model, the results of Table 4.2 will be used to explain the multicollinearity in this model. Once again, treatment 60.73, students 55.85, refugees 30.61, permits 0.218732, and Water Per Capita 0.39931 have multicollinearity. While other independent variables have moderate level of multicollinearity, additional tests are needed to investigate the collinear independent variables (Table 4.6).

**Table 4-6**: VIF Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treat</td>
<td>60.73</td>
<td>0.016467</td>
</tr>
<tr>
<td>Students</td>
<td>55.85</td>
<td>0.017906</td>
</tr>
<tr>
<td>Refugees</td>
<td>30.61</td>
<td>0.032673</td>
</tr>
<tr>
<td>PopGrow</td>
<td>8.07</td>
<td>0.1239</td>
</tr>
<tr>
<td>Dist</td>
<td>7.39</td>
<td>0.135309</td>
</tr>
<tr>
<td>Permits</td>
<td>4.57</td>
<td>0.218732</td>
</tr>
<tr>
<td>WPC</td>
<td>2.5</td>
<td>0.39931</td>
</tr>
<tr>
<td>Mean VIF</td>
<td>24.25</td>
<td></td>
</tr>
</tbody>
</table>

Note: LnMENA & GDP omitted because of collinearity

Source: Zaid Alfayez, 2018
4.2.3 Pearson Correlation

The correlation matrix has the similar results as the previous model’s matrix. However, there is a slight variation in the population growth variable due to the form of use, but it still does not change the results of collinearity. In general, Variables that are highly correlated are the number of Syrian permits with the number of refugees and the number of students and treatment cases in public hospitals. Again, the number of students and treatment cases in public hospitals are highly correlated (Table 4.7). Thus, the same variables in Model One are dropped from the model due to collinearity.

Table 4-7: Pearson Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Refugees</th>
<th>PopGrow</th>
<th>Permits</th>
<th>Students</th>
<th>Dist</th>
<th>GDP</th>
<th>Instability</th>
<th>Treat</th>
<th>WPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refugees</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PopGrow</td>
<td>0.3363</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permits</td>
<td>0.8209</td>
<td>0.6470</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>0.6318</td>
<td>0.0148</td>
<td>0.8188</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dist</td>
<td>-0.4488</td>
<td>-0.0004</td>
<td>-0.6106</td>
<td>-0.5331</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>-0.6634</td>
<td>-0.2909</td>
<td>-0.0541</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instability</td>
<td>0.3885</td>
<td>-0.0159</td>
<td>-0.0455</td>
<td>0</td>
<td>-0.7427</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treat</td>
<td>0.6177</td>
<td>0.0112</td>
<td>0.8616</td>
<td>0.9679</td>
<td>-0.6445</td>
<td>-0.0181</td>
<td>0.0103</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>WPC</td>
<td>-0.2579</td>
<td>-0.0143</td>
<td>-0.4605</td>
<td>-0.3311</td>
<td>0.6628</td>
<td>0.0478</td>
<td>-0.0168</td>
<td>-0.4539</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Zaid Alfayez, 2018

4.2.4 Test of Normality

4.2.4.1 Shapiro-Wilk W test for Normal Data

In this model (Table 4.8), the P value for the dependent variable (employment) is 0.000 and the residual is 0.56485. Although the P values for the residual is normally distributed, it is less than the significant level in the dependent variable. Therefore, the dependent variable is not normally distributed. In this case we reject the null hypothesis indicating the data was normally distributed. Consequently, additional tests will be used to clarify the issue.
Table 4-8: Shapiro- Wilk W test for Normal Data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>W</th>
<th>V</th>
<th>Z</th>
<th>Prob&gt;z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>84</td>
<td>0.89429</td>
<td>7.553</td>
<td>4.442</td>
<td>0.00000</td>
</tr>
<tr>
<td>Resid</td>
<td>84</td>
<td>0.98701</td>
<td>0.928</td>
<td>-0.163</td>
<td>0.56485</td>
</tr>
</tbody>
</table>

Source: Zaid Alfayez, 2018

4.2.4.2 P-P and Q-Q plot tests for Normal Data

The P-P test and Q-Q test are used to investigate the normality issues within the data. Both the P-P and the Q-Q plots of the residual show a slight deviation in the middle and the tails but is still considered normally distributed (Figure 4.8 and Figure 4.11). On the other hand, both plots of the dependent variable for the P-P and Q-Q test demonstrate a severe deviation from the middle and the tails (Figure 4.9 and Figure 4.12). Therefore, a log transformation was used to correct for the deviation issue that resulted in better results and a more linearity in the dependent variable. However, the log transformation better corrected the data in the middle as it still shows some deviation at the tails (Figure 4.10 and Figure 4.13).
Figure 4-8: P-P Normality Test for Residual

Source: Zaid Alfayez, 2018

Figure 4-9: P-P Normality Test for Dependent Variable

Source: Zaid Alfayez, 2018
Figure 4-10: P-P Normality Test for Dependent Variable After Log Transformation

Source: Zaid Alfayez, 2018

Figure 4-11: Q-Q Normality Test for Residual

Source: Zaid Alfayez, 2018
Figure 4-12: Q-Q Normality Test for Dependent Variable

Source: Zaid Alfayez, 2018

Figure 4-13: Q-Q Normality Test for Dependent Variable After Log Transformation

Source: Zaid Alfayez, 2018
4.2.4.3 Kernel Density Estimate

Kernel Density Estimate was used to test for normal density in this model. While the residual plot shows a normal density with slight deviation (Figure 4.14), the dependent variable plot indicates a deviation in the left side (Figure 4.15) which represents more frequencies taking place in the right side. Thus, it has skewed distribution. Using the log transformation, the distribution was still skewed but more frequencies were moving closer to the normal distribution (Figure 4.16).

*Figure 4-14: Kernel Normality Test for Residual*

![Kernel density estimate](image-url)

*Source: Zaid Alfayez, 2018*
Figure 4-15: Kernel Normality Test for Dependent Variable

Figure 4-16: Kernel Normality Test for Dependent Variable

Source: Zaid Alfayez, 2018
4.2.5 Test of Homoscedasticity

While Homoscedasticity test indicates the existence of a linear relationship within the variables, Heteroscedasticity occurs when the variance of the error term is not equally distributed. Figure 4.17 shows that the error term in this sample is not distributed randomly and a Heteroscedasticity exists. Therefore, a log transformation and a robust that generates consistent standard errors were used to correct for the issue that resulted in a better distribution (Figure 4.18 and Figure 4.19).

Figure 4.17: Homoscedasticity Test for Dependent Variable

Source: Zaid Alfayez, 2018
Figure 4-18: Homoscedasticity Test for Log Transformed Dependent Variable

Source: Zaid Alfayez, 2018

Figure 4-19: Homoscedasticity Test for Robust Transformed DV

Source: Zaid Alfayez, 2018
4.3 Selection of Multiple Regression Models

4.3.1 Model Selection Tests (Model One)

The economic impact of refugees on a host country was measured by analyzing the relationship between the dependent variables (employment and unemployment rate) and the refugees’ number as the main independent variable. Using Panel Data analysis, the association among the refugees’ numbers in each governates for a certain year was studied. Moreover, other independent variables that could have an effect on the dependent variables were initially included in the models. However, throughout the model building process many of these variables were dropped for different reasons such as high correlation. Moreover, since the Panel Data allows for several types of analysis, different models were run after which some tests were used to determine the best fit model for the data. The first test is the Breusch and Pagan Lagrangian Multiplier LM that was used to choose between the Pooled Ordinary Least Square (OLS) and the Random Effect models. Table 4.9 reflects the results for model one (unemployment rate) and it shows a variance across the different governorates. Consequently, as the test is significant, the null hypothesis is rejected, and the Random Effect model should be used over the OLS regression.
\textit{Table 4-9: ML Test for Random Effect}

\begin{tabular}{|c|c|c|}
\hline
 & Var & \text{sd} = \text{sqrt (Var)} \\
\hline
Unemploy e & .023586 & .1535773 \\
u & .0111952 & .1058072 \\
\hline
\textbf{Test: Var(u) = 0} & & \\
\hline
\textbf{chibar2(01) = 8.78} & & \\
\hline
\textbf{Prob > chibar2 = 0.0015} & & \\
\hline
\end{tabular}

\textit{Source: Zaid Alfayez, 2018}

The second test is the Hausman test that is used basically to select either Fixed Effect Model or both (Fixed and Random Effects). Table 4.10 provides a significant variation upon which, the null hypothesis is rejected. Therefore, the Fixed Effect model and the Random Effect are not equal, and the Fixed Effect must be used in this model. However, although the goodness of fit showed by the $R^2$ is higher in the Random Effect regression, the Fixed Effect model was still used based on the Hausman test results. In addition to the model selection process stated, highly correlated and multicollinear variables were dropped during the modeling process including the Students Number, the Political Instability, and the distance. Furthermore, Syrian employment permits variable was dropped due to data availability. Accordingly, the final Fixed Effect model is shown below:

\textbf{Fixed Effects}

\begin{equation}
(1) \ln(\text{Unemployment Rate})_{it} = \beta_0 + \beta_1 \text{Refugees}_{it} + \beta_2 \text{Population}_{it} + \beta_3 \text{WPC}_{it} + \beta_4 \text{GDP}_{it} + \alpha_t + U_{it} \quad (6)
\end{equation}
4.3.2 Regression Model Result

This model investigates the dependent variable, Unemployment rate and the main independent variables, refugees’ number, population, GDP, and water per captain. The analysis is used to capture the correlation between the variables and the results indicated that this model has three significant variables as shown in Table 4.11. The Unemployment rate is the dependent variable and it is affected by several factors, independent variables. Since the Hausman test result was significant, the Fixed Effect model is used and interpreted. The refugees’ numbers are significant at the 10% level, therefore, a 10% increase in the number of refugees’ results in a 0.2% decrease in unemployment rate. Thus, more refugees lead to a lower rate of unemployment. On the other hand, a 10% increase in population results in about 3.6% increase in unemployment rate at the 10% level significance. In addition, a 10% increase in the Water per capita usage results in a 4.0% decrease in unemployment rate at a significance level of 5%. Finally, the national GDP is not significant in this model. On the other hand, the refugees tipping point that is
132943 is not significant. The number of refugees initially starts to affect the unemployment percent negatively, but after it reaches about 1.4% of the total population it starts to have a positive relationship with the unemployment rate (Figure 4.20). The fitted value represents the unemployment rate.

*Figure 4-20: Refugees Tipping Point on Unemployment*

(Source: Zaid Alfayez, 2018)
Table 4-11: Unemployment Regression Result

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Quadratic</th>
<th>(2) Fixed Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refugees</td>
<td>-1.81e-06*</td>
<td>-0.0232*</td>
</tr>
<tr>
<td></td>
<td>(9.66e-07)</td>
<td>(0.0138)</td>
</tr>
<tr>
<td>Refugees^2</td>
<td>6.82e-12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.73e-12)</td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td></td>
<td>3.568*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.000)</td>
</tr>
<tr>
<td>WPC</td>
<td></td>
<td>-0.403***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.182)</td>
</tr>
<tr>
<td>GDP</td>
<td></td>
<td>5.184</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3.145)</td>
</tr>
<tr>
<td>Constant</td>
<td>2.670***</td>
<td>-79.70</td>
</tr>
<tr>
<td></td>
<td>(0.0205)</td>
<td>(49.26)</td>
</tr>
<tr>
<td>Observations</td>
<td>84</td>
<td>84</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.061</td>
<td>0.31</td>
</tr>
<tr>
<td>Number of Govern</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Hausman</td>
<td>YES</td>
<td></td>
</tr>
</tbody>
</table>

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Zaid Alfayez, 2018
4.3.3 Discussion and Analysis (Model One)

4.3.3.1 Hypothesis One

Ho: There is no relationship between the number of refugees and the economy.

Model one shows that there is an association between the number of refugees and the economic factor, unemployment rate. Although the refugee’s number lower the unemployment rate, the decrease in unemployment rate is minor. Hence, although Jordan is benefiting from hosting the Syrian refugees, the economic advantage seems to be slight. Based on the literature, the UNHCR Standing Committee, 1997 stated that the benefits from the refugees are due to their need for services and amenities provision as well as the international community donations, which results in decreasing the unemployment rate in the local community. Local communities would use the received donations to develop camps and provide services that should create more jobs for the residents and reduce the unemployment rate. However, there are many other international benefits that might be limited to Jordan due to its specific characteristics. For example, Jordan that has a high rate of education and highly skilled Jordanian population might not benefit from the high skilled refugees, which might increase the unemployment rate. Also, other sources for providing economic benefits such as language tutoring will not benefit Jordan like other communities since all refugees speak the same language of Jordanians. Therefore, benefiting from refugees might vary from one country to another based on its unique features. Despite the low level of negative relationship but positive impact, which decreases the unemployment rate, we are able to reject the null hypothesis and prove that a relationship exists between the refugees’ number and the unemployment rate, which in return affect the economy. In contrast, the increase in the population number has a positive relationship but a negative impact since the more population results in more unemployment rate. This is consistent with the
literature and the expected relationship. In general, developing countries that have limited development opportunities would not be able to generate more jobs for the increased population in the labor market. Moreover, poor applications of regulations result in both illegal labors including underage workers, which leads to increasing the official unemployment rate. Although significant at the 10% level, population impact is considered major with a 4% increase in unemployment rate.

In addition, the water per capita usage has a negative relationship but a positive impact on the unemployment rate. The development of a city required the existence of water otherwise arid lands would be highly developed. The increased level of water leads to more development, project creation, and job opportunities. Therefore, the increased level of water lowers the level of the unemployment rate and positively affect the economy. Finally, although it has a positive relationship but negative impact, the national GDP has no effect on the unemployment rate on the governorate level.

4.3.3.2 Hypothesis Two

Ho: There is a tipping point where the number of refugees reverse the impact once it reaches a certain percent of the total population.

In order to look for the turning point, tipping point, where the number of refugees reverse the impact once it reaches a certain percent of the total population, the quadratic function was used. According to the regression results, the number of refugees has a negative relationship but a positive impact at the beginning, after which the impact is reversed one it reaches the tipping point. Although the relationship is reversed, the quadratic effect is not significant. Therefore, no tipping point is considered. Thus, we are able to reject the null hypothesis and accept the alternative hypothesis since the turning point is not significant.
4.3.4 Model Selection Test (Two)

The economic impact of refugees on a host country was measured in the second model by analyzing the relationship between the dependent variable (employment) and the independent variable that some of them were dropped during the model building process. Furthermore, several tests were used to determine the best fit model for the data using Panel Data analysis. The model building process and tests followed the same procedure form the first model. The Breusch and Pagan Lagrange Multiplier (LM) was significant as indicated in Table 4.12. therefore, the null hypothesis is rejected, and the Random Effect model should be used over the OLS regression.

Table 4-12: ML Test for Random Effect

<table>
<thead>
<tr>
<th></th>
<th>Var</th>
<th>sd = sqrt (Var)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employ</td>
<td>.9941749</td>
<td>.9970832</td>
</tr>
<tr>
<td>e</td>
<td>.0073595</td>
<td>.0857873</td>
</tr>
<tr>
<td>u</td>
<td>.2286954</td>
<td>.4782211</td>
</tr>
</tbody>
</table>

Test: Var(u) = 0

*chibar2(01) = 226.03*

Prob > chibar2 = 0.0000

Source: Zaid Alfayez, 2018

The Hausman test that is used to choose between Fixed Effect Model and Random Effect Model indicated that the result was significant, and the null hypothesis was rejected (Table 4.13). Hence, the Fixed Effect model and the Random Effect are not equal, and the Fixed Effect must be used for this model although the goodness of fit showed by the $R^2$ is higher in the Random Effect regression. Once again, highly correlated and multicollinear variables were dropped
through the modeling process including the Students Number, the Political Instability, the WPC, and the distance. In addition, Syrian employment permits variable was dropped as a result of the data availability. Therefore, the final Fixed Effect model is shown below:

**Fixed Effects**

\[
\ln(\text{Employment}_{it}) = \beta_0 + \beta_1 \text{Refugees}_{it} + \beta_2 \text{Population}_{it} + \beta_3 \text{GDP}_{it} + \beta_4 \text{WPC}_{it} + \alpha_i + U_{it} \quad (7)
\]

**Table 4-13: Hausman Test**

<table>
<thead>
<tr>
<th></th>
<th>(b)</th>
<th>(B)</th>
<th>(b-B) Difference</th>
<th>Sqrt (diag(V_b-V_B))</th>
<th>S.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refugees</td>
<td>-.0283232</td>
<td>-.0326839</td>
<td>.0043608</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PopGrow</td>
<td>.0283808</td>
<td>.0278601</td>
<td>.0005206</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treat</td>
<td>-.1527428</td>
<td>.5887913</td>
<td>-.7415341</td>
<td>.1431223</td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>1.019379</td>
<td>1.068479</td>
<td>-.0490998</td>
<td></td>
<td></td>
</tr>
<tr>
<td>chi2(4) =</td>
<td>26.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob&gt;chi2 =</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Zaid Alfayez, 2018*

**4.3.5 Regression Model Result**

This model examines the dependent variable, Employment numbers and the independent variables, refugees’ number, population, water per capita, and GDP. The developed model shows that only three variables out of four independent variables are significant on different levels (Table 4.14). Since the Hausman test result was significant, the Fixed Effect model is used and interpreted. The refugees’ numbers are significant at the 1% level, consequently, a 10% increase
in the number of refugees’ results in a 0.3% increase in employment. Therefore, more refugees lead to a higher number of employments. In contrast, a 1% increase in population results in about 8.2% decrease in employment numbers at the 1% level significance. Moreover, a 1% increase in the GDP results in a 11.3% decrease in employment. This is also significant at the 1% level. Finally, the water per capita usage is not significant. On the other hand, the refugee’s quadratic function is significant at the 5% level and it decreases the employment by 6.7%. Consequently, the tipping point is 150,150. The number of refugees initially starts to affect the employment percent in the sample positively, but after it reaches about 150,150 it starts to have an inverse effect on the employment numbers (Figure 4.21). The fitted value represents the employment percent.

*Figure 4-21: Refugees Tipping Point*

*Source: Zaid Alfayez, 2018*
Table 4-14: Employment Regression Result

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Quadratic</th>
<th>(2) Fixed Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refugees</td>
<td>2.01e-05*** (5.62e-06)</td>
<td>0.0325*** (0.0110)</td>
</tr>
<tr>
<td>Refugees$^2$</td>
<td>-6.68e-11** (2.75e-11)</td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td></td>
<td>-8.232*** (1.594)</td>
</tr>
<tr>
<td>WPC</td>
<td></td>
<td>-0.119 (0.145)</td>
</tr>
<tr>
<td>GDP</td>
<td></td>
<td>-11.25*** (2.507)</td>
</tr>
<tr>
<td>Constant</td>
<td>7.247*** (0.119)</td>
<td>197.6*** (39.27)</td>
</tr>
<tr>
<td>Observations</td>
<td>84</td>
<td>84</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.25</td>
<td>0.83</td>
</tr>
<tr>
<td>Number of Govern</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Hausman</td>
<td></td>
<td>YES</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Source: Zaid Alfayez, 2018
4.3.6 Discussion and Analysis (Model Two)

4.3.6.1 Hypothesis One

Ho: There is no relationship between the number of refugees and the economy.

Model two shows that there is a correlation between the number of refugees and the economic factor, employment. In fact, the refugee’s number increase the employment and this increase is statistically highly significant. Therefore, Jordan is actually benefiting from hosting the Syrian refugees which provides more job opportunities. Once again, this is consistent with the literature that indicates the need for services and amenities provision, which results in more employment. Moreover, the international community donations give the country the potential to develop new projects, thus, benefiting the local community and increasing employment numbers. Accordingly, since there is a positive relationship between the refugees’ number and the employment number, we are able to reject the null hypothesis and prove that an association exists between the refugees’ number and the employment, which has a direct and indirect effect on the economy.

In comparison, the increase in the population number has a negative relationship with the employment numbers as higher population results in more employment numbers. This is constant with the literature and the predicted relationship. Due to the limited development opportunities in the developing countries and poor applications of regulations, increased population put pressure on the labor market, which leads to lower percent of employment. Furthermore, this impact is highly significant statistically and economically and the population impact on the employment numbers is considered major.
Moreover, the Gross Domestic Product has a negative relationship with the employment numbers. Indeed, the increased level of GDP slow the level of economic development, project formation, and job opportunities. Consequently, the increased level of GDP decreases the level of the employment and negatively affect the economy. Also, this effect is not only highly significant statistically, but is economically significant as well and the impact on the employment numbers is considered major. Lastly, although it has a negative correlation, the water per capita usage has no effect on the employment.

4.3.6.2 Hypothesis Two

Ho: There is a tipping point where the number of refugees reverse the impact once it reaches a certain percent of the total population.

The turning point, tipping point, where the number of refugees reverse the impact once it reaches a certain percent of the total population is examined using the quadratic function. According to the regression results, the number of refugees has a positive correlation at first when the refugees arrived at the country. This is probably as a result of the increased need for the expansion of the services and infrastructure such as education, health care, and accommodation. However, this impact was reversed when the number of the refugees reached the tipping point, 150,150. Certainly, not only the relationship was reversed but it also was significant. This is possibly due to the fact that the high increasing number of refugees who live outside the camps started to compete against the local residents especially the low skilled labor. Moreover. The instability situation in the region caused a closure of many businesses in different sectors, which led to shrinking employment opportunities. Furthermore, the international community donations were significantly decreased, and the economic burden was increased on the host country, Jordan. This was another reason for slowing down of projects and decreased employment
opportunities. Although there is a tipping point, the overall results are positive and shows that the refugees numbers increase the employment. Based on the existence of the tipping point, we are unable to reject the null hypothesis since the turning point is significant.

4.4 Summary

This study includes two models that measures the refugees’ impact on the economic factors, employment and unemployment rate. The model building, and selection processes resulted in a drop of many variables due to multicollinearity and perfect collinearity such as hospital treatment cases, political instability, number of students in school, and distance. After that, the best model that fits the data was selected using the proper tests. In both models the Fixed Effect regression was used. In addition, a quadratic function was used to measure the existence of any tipping point that reverse the effect.

The results of both models provided an evidence for the association between the dependent variables and the main independent variable, the refugees numbers. In both models, the unemployment rate and the employment numbers, the refugees’ number has a positive impact on reducing the unemployment rate and increasing the employment in Jordan. Additionally, there was an agreement in the effect of population and GDP over the two dependent variables since they have increased the unemployment in the first model and decreased the employment in the second model although GDP was insignificant in the unemployment model. Alternatively, the water per capita was only significant on the unemployment rate model and had a positive impact since it has decreased the unemployment rate. Accordingly, we were able to reject both hypotheses in the unemployment rate model since a relationship with the refugees’ number existed and there was no significant tipping point in the model. On the contrary, we were able to
reject the first hypothesis in the employment numbers model since there is a relationship with the refugees’ numbers but were unable to reject the second hypothesis as a tipping point existed.
Chapter 5

Policy Recommendations and Conclusion

5.1 Findings Summary

This study justifies the conflicting discussion of the positive and negative impacts. Therefore, it adds to the urban planning and political science literature. This study provides evidence of the economic impact of refugees on a host country. Refugees appear to have an effect on unemployment rate and employment numbers. The study shows that unemployment rate is reduced, and employment numbers increase with the increase in refugees. In addition, it proves that a tipping point for the employment numbers exists as refugees initially bring a positive impact on the employment numbers but once the number of refugees reaches a certain percent of the population, this effect is reversed and becomes negative. The study also clarifies the contradictory literature that sometimes indicates positive impact of refugees and other times insist on the negative impact. In fact, according to the research both effects could take place consecutively based on the intensity of the number of refugees. Also, to the researcher’s best knowledge, this study is the first to study the refugees’ effect on the governorates/ states level empirically and investigates the turning point where the impact is reversed.

The employment numbers and unemployment rate are the two economic factors used to measure the economic impact. The results on both models used in this study highlight that refugee numbers have a positive impact on decreasing the unemployment rate and increasing the employment as demonstrated in the case study of Jordan. Therefore, a clear evidence is established for the significant connection and impact of the refugees as opposed to some studies in the literature.
Furthermore, other factors have affected the economic conditions including population, GDP, and water per capita use. Surprisingly, both population and national GDP have increased the unemployment rate and lowered the employment numbers. Thus, the negative impact of increased population could be a result of the way the population surveys are completed that take into account the number of refugees. Moreover, the result of the GDP could be reversed because it is on the national level and cities with lower populations and economic activities can be hurt with the inflated GDP. On the other hand, the water per capita has contributed to lowering the unemployment rate in the governorates level since the more water per capita use generates more projects and employment opportunities. Moreover, the employment numbers had a turning point where the impact of refugees was reversed when the number of refugees reached 150,150 before it started to generate a negative influence.

5.2 Recommendations and Policies

This study provides an overview of the refugees’ literature and a quantitative analysis of the impact of refugees by examining the effects of refugees on the economy of the twelve governorates in the nation of Jordan upon which the recommendations are based. This study provides insight into how governments should approach the creation of policies and the setting of limitations on refugees as this problem continues to grow on an international scale. The government of the refugee’s host country should consider general refugees’ policies. This research addresses the effect of refugees on the host country. Jordan was used as the case study because it hosts about 1,400,000 million Syrians including about 670,000 registered as refugees. It is hoped that the findings in this study can be used by all nations addressing issues and policy formations addressing refugees and they should carefully study options and alternatives available to them to mitigate the impact.
5.3 Policy Implications for the Case Study, Jordon

The number of refugees positively affects the economic situation in the host country measured by the unemployment rate and the employment numbers. However, as the number of refugees starts to increase, the impact turn into a negative one once it reaches the tipping point of that country. Therefore, in order to control for the number of refugees and not reach the tipping point the government of the host country should apply policies that help achieve this goal and control the numbers of refugees. For example, when a country faces an increasing number of refugees, the government must better document the related statistics to be able to analyze the data and provide adequate solid empirical evidence as to the immediate impact of refugees. In the case of Jordan, by doing so, the government would be undoubtedly able to identify the tipping point and form policies that help the government determining the maximum capacity after which the country is not able to admit more refugees. Like the case of Jordan, the total number of refugees should not reach more than the tipping point percent of the total population since this could result in reversing the impact and generating a negative one. Therefore, a country must know its capacity and limit and find its tipping point. In addition, identifying the tipping point can clearly guide the international community that is providing support and aid to be more efficient and effective. Moreover, the documentation process can be done through generating a specialized entity that is in charge of personal data collection as refugees cross the borders, data analysis, aid management, and all other inquiries related to the refugees. Currently, these are done within different locations and organizations/ entities in Jordan and a unified system is needed.

In the case of Jordan, the population growth is inconsistent and unstable due to the regional conflicts and wars. This creates challenges to the community and results in a negative
impact on the job market instead of increasing job opportunities. Therefore, the government should take several procedures to reduce the effect of the inflated population due to the increased number of refugees. For example, since some employers may prefer using cheap labor, refugees are hired instead of locals. The government, specifically the Ministry of Labor and Ministry of Interior in the case of Jordan, should control the labor market and enhance the regulations implication in this filed. Also, cities should cooperate with the responsible entities to manage the labor market and arrange for the refugees permits. Using specific regulations for issuing the permits is important since the government can track the refugees’ employment and make them pay taxes instead of working illegally and not pay taxes.

In addition to using the tipping point to control for the population growth and the negative impact of refugees’ numbers, the inflated GDP is causing a negative impact on the country. Indeed, the high number of refugees is causing abnormal population growth, causing inflation, which affects the GDP inversely. Therefore, controlling the unorganized population growth due to refugees can help reduce the GDP effect. In fact, the population growth is generating more jobs in general, but the source of population growth is the problem since the refugees might have an effect on the job market. Consequently, the government can use some policies to mitigate this impact. For instance, refugees might be considered alien residents for the purpose of tax paying after they spend more than five years within the country. This should improve the relationship with the GDP.

Moreover, the private sector under the umbrella of the government should focus on developing the refugees’ sites and turn them into hot spots for investment that requires the qualifications of the refugees. This way, instead of leaking to the local job market, refugees will stay in their camps and work in developing the camps. In general, the camps that became city
like could require different types of employment for various transactions and progress.

Nevertheless, strict control of refugees leaving their camps is required to avoid looking for outside employment. Moreover, the private sector along with the international community and the nonprofit organization should take mutual responsibility and collaborate to supply countries with limited resources, such as Jordan; with the needed resources to be able to meet the high demand resulted from the refugees’ pressure such as water usage. Since the water per capita usage increases the positive impact on the economy, generates more projects, and reduce unemployment, the government should invest in regional water security and provision plans and policies to mitigate the effect of the water shortage. In general, the international community should be required to dedicate a fixed aid to support countries like Jordan that is limited in resources but still among those taking in the greatest number of Syrian refugees.

Other policies for mitigating the refugees’ impact can be implemented with the aid of the international community such as the United Nations United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA). The Jordanian government, like other host countries, should work with the United Nations and the international community to distribute the refugees equally between rich countries. In addition, the UNRWA should include all refugees around the world in their budget and under their supervision. Furthermore, if feasible, the international community and the United Nations could create refugees’ camps inside the conflict zone next to the borders of the adjacent countries to protect the residents instead of running away from their country to another one. This can reduce the load on other countries/ governments and lower the refugees’ impact since these camps can take a high percentage of the refugees.

In conclusion, there is a need for dropping the traditional perspectives in humanitarian activities, where refugees should not be considered as a dependent group. The focus of assistance
should be helping displaced persons restart their normal lives as they have aspirations, skills, and talents. Similarly, there is a need for adopting market-based approaches, as refugees are part of the economic model of the host country. The governments should also rethink the role of the private sector, where the focus should not only be compassion and corporate responsibilities, but also considered as a group for business interests because refugees play an essential role in capital and financial markets. The United Nations must take an immediate action to allocate refugees evenly, provide, and manage the required aid and assistance for the host country. Thus, refugees hosting countries should use universal refugees’ strategies supported by the international community.

5.4 Study Limitations

This study has different limitations. First, some variables were eliminated from the models as the data was missing for the specific variable. It was hard to find data on Jordan at the governorates level, especially the economic indicators. Second, time limitation is another major restriction of the study. A longer time frame for the study might show more changes in the indicators. Also, due to the nature of the study, location, and sensitivity, economic and refugees’ data was extremely hard to access and acquire.

5.5 Future Studies

This research focus on the economic impact of refugees on a host country, using Jordan as a case study and using the governorates of Jordan to investigate the refugees’ impact on the economy. The economic factors used in this study are employment numbers and unemployment rate. Future studies can expand this research on different levels comparing countries or regions to provide more evidence on the economic impact of refugees on a host country. Also, using a longer time frame can provide other results and allow for the use of lagged effect. On the other
hand, this study focuses on the economic effect, but future studies might focus on different aspects of refugee impacts such as socioeconomic effects. Furthermore, more detailed studies can be used to determine the effect on specific gender or age range. Different employment sectors can be studied to identify the most effected industry. Finally, other economic indicators can be sued if the study is prepared on the national level to identify the overall effect such as the GDP.

In conclusion with wars ongoing in several parts of the world, a number of countries are absorbing significant numbers of refugees. This study gives insight into the actual impact for countries accepting refugees to help policy makers determine how to effectively deal with this issue. In addition, this study is used to determine the true consequences of significant refugees to an economy to provide a policy to overcome these challenges. Jordan is used as a case study as it presents a unique opportunity: it is a country that has absorbed several phases of large numbers of refugees; yet, it is continuing to receive more refugees from surrounding countries because of its neutrality. Although the study analyzes the case study of Jordan, this research can be applied to other areas facing a large influx of refugees such as Europe is happening. The results of this study can be used to set policies concerning refugees in other countries.

The refugees’ numbers were proved to have a significant positive impact on the employment numbers and the unemployment rates since they decreased the employment numbers and increased the unemployment rate. In addition, the employment numbers had a tipping point at 150,150 where the impact was reversed to become negative. Furthermore, the population and the water per capita indicated a positive impact on the host country as it increased the employment numbers and decreased the unemployment rate. However, the GDP had an inverse relationship with both the employment numbers and the unemployment rate. This study
provided a concrete evidence about the existence of the relationship between the refugees’ numbers and the economic factors and indicators. Thus, the economic impact of the refugees on a host country is proved and has an added value to the urban planning and political science literature.
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Biography

Zaid Ghaleb Alfayez holds a Ph.D. degree from The University of Texas At Arlington, in Urban planning and public policy. His research interest focuses on the economic impact of refugees on a host country. He gained his master’s degree in Urban Planning from the University of Arizona, with a focus on Infrastructure Improvement in Poor Areas and his bachelor’s degree from Mu’tah University Jordan, on B.A, Administration Sciences, also National Diploma Military Sciences Mu’tah University Jordan.

Zaid is a Brigadier General at Royal Guards Liaison at Royal Protocol, the Royal Hashemite Court, Amman, Jordan. Worked at Royal Protocol for His Majesty King Abdullah II of Jordan. Responsibilities related to Royal Protocol planning and community development. Arranged for the King’s national and international public and political activities, events, and meetings. Facilitated security arrangements for His majesty with the Royal Guards. Arranged different conferences at the national and international level and arranged for the Head of States visits to Jordan

He worked as Aide-de-camp to His Royal Highness Prince Gahzi bin Mohamed. Organized His Royal Highness visits to the Jordanian tribes and worked on community development. Communicated with Jordanian tribes to discuss their issues and needs and allocating the available resources to help them overcome the challenges in their regions including education, health insurance, land use and zoning issues. In addition to facilitating communication with tribal people in Jordan and designate suitable strategies and policies to organize and resolve their issues using planning and management experience. Worked in different Military tasks in Jordan Army, Royal Guards.
He worked on a project for Jerome Town in Spring 2006. Prepared a comprehensive plan for Jerome town, Arizona. Worked on the land use part of the plan which included data collection, data analysis, creating objectives and goals to finally come up with adequate recommendations for the town. Zaid also worked on A Preliminary Study for Grant Road Corridor Project, Fall 2006 in Tucson, Arizona. Prepared a document that the City of Tucson will be using in their Grant Road Project Plan as an introductory data document. The document included data collection, data analysis and some recommendations of best practices used in around the world when widening an arterial thoroughfare.