

THESES OF THE DOCTORAL (PhD) DISSERTATION
THE INTEGRATION OF SYRIAN REFUGEES INTO THE
JORDANIAN LABOR MARKET

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1. INTRODUCTION OF THE TOPICS AND OBJECTIVE

Given the late 1970s, the significant impact that large-scale evacuation can have on the economic, political, and social lives of destination governments has been recognized by global society (Hansen, R. 2011). The international media reports on extraordinary vehemence, great human suffering, and destruction almost daily in places such as Ukraine, Iraq, Syria, Afghanistan, and other nations. The region has essentially changed due to these disagreements in terms of politics, economy, and demographics. The origin of these conflicts is for economic, social, cultural, and political reasons, and ideological schisms are profoundly ingrained (Rother et al., 2016). Further reasons may also cause or be a controlling issue in pushing people to escape their country of origin, such as the impacts of climate change, dryness, starvation, and environmental disasters such as earthquakes and flooding (Thayyib Sahini, 2009 ; Refai et al., 2018).

In reality, the bulk of the globe's displaced reside in the global south (developing countries), where they are sheltered by host nations (Cristea & Grabara, 2019). Four out of five refugees settle in nations around their country of birth. For example, the countries directly surrounding Syria are the largest host countries for Syrian refugees. Jordan, Turkey, and Lebanon host some of the highest numbers of Syrian refugees from any region on the globe (Içduygu & Nimer, 2020). Usually, those are mostly low- and middle-income countries in the Third World, which could have insufficient funding to meet the protection needs and security requirements of those vast numbers of displaced people (Abbas et al., 2018).

While several evacuees flee their countries of birth, considerably more are recognized as internally displaced people when they are forced to leave their country of origin (IDPs) (Alobo & Obaji, 2016). Mostly, a relatively limited percentage of refugees are offered a key solution to their condition of displacement, whether through being able to return to their country of origin, by integration into the host nation, or resettlement in a third country (UNHCR, 2019).

The movement of refugees is frequently a complex process involving many factors, such as the reason for the massive movement from the country of origin and policies implemented by destination countries. Following the arrival of the host country, the majority of issues arose regarding the integration of refugees and their participation in the labor market.

However, before coming to the stage, countries must also make clear statements about ambiguity for refugees. In today's world, it is still not clear who is a migrant, refugee or asylum seeker.

First, making clear definitions will remove misunderstanding of definitions. On the other hand, confusing groups (migrants, refugees, and asylum seekers), whether by terminology or otherwise, is risky and damaging to refugee protection. Because certain illegal immigrants abuse the asylum system, the public's perception of migration is tainted with criminality, and in some cases, it is entirely devoid of its beneficial features while leaning toward control. The definitions of each group are listed below:

There should be a clear statement that a refugee is not a migrant. Refugees are strictly defined in international law as people who escape from any form of persecution or political conflict in their country of origin. However, in regard to being a migrant, there is plenty of evidence that there is still no such precise and universal description. Even so, it can be defined as a person who left his or her country to seek better life opportunities to enhance their income for themselves and their families. It will not be wrong to say that the reasons behind being a migrant are mostly related to economic factors. The migratory movement can be outside the country of residence or inside the same country. If the movement is out of the country, it is called international migration; if it is inside the same country, it is called national migration. This is also another reason why refugees are not migrants because refugees cannot be in the same country as migrants.

For asylum seekers, the situation is more complex. Those people also escape from serious persecution and human rights violations. What sets those people apart from refugees is the process of applying in the country of destination. When a person applies for asylum, the country of origin must first confirm that the reasons for seeking asylum are valid. Notoriously, sometimes it can result in deportation. If not, this person may have to wait months or even years to obtain refugee status. All of these definition differences are important not only for better understanding but also for those people's and policies' future labor market participation.

Thus, this dissertation focuses on the specific group of "Syrian Refugees in Jordan" and its effects on their labor market participation. The demographic characteristics of refugees,

including their gender, age, marital status, and level of education, restrict these effects. The overall dissertation examines the influence of different underlying demographic factors on the labor market participation and involvement in different jobs of Syrian refugees in Jordan. The empirical evidence behind this is presented in the literature review. Those differences and how they affect refugee labor market job participation are discussed and examined based on three different theories (human capital, social capital, and dual labor market theories).

Each model is created based on different equations and separately tested on the database gathered from the Jordanian Department of Statistics. In preparation for the 2017 census, the Jordanian Department of Statistics began gathering information on Syrian refugees. Since then, significant work has gone into building databases of Syrian refugee flows. In collaboration with the Ministry of Planning and International Cooperation, the FAFO Foundation, and the United Nations High Commissioner for Refugees, the Jordanian Department of Statistics is striving to increase the size of the country's refugee database (UNHCR). Unfortunately, the database contains much missing information that could not be examined in the dissertation. Apart from the specific country or ethnicity, the process of refugee movement and settlement requires a deeper understanding and an expanded database. However, this dissertation is an excellent example of shedding light on the effects of Syrian refugees on labor market participation in Jordan and their challenges.

1.1. Research Objectives

As conflicts erupted in many parts of the world, a massive number of refugees fled their home countries in search of safety and a new life in host countries.

Refugee studies became very important and necessary to interpret and understand the phenomenon of refugeehood and its impacts on the refugees themselves and the host countries socially, politically, and, of course, economically and to facilitate and ease refugee integration in the host countries and give them hope for better living conditions in terms of education, employment, and health. Scholars have made numerous attempts to determine how the phenomena of forced migration and refugeehood impact and reflect on host countries. More research is critically needed, particularly in terms of gathering information about how to integrate refugees into the education system and labor markets in host countries, because earlier research studies have been limited in scope.

The majority of Syrian refugees who obtained an employment status in Jordan have primarily low-skilled or lower-wage jobs, which are often in the informal sector. However, when they are assigned to jobs, their socioeconomic characteristics are ignored, and there is no clear vision of their integration process into the Jordanian labor market or recognition of their educational backgrounds.

Furthermore, previous outcomes of the Syrian refugees' integration into the Jordanian labor market were not thoroughly examined.

This dissertation aims to address various demographic factors that influence Syrian refugees' participation in the labor market and holding various jobs in Jordan. These differences are based on age, gender, marital status, and educational differences.

The objectives of this dissertation are as follows:

1. To investigate gender differences, age differences, and marital status differences in the labor market participation of Syrian refugees in Jordan.
2. To highlight the role of educational attainment in the labor market participation of Syrian refugees in Jordan.
3. To use different models to highlight those differences from an empirical perspective in refugee studies.

The following questions have formed the aforementioned objectives: These questions guide the equations and empirical model to test hypotheses and shape the findings.

1. What determines Syrian refugee labor market participation in Jordan?
2. Does labor market participation differ based on being a male or female refugee in Jordan?
3. Does age affect the labor force participation of Syrian refugees?
4. Does marital status affect the labor force participation of Syrian refugees?
5. Is there a link between educational attainment and labor force participation among Syrian refugees in Jordan?

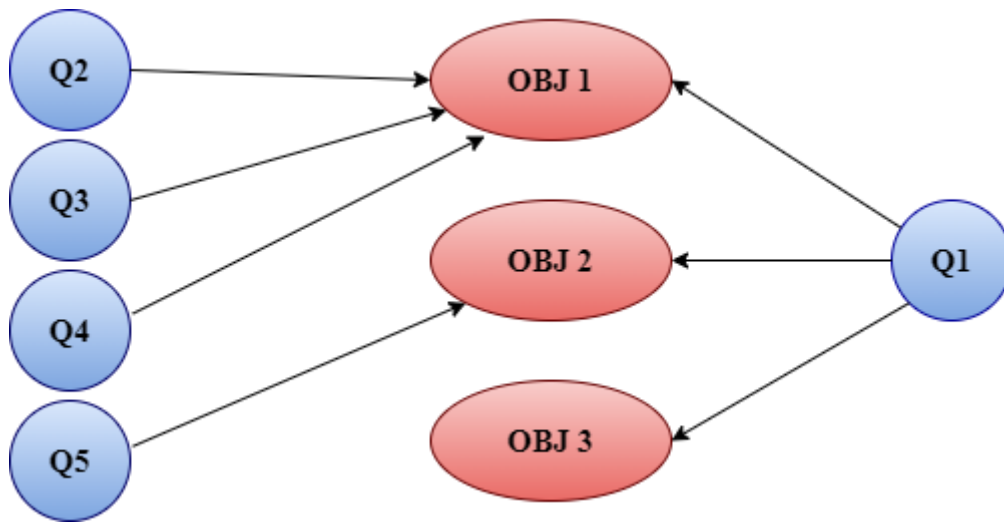


Figure 1: The research questions and objectives.

Source: Author's own compilation (2022)

The deductive model is applied with a quantitative research approach to accomplish the research objectives and answer the research questions of the study. Additionally, the relationships between each variable and the objectives and theories were evaluated. *Figure 3* shows the research model that has been used in the dissertation.

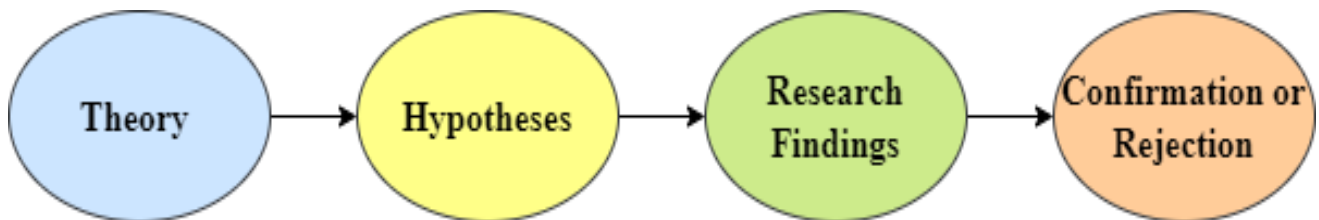


Figure 2: Research Approach Applied on the Dissertation

Source: Author's own compilation (2022)

1.2. Dissertation Structure

This dissertation examines Syrian refugees' labor market participation and how their socio-demographic characteristics influence their employment and occupational status in Jordan. The dissertation contained six main chapters. Along with the introduction, a review of the literature, methods and materials, research findings, and evaluations, the main conclusion, and novel findings, with implications, limitations, and future directions of the study, are presented. Finally, with the summary of the dissertation, it is concluded.

To propose the topic, the dissertation starts with an introduction. The introduction chapter provides a brief overview of the topic. Furthermore, an overview of the refugee phenomenon in the world, Syrian refugees in Jordan, distinguishes between the various humanitarian flow definitions of refugees, migrants, and asylum seekers. Following the importance of the topic and aim of the dissertation.

The second chapter of the dissertation continued with the literature review and hypothesis development for the study. First, the theories used in the study are presented. Human capital theory, dual labor market theory, social capital theory, and discrimination theory are used to explain the topic from a theoretical perspective. In addition to explaining Jordan's general labor market structure, the situation of Syrian refugees and their socio-demographic characteristics have been discussed, as has the integration of Syrian refugees into the Jordanian labor market.

Under the title of the third chapter, "materials and methods" are presented. In this dissertation, mainly quantitative and deductive research approaches were applied. Based on this, numerical data have been used and empirically tested by using SPSS 23. Descriptive statistics were used to show the features of variables, and correlation analyses were used to demonstrate the relationship between variables. The study's hypotheses are tested using binominal logistic regression and linear regression.

Next, the results and findings of the study are indicated. It has been found that in many jobs, Syrian male refugees who are older and have sufficient educational backgrounds obtain more employment opportunities than others. The results are followed by a discussion. In the discussion section, the results are also compared with previous findings on the topic. Finally, the study's conclusion, implications, limitations, future directions, and novel findings are presented as a full summary.

2. MATERIAL AND METHODS

The phenomenon of refugees is one of the twenty-first century's most complicated, intriguing, and arguably misunderstood aspects. Refugees are frequently mentioned in the media all over the world every day. It is vital to emphasize that the number of refugees currently exceeds anything previously recorded, with millions of fresh displacements occurring each day because of the many conflicts in the world.

There is no consensus on what constitutes the definition of refugees, and these scopes exist because of the large number of refugees globally and language and geographical barriers, which can lead to considerable confusion.

Many policymakers and researchers interested in refugee studies realized the importance of the refugee phenomenon, and a sizable database was required to assess the impact of the refugee phenomenon globally and between different countries, giving you knowledge of the facts about refugees and forced migration flows.

The key issue with refugee studies is a lack of data, which makes it difficult to determine the actual impact on gender discrimination, educational level, and labor market participation. More data on refugees in the future will make it easier to identify components and investigate their implications.

The dissertation describes a rich and unique individual-level panel dataset from Jordan (the department of statistics) that spans the period following the influx of Syrian refugees. This report assesses the influence of the refugee influx on employment, labor force participation, formal and informal (no social security coverage and/or jobs with no job contract) work, weekly hours of work, and hourly and total wages.

The Department of Statistics in Jordan started collecting data on Syrian refugees based on the population census in Jordan for its 2017 census. The Department of Statistics in Jordan is working to expand the refugee database in Jordan in partnership with the Ministry of Planning and International Cooperation, the FAFO foundation, and the United Nations High Commissioner for Refugees (UNHCR).

2.1. Data Collection

The data collection encompasses information on refugees based on the registered population censuses in camps in Jordan. It is a well-known fact that Jordan hosts 760,000 refugees and asylum seekers based on the registered number with UNHCR in 2022. Among this number, 670,000 refugees are Syrian. That number makes Jordan the second largest country behind Lebanon, which hosts Syrian refugees globally.

The databases contain information on the gender, educational level, marital status, occupational status, employment status, etc., of refugees. The refugee database collected by the Department of Statistics in Jordan is very important to identify.

2.2. Methodology

Empirical research about the differences in labor market participation among the refugee community plays an important role in the Jordanian community. It will help to change people's perceptions of refugees' employment status, challenges, and opportunities.

In the history of refugee studies, the method of refugee studies was mostly used in Europe and beyond while using former policies to find a solution to the new refugee flow in destination countries. However, it's a very well-known fact that every refugee flow in receiving societies needs a new methodological approach. It will also help to explore appropriate policies that can be functional to mitigate future refugee crises (Hossain, 2021; Voutira & Doná, 2007). For the empirical testing of current refugee data, estimated Binary Logistic regression and Linear (OLS) regression are used. Both methods are highly effective for examining relationships between dependent and independent variables.

On the other hand, research on refugee adjustment, for example, gender, family dynamics, labor market participation, and other socio-cultural and economic measures, has several components as a dependent variable. Due to that, it's important to test them with that methodological approach to identify their opposite effects on each other (Montgomery, 2018).

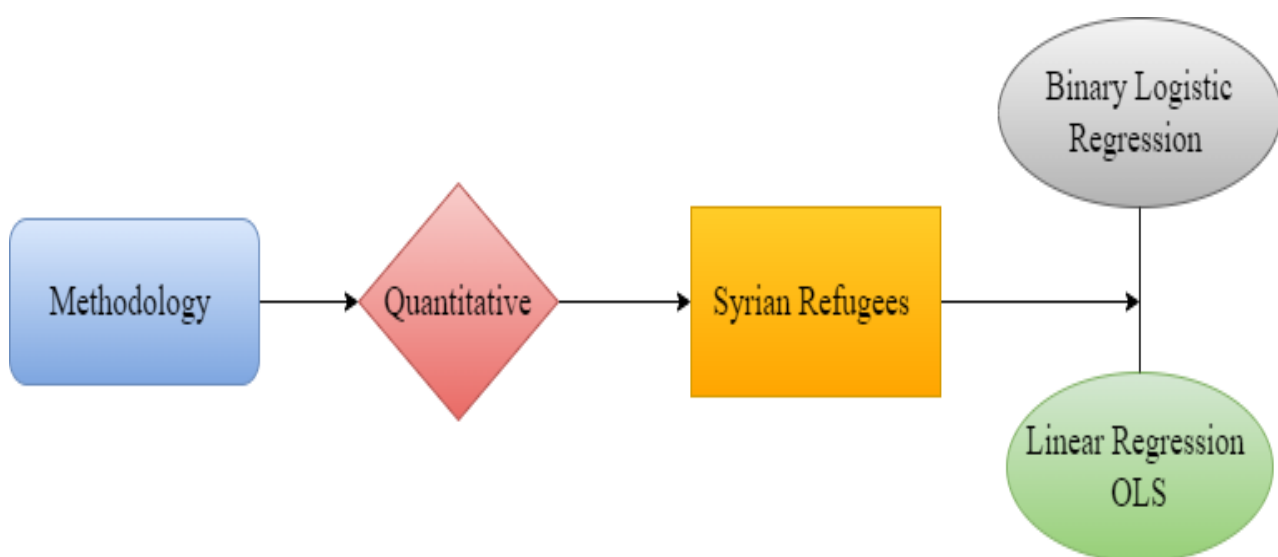


Figure 3: Applied Research Methodology of the Current Dissertation

Source: Author's own Compilation (2022)

2.2.1. Descriptive Statistics

Statistics is defined as the science of collecting, summarizing, and measuring data. The categories for summarizing the data are called descriptive statistics (Nick, 2007). With respect to this, it might be said that descriptive statistics are usually used for a sample to characterize a population by mean and standard deviation. Minimum and maximum numbers.

In this study, three descriptive statistics are employed. First, descriptive statistics are employed for the demographic variables of refugees. There are three: gender, age, and marital status. The second descriptive statistic is for the employment status of refugees. These are paid employees, paid employees in family businesses, an employer, own account workers, unpaid workers in family farms, and paid trainees. Third and last, descriptive statistics are used to measure the occupational status of refugees. These variables are professionals, skilled agricultural, service and sales workers, forestry workers, fishery, and plant and machine operators and assemblers.

2.2.2. Cross Tabulation

To cross-tabulate the relationship between the two variables under investigation, use the crosstabs command in SPSS. The crosstab analysis was also used to show the connection between two variables. The link between gender, age, educational attainment, work status, and marital status of Syrian refugees in Jordan was shown in the dissertation by using entrepreneurship activities.

2.2.3. Binary logistic regression and multinomial logistic regression

In the social sciences, socioeconomic variables are usually categorical rather than on an interval scale. As a result, most research focuses on models in which dependent variables are chosen as a dependent variable. Therefore, if the dependent variable is categorical, a binary logistic (binominal) regression model is used (Nussbaum, 2020). Binary logistic regression was conducted by Cox in 1958 (Cox, 1958). The purpose of binominal regression

is to find the best model to explain the relationship between dependent and independent variables.

The objective of this dissertation is to predict the outcome from a collection of predictors using *multinomial logistic (mlogit) regression analysis*. mlogit regression is a classification technique in statistics that extends logistic regression to issues with more than two discrete outcomes. Given a collection of independent variables, the mlogit model is used to forecast the probabilities of various outcomes of categorically distributed, dependent variables (real-, binary-, or categorical-valued, etc.). Additionally, the application of these logistic regressions is consistent with other previous studies on refugees. A logit regression model was used in the dissertation to explain the connection between entrepreneurship activity, gender, educational achievement, and marital status.

There are other analyses that fit the dissertation. These are:

The Hosmer–Lemeshow test is a statistical test that is used to determine the goodness of fit of logistic regression models. It is frequently used in risk prediction models. The test determines whether observed event rates match expected event rates in model population subgroups. A significant chi-square value (significant p value) shows the fitness of the logit model. Along with this, the omnibus (F test) and HL test are employed to indicate the importance of the data, which is greater than unexplained data that do not fit the model.

2.2.4. Linear (OLS) Regression

Linear regression is a statistical technique used to model the relationship between dependent and independent variables (a scalar response and one or more explanatory variables). Simple linear regression is used when there is only one explanatory variable; multiple linear regression is used when there is more than one. Multivariate linear regression, on the other hand, predicts many correlated dependent variables rather than a single scalar variable, which is predicted by linear OLS regression. In this current dissertation, multiple linear regression is used.

Being married and controlling occupational status were selected as control factors to regulate and prevent dummy traps. The dummy variable trap happens (multicollinear) when

two or more dummy variables made by one-hot encoding are highly correlated. This means that one variable can be predicted from the others, making predicted coefficient variables in regression models difficult to interpret. To prevent this, at least one dummy variable from the categorical values must be removed.

2.3. MODEL SPECIFICATION

2.3.1. Refugees' Gender Differences

Much of the research focusing on refugee integration and gender differences is qualitative, focusing on the small number of refugee women from specific countries. However, compared to gender outcomes, refugees play an essential role in social and labor policies in destination countries. Cheung & Phillimore, 2017 say that most of the time, integration fails because of identified multidimensional components of integration. This is especially true in regard to employment.

The dissertation analyses whether age, marital status differences, educational level, and being an entrepreneur of refugees are related to gender. To test this hypothesis, equation 1 is created and presented below.

$$\text{MLogit}(\text{Marital Status}_i) = \beta_0 + \beta_1 \text{gender}_i + \beta_6 \text{Edu}_i + \beta_7 \text{Ent}_i + \varepsilon_i \quad (1)$$

In the model, in order to show the age of refugees, having different marital status, also having different educational level and being involved in entrepreneurial activities or not correlated with the gender of refugees. With respect to this, gender is chosen as a dependent variable, and age, being single, widowed, divorced, or separated, educational level, and being an entrepreneur are chosen as independent variables. For marital status, which is made up of single, married, divorced, and separated, a dummy variable with a value of 1 means that the person is currently single and a value of 0 means that they are not. Being married is omitted to avoid the dummy trap.

2.3.2. Entrepreneurial Activity: Determination of Refugees

Recently, increasing attention toward self-employment among refugees has been an essential agenda item in many destination countries. It is important in many aspects. First,

it promotes a chance for the refugees to be part of the labor market in the destination countries. Second, it plays a very crucial role in accelerating the integration process (Chaux & Haugh, 2020). Therefore, in the current dissertation, we will analyze whether age differences, marital differences, educational differences, and gender differences have an influence on being involved in entrepreneurship activities. Equation 2 is created and shown below for empirical testing.

$$\text{Logit} (\text{Ent}_i) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{Dspt}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (2)$$

In the equation, the entrepreneur is chosen as a dependent variable. Age, marital status, educational attainment level, and gender were chosen as independent variables.

2.3.3. Employment Determination of Refugees

The employment opportunities of refugees come from the qualifications they have earned in their countries of origin. However, sometimes their qualifications, for instance, in education or in jobs, do not match the requirements that the country of destination desires. This factor creates considerable difficulties for refugees to identify and mitigate risk involving the labor market in the receiving societies (Tomlinson & Egan, 2002). However, there are other factors also affecting this, such as marital status, education, and age and gender diversity. This dissertation analyses how these factors correlate with the employment status of refugees in Jordan.

For empirical testing, each employment status was created as a dummy variable (1 = specific employment status and 0 = otherwise). For statistical testing, equations 3, 4, 5, 6, and 7 are modeled and listed below:

$$\text{Logit} (\text{PE}_i) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{Dspt}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (3)$$

$$\text{Logit} (\text{PEF}_i) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{Dspt}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (4)$$

$$\text{Logit}(AE_i) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{Dspt}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (5)$$

$$\text{Logit}(OAW_i) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{Dspt}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (6)$$

$$\text{Logit}(\text{unwfi}) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{Dspt}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (7)$$

In the equations, *pe*, *pef*, *ae*, *oaw*, and *unwf* are used as dependent variables, and age being single, widowed, divorced, or separated, educational attainment, and gender differences of refugees are used as independent variables.

2.3.4. Occupational Determination of Refugees

Employment and having a role in an occupation have always been critical factors in determining the destination country for refugees. The main reason behind this phenomenon is having a job or any income, which ends the dependency and makes the integration process and acceptance into a new society easier. It also gives refugees a chance to learn the language, discover social norms, and increase their social involvement with native citizens in the receiving society (Stein, 1978a). Because of this, having an occupational status is very important for economic integration. Without a job, refugees are often at a disadvantage in the economies of the host countries (De Vroome & Van Tubergen, 2010).

The current dissertation examines the occupational status determinations of refugees in Jordan. Four main occupations are involved in the analyses: professional (*prf*); service and sales workers (*ssw*); skilled agricultural, fishery, and forestry workers (*saf*); and plant and machine operators and assemblers (*pamoa*). Management occupation is chosen as a control variable and omitted from the empirical testing.

For the statistical model, the following equations are created:

$$\text{Logit}(\text{prfi}) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{Dspt}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (8)$$

$$\text{Logit}(ssw_i) = \beta_0 + \beta_1 age_i + \beta_2 Dsng_i + \beta_3 Dwdw_i + \beta_4 Ddvcd_i + \beta_5 Dspt_i + \beta_6 Edu_i + \beta_7 gender_i + \varepsilon_i \quad (9)$$

$$\text{Logit}(saf_i) = \beta_0 + \beta_1 age_i + \beta_2 Dsng_i + \beta_3 Dwdw_i + \beta_4 Ddvcd_i + \beta_5 Dspt_i + \beta_6 Edu_i + \beta_7 gender_i + \varepsilon_i \quad (10)$$

$$\text{Logit}(pamoa_i) = \beta_0 + \beta_1 age_i + \beta_2 Dsng_i + \beta_3 Dwdw_i + \beta_4 Ddvcd_i + \beta_5 Dspt_i + \beta_6 Edu_i + \beta_7 gender_i + \varepsilon_i \quad (11)$$

In the models, each occupation is created as a dummy variable (1 = each occupation and 0 = otherwise). As independent variables, age, being single, widowed, divorced, separated, educational level differences, and gender were utilized.

2.3.5. Age Differences' Effect on the Employment of Refugees

It is a well-known fact that the age of refugees influences their ability to obtain employment status in destination countries, as emphasized in the literature review in the dissertation. To test the model, the equation below is created.

$$(AGE) = \beta_1 pef_i + \beta_2 Dae_i + \beta_3 Doaw_i + \beta_4 Dupw_i + \beta_5 ssw_i + \beta_6 Dsaf_i + \beta_7 gender_i + \varepsilon_i \quad (12)$$

The equation is created based on a linear regression model. Age is chosen as a dependent variable, and each dummy's employment is chosen as an independent variable.

Research findings and evaluations are presented in the next.

$$\text{Logit}(Gender_i) = \beta_0 + \beta_1 age_i + \beta_2 Dsingle_i + \beta_3 Dwidowed_i + \beta_4 Ddivorced_i + \beta_5 Dseperated_i + \beta_6 Edu_i + \beta_7 Ent_i + \varepsilon_i \quad (1)$$

In the model, in order to show the age of refugees, having different marital status, also having different educational level and being involved in entrepreneurial activities or not correlated with the gender of refugees. With respect to this, gender is chosen as a dependent variable and age, being single, widowed, divorced, or separated, educational level, and being an entrepreneur are chosen as independent variables. For the marital status, which is made up of single, married, divorced, and separated, a dummy variable with a value of 1 means

that the person is currently single and a value of 0 means that they are not. Being married is omitted in order to avoid the dummy trap.

2.3.6. Entrepreneurship Activity: Determination of Refugees

Recently, increasing attention toward self-employment among refugees has been an essential agenda item in many destination countries. It is important in many aspects. First, it promotes a chance for the refugees to be part of the labour market in the destination countries. Second, it plays a very crucial role in accelerating the integration process (Chaux & Haugh, 2020). Due to that, in the current dissertation, it is going to be analysed if age differences, marital differences, educational differences, and gender differences have an influence on being involved in entrepreneurship activities. Equation 2 is created and shown below for empirical testing.

$$\text{Logit}(\text{Ent}_i) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{Dspt}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (2)$$

In the equation, the entrepreneur is chosen as a dependent variable. Age, marital status, educational attainment level, and gender were chosen as independent variables.

2.3.7. Employment Determination of Refugees

The employment opportunities of refugees come from the qualifications they have earned in their countries of origin. However, sometimes their qualifications, for instance in education or in jobs, do not match the requirements that the country of destination desires. This factor creates considerable difficulties for refugees to identify and mitigate risk involving the labour market in the receiving societies (Tomlinson & Egan, 2002). Yet, there are other factors also affecting this, such as marital status, education, and age and gender diversity. This dissertation analyses how these factors correlate with the employment status of refugees in Jordan.

For empirical testing, each employment status was created as a dummy variable (1 = specific employment status and 0 = otherwise) for empirical testing. For the statistical testing, equations 3, 4, 5, 6, and 7 are modelled and listed below:

$$\text{Logit}(PE_i) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{DSPT}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (3)$$

$$\text{Logit}(PEF_i) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{DSPT}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (4)$$

$$\text{Logit}(AE_i) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{DSPT}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (5)$$

$$\text{Logit}(OAW_i) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{DSPT}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (6)$$

$$\text{Logit}(unwfi) = \beta_0 + \beta_1 \text{age}_i + \beta_2 \text{Dsng}_i + \beta_3 \text{Dwdw}_i + \beta_4 \text{Ddvcd}_i + \beta_5 \text{DSPT}_i + \beta_6 \text{Edu}_i + \beta_7 \text{gender}_i + \varepsilon_i \quad (7)$$

In the equations, pe, pef, ae, oaw, and unwf are used as dependent variables and age being single, widowed, divorced, or separated, educational attainment, and gender differences of refugees are used as independent variables.

2.3.8. Occupational Determination of Refugees

Employment and having a role in an occupation have always been critical factors in determining the destination country for refugees. The main reason behind this phenomenon is having a job or any income, which ends the dependency as well as makes the integration process and acceptance into a new society easier. It also gives refugees a chance to learn the language, discover social norms, and also increase their social involvement with the native citizens in the receiving society (Stein, 1978). Because of this, having an occupational status is very important for economic integration. Without a job, refugees are often at a disadvantage in the economies of the host countries (De Vroome & Van Tubergen, 2010).

In the current dissertation, it examines the occupational status determinations of refugees in Jordan. Four main occupations are involved in the analyses: professional (prf), service and sales workers (ssw), skilled agricultural, fishery, and forestry workers (saf), and plant and machine operators and assemblers (pamoa). Management occupation is chosen as a control variable and omitted from the empirical testing.

For the statistical model, the following equations are created:

$$\text{Logit} (prf_i) = \beta_0 + \beta_1 age_i + \beta_2 Dsng_i + \beta_3 Dwdw_i + \beta_4 Ddvcd_i + \beta_5 DSPT_i + \beta_6 Edu_i + \beta_7 gender_i + \varepsilon_i \quad (8)$$

$$\text{Logit} (ssw_i) = \beta_0 + \beta_1 age_i + \beta_2 Dsng_i + \beta_3 Dwdw_i + \beta_4 Ddvcd_i + \beta_5 DSPT_i + \beta_6 Edu_i + \beta_7 gender_i + \varepsilon_i \quad (9)$$

$$\text{Logit} (saf_i) = \beta_0 + \beta_1 age_i + \beta_2 Dsng_i + \beta_3 Dwdw_i + \beta_4 Ddvcd_i + \beta_5 DSPT_i + \beta_6 Edu_i + \beta_7 gender_i + \varepsilon_i \quad (10)$$

$$\text{Logit} (pamoa_i) = \beta_0 + \beta_1 age_i + \beta_2 Dsng_i + \beta_3 Dwdw_i + \beta_4 Ddvcd_i + \beta_5 DSPT_i + \beta_6 Edu_i + \beta_7 gender_i + \varepsilon_i \quad (11)$$

In the models, each occupation is created as a dummy variable (1 = each occupation and 0 = otherwise). Age, being single, widowed, divorced, separated, educational level differences, and gender are used as independent variables.

2.3.9. Age Differences' Effect on the Employment of Refugees

It is a well-known fact that the age of refugees influences their ability to obtain employment status in destination countries, as it is emphasised in the literature review in the dissertation. In order to test the model, the below equation is created.

$$(AGE) = \beta_1 pef_i + \beta_2 Dae_i + \beta_3 Doaw_i + \beta_4 Dupw_i + \beta_5 ssw_i + \beta_6 Dsaf_i + \beta_7 gender_i + \varepsilon_i \quad (12)$$

The equation is created based on a linear regression model. Age was chosen as a dependent variable and each dummy's employment is chosen as an independent variable.

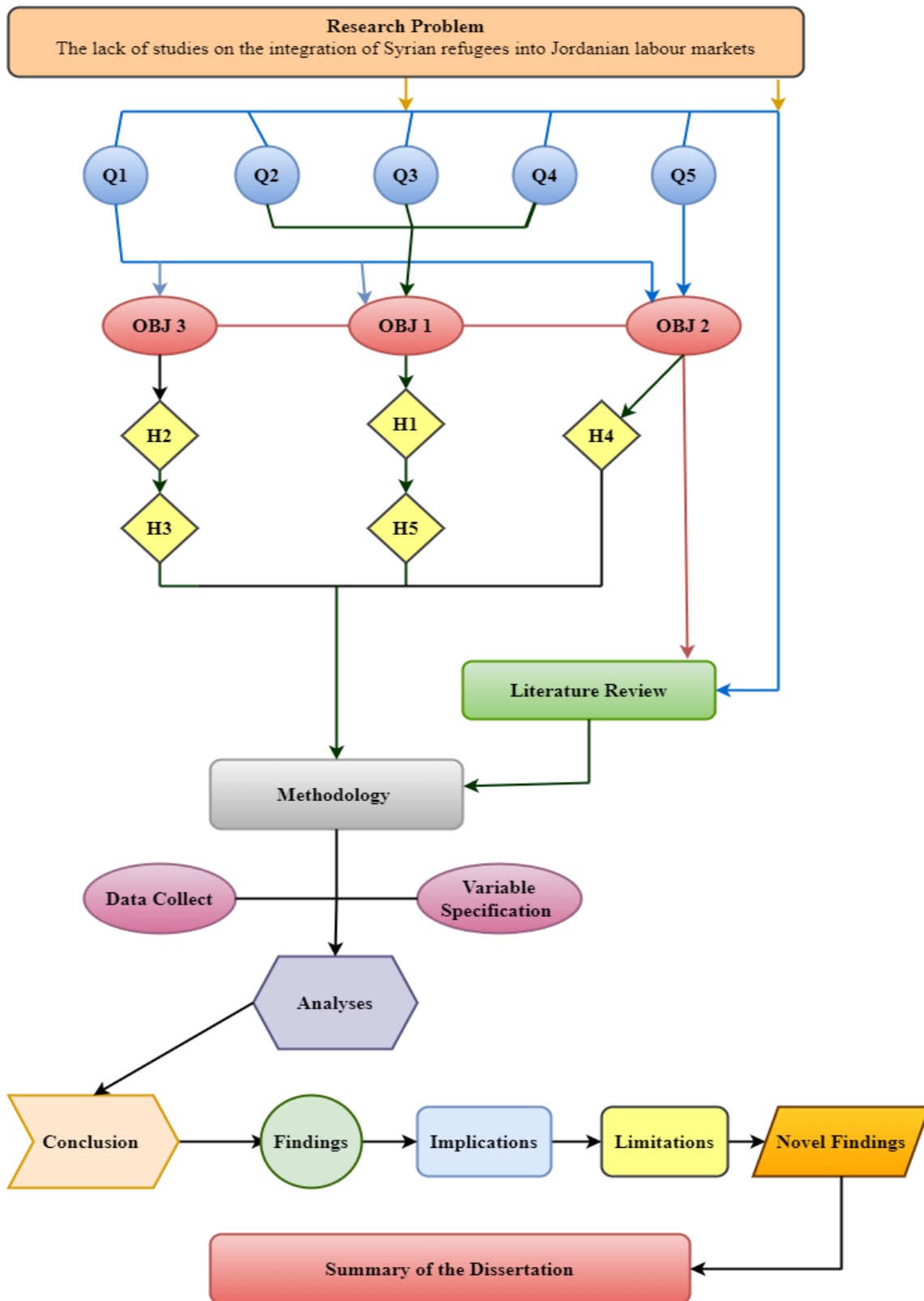


Figure 2: The research process.

Source: Author's own compilation (2022)

3. MAIN FINDINGS OF THE DISSERTATION

Based on the UNCHR definition, a refugee is defined as a person who fled from their country of origin to escape from violence, conflict, or persecution and sought safety in other countries. Due to its complexity and limited data and research, it is difficult to measure the components that influence refugee labor market participation in Jordan.

Our first empirical test included gender differences among Syrian refugees in Jordan. The first result of binary logistic regression on gender shows that male refugees are older than female refugees in Jordan. On the other hand, the literature on refugee studies gives very little attention to marital status differences and their impact on labor market participation in the host countries. However, in destination countries, particularly for married, divorced, and widowed female refugees, it is difficult for them to work in the labor sector (Lee et al., 2008). From this perspective, the results of the empirical model have shown that female refugees tend to be more single than male refugees. Male refugees, on the other hand, have a higher rate of divorce, widowhood, and separated marital status than female refugees. Hypotheses 1 were intended to examine the gender differences, where ***H1: Gender differences among Syrian refugees are related to differences in their characteristics***, with six sub-hypotheses. ***H1a: Syrian male refugees tend to be older than female refugees in Jordan***, ***H1b: Syrian male refugees in Jordan are more likely to be entrepreneurs than Syrian female refugees***, ***H1c: Syrian female refugees tend to be more likely to be single than Syrian male refugees in Jordan***, ***H1d: Syrian male refugees in Jordan are more likely to be widowed than Syrian female refugees***, ***H1e: Syrian male refugees tend to have divorce statuses higher than female refugees in Jordan***, ***H1f: Syrian male refugees are more educated than female refugees in Jordan***. ***H1 is accepted*** according to the results of the empirical testing.

The dissertation's second goal was to identify the characteristics of refugees engaged in entrepreneurial activities in Jordan. Both domestic and refugee entrepreneurship can be boosted by encouraging refugee entrepreneurship. However, research into refugee entrepreneurship is still in its infancy. Syrian male refugees who have previously worked for themselves and whose families are involved in business have a greater thirst for entrepreneurship. Refugee business owners are mostly men in their thirties and forties who

work in "inferior" industries. It was also discovered that the earnings of refugees were lower than those of other entrepreneurs. Hypothesis 2 are proposed in this regard: ***H2: Syrian refugees' demographic features influence their entrepreneurial activities, with two additional sub-hypotheses. H2a:*** Younger Syrian refugees tend to be more entrepreneurial than older Syrian refugees in Jordan; and ***H2b:*** Educated Syrian refugees tend to be more entrepreneurial than other Syrian refugees in Jordan. ***H2 is accepted*** based on the outcome.

On the other hand, the employment status of refugees plays a very important role in integration, but there are some components that make it harder or easier for refugees. The employment positions in this dissertation are classified into five categories: being a paid employee, being a paid employee in a family business, being an employer, own account worker, unpaid workers in family farms or businesses.

To demonstrate this hypothesis, Hypothesis 3 is formulated as follows: ***H3 Syrian refugees' characteristics and differences influence the employment status of Syrian refugees in Jordan.***

To elaborate, the following hypothesis concerning gender differences is developed: Gender differences affect refugees' ability to find employment in Jordan. The outcomes of the empirical testing show that female refugees tend to be better-paid employees, while male refugees tend to be better-paid employees in family businesses. Furthermore, male refugees are more employer- and account-oriented workers than female refugees. Marital status influences the ability of refugees in Jordan to obtain employment. It was also found that single refugees tend to have more employment opportunities as paid employees. Refugees with other than single status are more likely to work in a family business or be self-employed (own account worker). Refugees who have widowed status tend to have more employment status. Age differences affect refugees' ability to find employment in Jordan. As a result of the empirical testing displayed, there are no age differences between being a paid employee and being an employee in a family business. However, it has been found that elder migrants tend to have more employment positions as an employer and own account worker, and younger refugees tend to have more positions in the family farm or business. Marital status influences the ability of refugees in Jordan to obtain employment. It has been found that single refugees tend to have more employment opportunities as paid employees. Refugees

with other than single status are more likely to work in a family business or be self-employed (own account worker). Refugees who have widowed status tend to have more employment status. Moreover, educational attainment influences employment for refugees in Jordan. Unfortunately, educational attainment level does not influence the ability to obtain an employment status for the abovementioned positions. However, no gender differences have been found in terms of unpaid workers on family farms. Thus, ***H3 is partially accepted.***

The degree of assimilation and pleasure a refugee experiences during his resettlement depends critically on his ability to transfer his occupational status and abilities from his place of origin to the one in which he settles. Nevertheless, despite how much it affects assimilation's noneconomic components, occupational adjustment has hitherto received little attention. (Stein, 1978b). With respect to this, ***H4: Syrian refugees' characteristics and differences influence their occupational status in Jordan.*** These occupations include professional-level occupations such as service and sales workers, skilled agriculture, Fishery and forestry workers, plant and machine operators, and assemblers.

Gender differences influence Syrian refugees' ability to obtain an occupational status in Jordan. The results of the empirical testing have indicated that young refugees tend to have more occupations as service and sales workers; skilled agriculture, fishery, and forestry workers; plant and machine operators; and assemblers.

Marital status influences the ability of Syrian refugees in Jordan to obtain employment. Only refugees who have status other than single tend to have occupations as skilled agriculture, fishery and forestry workers, plant and machine operators, and assemblers.

In terms of age differences, age differences influence the ability to obtain an occupational status for Syrian refugees in Jordan. According to the findings of the analyses, younger refugees tend to have occupations as service and sales workers, as well as plant and machine operators and assemblers. However, elderly migrants tend to have a larger role in skilled agriculture.

In this study, educational attainment differences influence the attainment of an occupational status for Syrian refugees in Jordan. It has been found that professional occupation positions require a high level of educational attainment, which means that educated refugees tend to have more occupations in this occupation. Service and sales workers, skilled agriculture

workers, fishery and forestry workers, plant and machine operators, and assemblers, on the other hand, require less education, so refugees with low educational attainment tend to work in these occupations more. All results related to H4 demonstrated that *H4d is partially accepted*.

Finally, the last indicator in this study is age. To investigate it. *H5: Age is associated with the labor market participation of Syrian refugees in Jordan*. The result of the empirical testing has been that *H5 is partially accepted*.

Table 1: Results of the Hypotheses

H1	<i>Gender differences among Syrian refugees are related to their characteristics.</i>	Partially Accepted
	<i>H1a: Syrian male refugees tend to be older than female refugees in Jordan.</i>	Accepted
	<i>H1b: Syrian male refugees in Jordan are more likely to be entrepreneurs than Syrian female refugees.</i>	Accepted
	<i>H1c: Syrian female refugees tend to have more single status than Syrian male refugees in Jordan.</i>	Rejected
	<i>H1d: Syrian male refugees in Jordan are more likely to be widowed than Syrian female refugees.</i>	Accepted
	<i>H1e: Syrian male refugees tend to have divorce statuses higher than female refugees in Jordan.</i>	Accepted
	<i>H1f: Syrian male refugees are more educated than female refugees in Jordan.</i>	Accepted
H2	<i>Syrian refugees' demographic features influence their entrepreneurial activities.</i>	Accepted
	<i>H2a: Elder Syrian refugees tend to be more entrepreneurial than Younger Syrian refugees in Jordan.</i>	Accepted
	<i>H2b: Educated Syrian refugees tend to be more entrepreneurial than other Syrian refugees in Jordan.</i>	Accepted
H3	<i>Syrian refugees' characteristics and differences influence the employment status of Syrian refugees in Jordan.</i>	Partially Accepted
H4	<i>Syrian refugees' characteristics and differences influence their occupational status in Jordan.</i>	Partially Accepted
H5	<i>Age is associated with the labor market participation of Syrian refugees in Jordan</i>	Partially Accepted

4. NEW AND NOVEL RESULTS OF THE DISSERTATION

This study aimed to indicate refugees' demographic differences and their impact on labor market participation in Jordan. The study's hypotheses were tested using particular statistical tests, including correlation, and different regression analyses.

The scientifically remarkable contribution of this study is that investigating Syrian refugees' demographic differences and characteristics, will aid policymakers and the Jordanian government in their mission to integrate Syrian refugees into the labor market in Jordan, as well as the employment and occupational settlement of Syrian refugees in the Jordanian labor market. By linking the theories studied in this dissertation. It shows that the theories used for refugees can identify the problems of the labor market participation of refugees in Jordan. The novelty of the study is that no previous research has been done on the integration of Syrian refugees into the Jordanian labor market, including marital status differences, to show occupational differences by using empirical testing. What distinguishes this research is that it is intended to explore the entrepreneurship of Syrian refugees in Jordan in a detailed manner. This dissertation showed that obtaining an employment status or occupation can change based on the demographic characteristics of refugees.

As a summary of the novel findings:

- Investigating the integration of Syrian refugees into the Jordanian labour market with respect to marital, occupational, and employment status.
- Investigating the entrepreneurship of Syrian refugees in Jordan.
- Investigating the demographic characteristics of refugees with respect to employment status and occupation.

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List of publications related to the dissertation

Articles, studies (5)

1. Sarihasan, I., Dajnoki, K., **Al-Dalahmeh, M.**: Immigrant entrepreneurship and gender dimensions: A systematic review.
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