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## **Degree Project**

Level: Dalarna University, Master's in Business Studies

### **Impacts of the Level of Swedish Language Knowledge on Refugees' Employment and Occupational Matching**

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## ABSTRACT

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**The aim of the research:** the aim of the research is to explore which level or levels of knowledge in the Swedish language can enhance the employment and/or occupational matching possibilities for refugees in Sweden.

**Methodology:** This study conducts a quantitative research approach, Primary data was used, an online survey was distributed among a sample of Syrian refugees (defined as who were born outside Sweden with 0-9 years of residence in Sweden). Non-probability sampling by means of volunteer, snowball, and convenient sampling were used in order to collect the data, 112 valid responses were analyzed using descriptive statistics, reliability, multiple linear regression, multivariate analysis of variance and hierarchical multiple regression analyses.

**Findings:** it is found that the relationships between the knowledge in Swedish language and employment either occupational matching are statistically significant. However, there are no significant relationships between the level of knowledge in Swedish language and employment and occupational matching. Moreover, demographic variables had hardly any influence on the employment and occupational. Nevertheless, the only effect has been observed is between the education variable and employment.

**Conclusion:** Based on the findings of this research, it is detected that the level of the Swedish language does not play a considerable or notable impact on the refugees' employment and/or occupational matching in Swedish labor market. So, attaining specific level in the Swedish language knowledge does not positively impact the refugees' employment and/or occupational matching in Sweden.

**Keywords:** Language, employment, occupational matching, refugee and level of knowledge in Swedish language.

## TABLE OF CONTENTS

1	Introduction .....	7
1.1	Background .....	7
1.2	Problematization.....	9
1.3	Research Gap.....	11
1.4	Research Aim and Objective .....	13
	The Research Questions .....	14
2	Theoretical Framework.....	15
2.1	Language Knowledge.....	15
2.2	Language Knowledge and Employment .....	16
2.3	Language Knowledge and Occupational Matching .....	18
2.4	Demographic Variables.....	20
2.5	Measurement of the Variables.....	22
3	Research Methodology .....	26
3.1	Research Approach and Strategy .....	26
3.2	Research Instrument:.....	27
3.3	Data Collection Process .....	28
3.3.1	Population and Sample .....	28
3.3.2	Distribution of the Questionnaire.....	29
3.4	Data Analysis .....	30
3.5	Data Quality .....	31
3.5.1	Validity .....	31
3.5.2	Reliability.....	33
3.6	Limitation:.....	41
3.7	Ethical Considerations.....	42
4	Results .....	44
4.1	Demographic Characteristics of the Sample .....	44
4.1.1	Gender.....	45
4.1.2	Age.....	45
4.1.3	Education .....	46
4.1.4	Level of Swedish Language.....	48
4.1.5	Employment Status .....	49
4.2	Descriptive Results of Multi-item Concepts .....	50
4.2.1	Descriptive Results of Concepts .....	50
4.3	Multiple Linear Regression Analysis.....	51
4.3.1	The Knowledge in Swedish Language and Employment .....	52
4.3.2	The Knowledge in Swedish Language and Occupational Matching .....	54

4.4	Multivariate Analysis of Variance (MANOVA).....	57
4.5	Hierarchical Multiple Regression.....	61
4.5.1	Hierarchical multiple regression for Employment.....	62
4.5.2	Hierarchical multiple regression for Occupational Matching.....	65
5	Discussion.....	68
5.1	Knowledge in Swedish Language and Refugees' Employment .....	68
5.2	The Level of Knowledge in Swedish Language and Refugees' Employment .....	69
5.3	Knowledge in Swedish Language and Refugees' Occupational Matching .....	69
5.4	The Level of Knowledge in Swedish Language and Refugees' Occupational Matching.....	70
5.5	Employment, Occupational Matching and Demographic Characteristics of Refugees .....	71
5.5.1	Employment and Demographic Characteristics of Refugees .....	71
5.5.2	Occupational Matching and Demographic Characteristics of Refugees.....	71
6	Conclusion .....	73
6.1	Answer to the Research Questions.....	73
6.2	Academic and Practical Relevance of the Research .....	74
6.3	Research Limitations.....	74
6.4	Recommendations for Future Researches .....	75
7	References .....	76
	Appendix.....	79

## Table of Figures

Figure 1 – Hypotheses Framework.....	21
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## List of Tables

Table 1 Measurements of the Abstract Concepts .....	25
Table 2 Reliability Statistics.....	34
Table 3 Inter-Item Correlation Matrix.....	35
Table 4 Item-Total Statistics.....	37
Table 5 Reliability Statistics.....	37
Table 6 Inter-Item Correlation Matrix.....	38
Table 7 Item-Total Statistics.....	39
Table 8 Reliability Statistics.....	40
Table 9 Inter-Item Correlation Matrix.....	40
Table 10 Item-Total Statistics.....	41
Table 11 Gender.....	45
Table 12 Age.....	46
Table 13 The last grade of school completed .....	48
Table 14 The level of Swedish language.....	48
Table 15 Employment .....	50
Table 16 Multi-items Descriptive Statistics .....	51
Table 17 Model Summary .....	52
Table 18 ANOVA <sup>a</sup> .....	53
Table 19 Coefficients <sup>a</sup> .....	53
Table 20 Model Summary .....	55
Table 21 ANOVA <sup>a</sup> .....	55
Table 22 Coefficients <sup>a</sup> .....	56
Table 23 Descriptive Statistics .....	58
Table 24 Box's Test of Equality of Covariance Matrices <sup>a</sup> .....	58
Table 25 Levene's Test of Equality of Error Variances <sup>a</sup> .....	59
Table 26 Multivariate Tests <sup>a</sup> .....	60
Table 27 Model Summary <sup>c</sup> .....	62
Table 28 ANOVA <sup>a</sup> .....	63
Table 29 Coefficients <sup>a</sup> .....	64
Table 30 Model Summary <sup>c</sup> .....	65
Table 31 ANOVA <sup>a</sup> .....	66
Table 32 Coefficients <sup>a</sup> .....	67

## LIST OF ABBREVIATIONS

LFS .....	Labour Force Survey
NAR.....	New Arrival Refugees
LMM.....	Labour Market Marginalisation
Sfi .....	Swedish for immigrants
e.g. ....	exempli gratia (for example)
M .....	Mean
n .....	Number of observations
n.a. ....	Not available
r .....	correlation coefficient
R <sup>2</sup> .....	R-squared, Coefficient of determination
SD .....	Standard Deviation
Sig. ....	Significance Level
SPSS .....	Software Program IBM SPSS Statistics 27
$\alpha$ .....	Cronbach's Alpha
p .....	Significance Level
ANOVA .....	Analysis of Variance
MANOVA .....	Multivariate analysis of variance
$\beta$ .....	Unstandardized coefficient
rev.....	reverse coded

# 1 INTRODUCTION

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## 1.1 BACKGROUND

Due to political crises in many parts of the world as well as raging and ongoing conflicts and wars on the other parts around the world, many people from these unstable regions and countries have been forced and obliged to move or flee from their home countries to other areas or countries to survive and to save their and their families' lives and/or to get better opportunity and life. Consequently, one of these safe heavens which receives a part of these people is Europe. According to Helgesson et al. (2019), Europe has received the largest wave of these people since the Second World War during the last five years. "According to the UNHCR, more than one million asylum applications were filed in Europe between 2011 and 2016 (UNCHR, 2017)." (Shneikat & Ryan, 2018, p. 203).

Nevertheless, in the other side, migration has often been seen as a promising solution or remedy for the demographic change which occurs in these host industrial European countries. So, as a result from rapid aging and technological revolution, many of these host industrial European countries have decided to adopt more generous migration policies (Cim et al., 2020). Correspondingly, (Bershidsky, 2015 as cited in Shneikat & Ryan, 2018), has said that migration policies which adopted in many European countries due to a need for labor force, decreasing birth rate and aging.

Accordingly, one of these European countries which have received a considerable amount of those people who come to Europe is Sweden. So, according to (Kaplan, 2015 as cited in Shneikat & Ryan, 2018), one of the preferred destinations for refugees beside Germany, France, and the UK is Sweden. Thus, according to a report from Statistics Sweden, the number of people which have been living in Sweden between 0-9 years and were born outside Europe has increased from 170000 in 2000 to 600000 in 2018. In fact, this group of population constitutes 6 per cent of all inhabitants in Sweden. Moreover, the report has declared that 28 per cent of this group has come from Syria, and they have spent less time in Sweden (Integration – Report 13, 2019).

Consequently, one of the most important challenges which face these host countries, including Sweden, is how to settle these humans, and how these host countries can take benefit from these refugees as a potential workforce. Thus, to deal with this challenge

and to get advantage from this potential workforce which arrived to Sweden, work policies have gained more attention and consideration in social policy as that has been mentioned by Wikström and Ahnlund (2018). One reason behind these adopted work strategies and policies is to boost and promote the economy of the host countries. So, according to Borjas (1999) as cited in Peri and Sparber (2011), who says that immigrants including refugees can enhance fiscal conditions through increasing tax returns. Moreover, Saal and Volkert (2019) have said in their study that the German Gross Domestic Product (GDP) is going to increase by approximately 9 billion euros until 2030 as a result from the increasing of refugees' income.

Hence, the Swedish Employment Agency is responsible on the program which offers to the refugee approximately two years of support, including studies for Swedish language, civic and society information as well as preparation for employment (Wikström & Ahnlund, 2018). The main aim is to utilize the individual's work experience and/or education. So, that can enhance and increase possibilities for a more rapid entrance to the labor market as that has been mentioned by (Economou & Hajer, 2019; Mangrio et al. 2020). Moreover, Cim et al. (2020) have said that the success of these migration-oriented strategies depends essentially on the excellence of occupational matches of immigrants come to Europe in the labor markets of these European host countries.

Contextually, the Statistics Sweden which is a site specialized to supply users and customers with statistics for business in Sweden has published a statistic known as Labour Force Surveys (LFS), this statistic describes labour market developments for the Swedish population aged 15–74. The LFS shows the number and percentage of employed and unemployed persons respectively, per month, quarter, and year. It is source of continuous data on total unemployment and represents the official unemployment rate. The results were as the following, during the reference period, December 2020: Labour force rate, 73.0%. Unemployment rate, 8.2%. Employment rate, 67.0%. (LFS, n.d.). Moreover, according to Statistics Sweden, about 49% of the group of population who were born outside Europe, and who have been living in Sweden between 0-9 years are unemployed (Integration – Report 13, 2019).



## 1.2 PROBLEMATIZATION

Accordingly, one of the most significant and effective way to introduce these refugees to the labor market and to help them to settle adequately in this new society is through learning the host country language. Thus, the language learning process is not an objective in itself, however, it is considered as a skill or a competence which is preferred to create opportunities and to attain employment and/or occupational matching for these people in the host country. Consequently, they can support themselves, pay taxes and successfully contribute in social life of the host country (Delander et al. 2005). So, finding or getting an occupation for refugees is considered as a vital and important issue for those people according to Lundborg (2013), because, it can increase the feeling of belonging, certainty and fiscal security.

Hence, “Striking roots by facing new challenges relates to how ‘New Arrival Refugees’ (NAR) could identify such roots during the resettlement process. Learning the language was regarded as the most important task for integrating and becoming part of society” (Mangrio et al., 2020, p. 703). Also, this can have positive consequences on the public health and economy in the host country. On the contrary, this indicates that insufficient skills and knowledge in host country language can limit the access to social resources, employment and attaining occupational matching for this segment of population. Therefore, language can create and establish restrictions and boundaries between the various groups, so, that can lead to some determinations or limitations of social inclusion and exclusion as that is stated by Piekkari (2008).

Moreover, Helgesson et al. (2019) have claimed that several reports showed that refugees have lower attachment to the work market if it is compared with the native population. As well, they also said that the one of main reasons for that; it may be insufficient knowledge in the host country language. So, language knowledge insufficiency can lead to what is called labour market marginalisation (LMM) which is defined “as severe problems in obtaining and retaining a job” (Helgesson et al., 2019, p. 407). Moreover, Dustmann and Fabbri (2003) have mentioned in their paper that refugees who do not have sufficient skills in the host country language may encounter difficulties in convincing potential employers of their qualifications. Furthermore, lack of or insufficient language skills can be a critical barrier to job success according to Yao and Ours (2015). As well, insufficient language knowledge in the host country

language, among other reasons which are mentioned in the study of Lundborg (2013), may be underlying factors behind the high unemployment periods among the new arrival refugees. Briefly, from the aforementioned arguments, it is understandable that the lack or insufficient knowledge in the host country language can lead to employment difficulties among refugees. So, that may prevent or delay their entrance to the host country labor market.

Furthermore, insufficient knowledge in the host country language can lead to another serious problem which is called occupational mismatching. So, as that mentioned in the study which is conducted in Sweden by (Helgesson et al. 2019), mismatch on the labour market can be attributed to language problems among other reasons. Actually, one type for the occupational mismatching is called over-educated employees. So, according to Wolbers (2003, 251) as cited in Frank & Hou (2018), over-educated employees are employees which their educational levels or attainments are higher than the educational requirements for their jobs. In other words, these employees have education levels and work experiences which exceed the education levels which are needed or required to conducting their jobs.

Consequently, this problem is created or is occurred when a refugee accepts to work in an occupation which is below his or her education level, because this occupation does not require a higher level of knowledge in the host country language than the refugee has. So, according to (Chiswick and Taengnoi, 2007, as cited in Peri and Sparber, 2011), they have noticed that immigrants with inadequate skills in host country language work in occupations which do not need language communication skills. Hence, it is not strange or uncommon to see immigrants including refugees working in occupations and doing tasks which are far below their skills and competencies; for example, engineers work as technicians or as bus chauffeurs.

Thus, according to Trache (2016) who has studied the impacts of this problem (occupational mismatching) and has found that this problem can undoubtedly deprive refugees from attaining to their goals in the host country labour market and can prevent the host country economy from their qualifications and experiences. Moreover, according to (Hawthorne, 2007, as cited in Trache, 2016), a refugee who cannot get an occupation which is compatible with the refugee's education becomes less competitive.

So, this occupational mismatching makes him or her even less possible to overcome the ‘transferability gap’.

Consequently, the impacts of occupational mismatching on refugees can lead to a loss of social status, higher levels of depression, lower job satisfaction, economic uncertainty, and feelings of isolation (Frank & Hou, 2018). Additionally, Cim, et al. (2020) have mentioned in their study that results from 11 European countries show that unexploited human capital can be considered as “brain waste”. Thus, the problems related to occupational mismatching do not only affect the refugees but also these problems affect the economy and public health of the host country.

As well, unemployed people can increase the burden on the economy of the host country. Moreover, the host country can lose the returns from the refugees’ taxes which can be paid by these employed refugees. As well, those unemployed people can suffer from stress and worryment which can affect their and their families’ health and certainties. Correspondingly, according to the report from Statistics Sweden, 42 per cent from the new arrival people suffer from uncertainty and anxiety as a result from their statuses as unemployed people (Integration – Report 13, 2019). Hence, these problems such as unemployment and occupational mismatching among refugees may lead to a growing and serious public health challenge as well as an economic problem in the host country (Helgesson et al., 2019).

### **1.3 RESEARCH GAP**

In point of fact, the concepts of the language skills, language proficiency and/or language knowledge, which are interchangeably used in many studies and researches which examining the impact of knowledge in the host country language on refugees’ employment, are very broad and are not specified or determined. Therefore, there are several levels of knowledge can be attained in the host country language. So, these previous studies have not determined which level of language knowledge is acceptable or appropriate for entering the host country labor market and/or which level in language knowledge may be proper to attaining an occupational matching in the host country labor market.

Instead, these studies and researches have only dealt with these broad concepts without any clarification or determination. So, for instance, the level of knowledge in the host country language which is considered as an appropriate level to work as a cleaning worker or as an industrial worker undoubtedly differs from the level which is seen as an appropriate level to work as a teacher or as an engineer. So, this, in turn, needs a deeper insight into the strength of the relationship between the level of knowledge in the host country language and the endeavor for attaining employment and/or occupational matching in the host country from the refugees.

Thus, regarding to the literature which studies and deals with the relationship between the level of knowledge in the host country language and attaining a job and/or an occupational matching, especially in Sweden, it is noticed that there are no studies which specify or examine which level of knowledge in Swedish language is appropriate to get any occupation or job in Sweden, and which level of knowledge in Swedish language is suitable to get an occupation which is somewhat compatible with the refugee's education and experience. So, according to Delander, et al. (2005, p. 26) who mention in their study that "there are no Swedish studies regarding the relationship between the level of knowledge of Swedish and the degree of success in different respects in the labor market." Consequently, from this claim, it is clear that there is no study or research in Sweden which has given facts about which level of knowledge in Swedish language can lead to a success in Swedish labor market. Moreover, this success in the labor market can be seen or be understood as getting a job and/or attaining an occupational matching in the Swedish labor market.

Thus, as a result from the aforementioned gap, this research tries to deal with it. So, the research attempts to explore the relationship between the level of knowledge in Swedish language and getting a job in Sweden. Also, the research will try to explore the relationship between the level of knowledge in Swedish language and attaining an occupation which is to a certain degree compatible with the refugee's education and/or experience.

Therefore, the authors have chosen Sweden as a place to conducting this research, because Sweden is considered, as it is mentioned previously, one of the most European countries which have received a considerable amount from the wave of the refugees who have come to Europe, and it has also a long experience in integration and work

policies related to migration. Accordingly, during the year 2014, European countries received more than 620 thousand refugees, distributed in different proportions to a number of those countries. However, Sweden is ranked first in terms of the percentage of the number of refugees if it compared to its total population, and it ranks second in terms of the number of refugees receiving in 2014, after Germany which is at the top of the list of European countries receiving refugees and asylum seekers. Moreover, the total number of refugees in Sweden in 2014 reached more than 81 thousand people; many of them are Syrians, followed by Afghans and citizens of Kosovo (Deutsche Welle, 2021).

Moreover, the authors have decided to narrow down the population of refugees, thus, they have chosen a sample from the Syrian refugees, because they constitute the main group of this population of refugees who recently have arrived to Sweden. The other reason that the authors have chosen this group is that “Syrian refugees refused to sit down at home and wait for help from organizations (Collier, 2017)” (Shneikat & Ryan, 2018, p. 218). So, this desire which is owned by this group of refugees can also be considered as a motive for learning the language of the host country, and it can be seen as a motive for getting employment and/or occupational matching in the Swedish labor market.

## **1.4 RESEARCH AIM AND OBJECTIVE**

According to what is discussed and presented previously, the aim of the study is to explore which level or levels of knowledge in the Swedish language can enhance the employment and/or occupational matching possibilities for refugees in Sweden.

Thus, the findings and results for this study can to a certain degree help to build or to establish a framework which may specify and determine which level of knowledge in Swedish language is considered as an appropriate level from the refugees to enter the labor market with any occupation whether it matches or does not match the individual's education and experience as a start point in the Swedish labor market. Also, which level of language knowledge is seen as a suitable level from the refugees to attain a job which is to a certain degree compatible with their education and/or experience as an advanced step in the Swedish labor market.

## THE RESEARCH QUESTIONS

So, according to the aim of the study, the authors formulate two research questions which will be answered by conducting this research.

These questions are:

*What is the relationship between the knowledge in Swedish language and employment and occupational matching?*

*What is the relationship between the level of knowledge in Swedish language and employment and occupational matching?*

## 2 THEORETICAL FRAMEWORK

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*By this chapter, the importance of the language is explained and illustrated to give more understanding about the significant role of the language in the people's life. Furthermore, the importance of the knowledge in the host country language is also discussed, and how this knowledge in one way or another can be considered as a key competence which may impact the refugees' employment and/or occupational matching in the host country. Then, the hypotheses are formulated and to be as a foundation for this research.*

### 2.1 LANGUAGE KNOWLEDGE

In point of fact, the significance of language stems from its nature as a way through which the human being can articulate and express thoughts, desires and feelings by means of a system of voluntary produced symbols (Sapir, 1921 as cited in Peltokorpi, 2017). Additionally, the language is not only words articulated or rhetorical method, but also it has instrumental-technical, socio-cultural, and political power-related aspects according to (Stahl, Björkman & Morris, 2012).

Hence, instrumental-technical aspect means that the language can be used as an instrument and as a technique to convey information, feelings, knowledge, etc. to other people or entities. As related to a socio-culture aspect, this indicates that the language can have some socio-cultural meanings and implications which can go beyond the literal meaning of the words as a result from the cultural and social background of the sender or the receiver. Finally, regarding to the political power-related aspect, this means that the persons who have considerable knowledge in specific language or languages can control the flow of data, information and knowledge to those who cannot speak this language or these languages, or they lack skills in this language or these languages. Thus, the language knowledge gives the individual or the entity a power to control the flow of information and knowledge.

Consequently, the language can be considered as the first and foremost method or means by which the communicating between and connecting of different socio-cultural, institutional and individual entities happens (Stahl et al. 2012). Also, as that mentioned

in the study of Kima et al. (2012), the gaining of the host country language and resettlement in a new society of the host country are inextricably intertwined.

## **2.2 LANGUAGE KNOWLEDGE AND EMPLOYMENT**

Hence, the learning of the host country language may be considered as a vital quality or competence for the refugee to be gotten into the labor market in the host country. Thus, the acquisition of the host country language something that may increase and enhance the opportunities for a faster access to the work market as that argued by Mangrio et al. (2020). Moreover, (Dustmann & Fabbri, 2003) and (Yao & Ours, 2015), have said in their articles that the language knowledge is considered to be extremely important for the social and economic integration of immigrants. Thus, this knowledge in the host country language may positively affect the employment of the immigrants and their work productivity at the workplace.

So, according to Delander et al. (2005), that many previous researches and studies have emphasized that the process of learning language of the host country can be an important aspect for integration in the host country and its labor market (McManus, Gould, and Welch 1983; Kossoudji 1988; Tainer 1988; Chiswick 1991). Actually, these researches and studies were examining countries with large immigrant populations, such as Canada, Germany, Israel, Australia, and the United States. Moreover, Delander et al. (2005) have said also that language knowledge is considered as a very important qualification or characteristic for the employment process and labor market in Sweden.

On the other hand, Yao and Ours (2015) have found the contrary as a result from their study which was conducted in Netherlands. They have said that the language insufficiency has not affected the time of working. Thus, refugees with insufficiency language knowledge have the same employment possibility and hours of work as refugees with sufficient language knowledge. Furthermore, Kima et al. (2012) have noticed and found according to their study which has been conducted in Australia, that insufficiency in the English language may not be recognized as an obstacle for immigrant's employment. So, these findings may be attributed to the level of the quality of the jobs attained by the immigrants. "English language proficiency did not appear to be a factor in the types of jobs immigrants had attained possibly because they were lower level/status jobs, as shown in our analysis" (Kima et al. 2012, p. 50).



Consequently, as a result from some aforementioned arguments and facts that the language knowledge can be seen as a key competence for refugees to getting a job in the host country. However, on the other hand, other findings have shown that the insufficiency knowledge in the host country language has no impact or effect on the employment of the refugees.

Accordingly, the first (a) hypothesis (H1a) which is tested in this research aims to determine if there is a relationship between the knowledge in Swedish language and refugees' employment in Sweden.

**H1a:** The knowledge in Swedish language is positively related to the refugees' employment in the Swedish labor market.

Moreover, in point of fact, it is obvious that the previous studies have used the concept of the language knowledge as a broad concept without any determination or classification of this language knowledge. Hence, the concept of language knowledge can constitute of several levels which in their turn can impact the employment or unemployment statuses of the refugees in the host country. Also, the nature of the job may need specific level of knowledge in Swedish language. Thus, occupations which need complex skills may require higher level of Swedish language knowledge. However, on the other hand, jobs which need low or modest skills may do not need high level of Swedish language knowledge.

So, in this study, the researchers want to give more determinations to the concept of the language knowledge and to explore which level of knowledge in the host country language, which is Swedish, can somewhat be seen as an indicator for getting a job in the Swedish labor market. Thus, the first (b) hypothesis (H1b) which will also be tested in this research is:

**H1b:** The level of knowledge in Swedish language is positively related to the refugees' employment in the Swedish labor market.

### **2.3 LANGUAGE KNOWLEDGE AND OCCUPATIONAL MATCHING**

Also, it may be argued that the knowledge in the host country language can disturb the refugees from attaining occupations which are compatible with their work experience and education. According to Kalf and Piracha (2018), as that mentioned in their research that refugees who hold a Bachelor's degree are more likely to be occupational mismatched, if it is compared with those with lower levels of education. Also, according to Trache (2016), knowledge workers need to work in occupations which match extensively their educations and experiences to reach to occupational success, otherwise, those knowledge workers can lose their skills and competencies as a result from occupational mismatching. Moreover, in Canada, it is very likely that immigrants who have been working in high skilled professions in their home countries work in professions which are below their qualifications and experiences in the host countries, according to (Warman, et al. 2015).

Moreover, occupational mismatching can be noticed as a prevalent phenomenon among refugees in many European countries (Cim, et al. 2020). Consequently, occupational mismatching is an urgent issue for both host countries and immigrants including refugees. According to a survey for the period between 2000 and 2009 which is conducted in 22 European countries and 76 immigrants' countries of origin, the survey showed that 22 per cent of immigrants are over-educated or over-qualified for their occupations (Aleksynska & Tritah, 2013, as cited in Chort, 2017). Consistently, Cim, et al. (2020) have argued in their study that refugees have approximately 10 per cent more likely to suffer from overeducation than natives. In Sweden, the occupational matching among immigrants who were born outside Europe with a short stay is 59 per cent, according to Statistics Sweden (Integration - Report 13, 2019).

However, on the contrary, as that is argued by Warman, et al. (2015) in their study which has been conducted in Canada, despite that there is a strong positive relationship between English (an official language in Canada) and employment, there is a modest relationship between English (an official language in Canada) and attaining an occupational matching. Furthermore, Kalf & Piracha (2018) have claimed in their research that the proficiency in the host country language does not have a notable effect on the refugees occupational mismatching.

Moreover, another interesting point of view which is argued by Peri and Sparber (2011) that native and immigrants work in two different tasks. Native educated people concentrate in professions needing communication or interactive skills; however, highly educated immigrants work in professions demanding quantitative and analytical skills. Thus, the language knowledge in the host country may not be considered as an obstacle or a glass ceiling for attaining an occupational matching for occupations which need or require analytical and/or quantitative skills.

Consequently, some studies' findings such as (Trache, 2016) and (Frank & Hou, 2018;) have argued that the language knowledge in the host country can be seen as vital and essential competence to attaining an occupational matching for refugees in the host countries. However, on the other hand, some other studies such as (Warman, et al. 2015) and (Kalf & Piracha, 2018) have claimed that the knowledge in the host country language has not been shown as an obstacle for attaining an occupational matching for the refugees in the host country labor market.

Hence, the second (a) hypothesis (H2b) which will be tested in this research is:

**H2a:** The knowledge in Swedish language is positively related to the refugees' occupational matching in the Swedish labor market.

Additionally, as it has been said previously that studies and researches which have dealt and examined the impact of the language knowledge on the refugees' employment and/or occupational matching have not determined any levels for the language knowledge. Therefore, this can open the door for several guesses about which level of language knowledge can be in general recognized as an appropriate level for refugees' occupational matching.

Consequently, (Trache, 2016; Frank & Hou, 2018) have mentioned in their studies that the occupational matching can be lessened by several factors which one of them is the level of language knowledge in the host country language. So, from this argument, it can be understood that an insufficient or low level of knowledge in the host country language can lead to getting a job which is not compatible with the refugee's education and experience.

Consequently, the researchers want to give some determinations to the concept of the language knowledge and to identify which level of knowledge in the host country language, which is Swedish, can be suitable for attaining an occupational matching in the Swedish labor market.

Thus, the second (b) hypothesis (H2b) which will be tested in this research is:

**H2b:** The level of knowledge in Swedish language is positively related to the refugees' occupational matching in the Swedish labor market.

## **2.4 DEMOGRAPHIC VARIABLES**

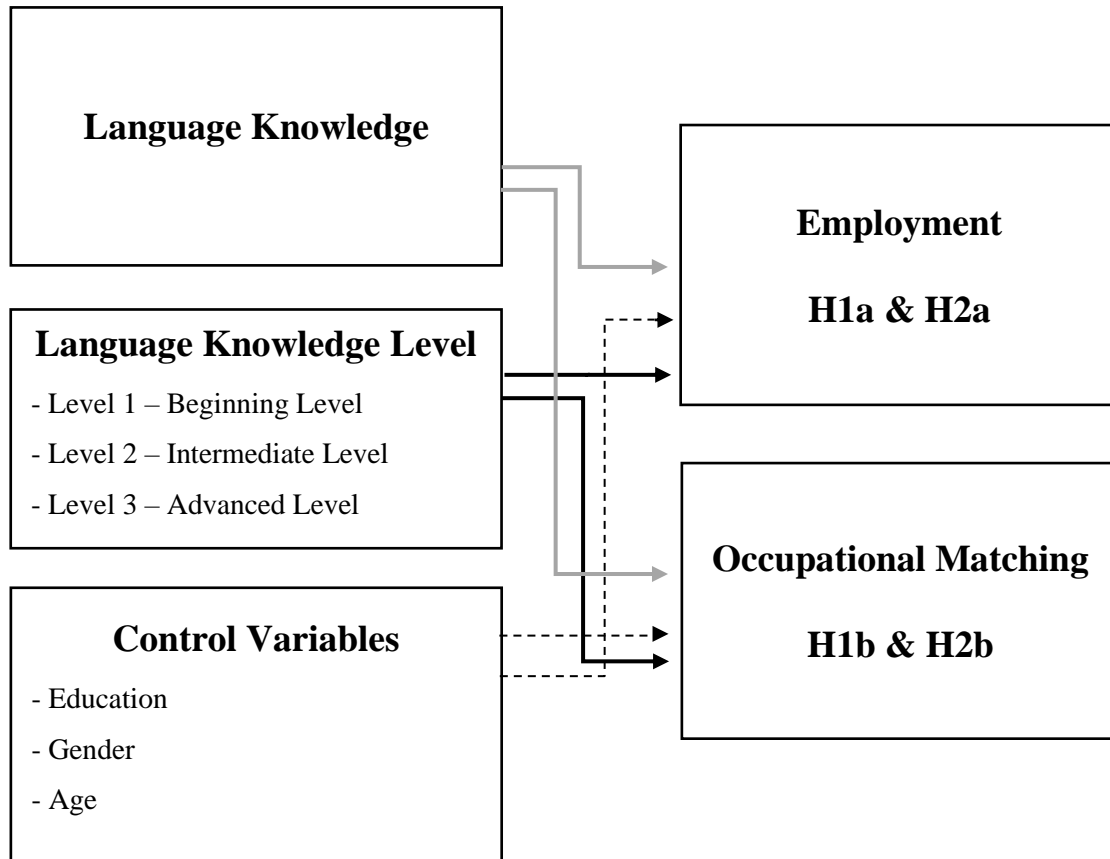
The demographic variables such as education, gender and age are variables which may in one way or another affect and influence the refugees' employment and/or occupational matching. So, according to Lundborg, who has said that "Obviously, the individual's labor market situation is partly determined by characteristics such as education, gender, age" (Lundborg, 2013, p. 222). Hence, the researchers have decided to consider these demographic variables for the refugees as control variables without setting specific research hypotheses.


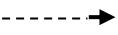
As related to the education, it may be considered that the influence of education is not considerable in refugees' employment. In other words, it may be noticed that the possibilities of getting any job for high-educated or low-educated refugees are to a certain degree equal in the Swedish labor market, according to (Lundborg, 2013).

Regarding to the gender, Lundborg (2013) has asserted that it is noticed that labor market participation is low among refugee women, if it is compared with refugee men. Thus, the gender variable can be to a certain degree influenceable on the refugees' employment in the labor market.

In terms of age, it is recognized that the age may have a significant impact on the refugees' employment. Consequently, as that is said by Lundborg (2013), the periods of unemployment are considerably higher for those who are above 30. Hence, the age of the refugee can be an essential factor which impacts the employment of the refugee.

**Figure 1 – Hypotheses Framework**



**Explanation:**  means expected relationship  
 means possible influence of the control variables

## 2.5 MEASUREMENT OF THE VARIABLES

In this study, the authors will not approach and/or explore the other reasons and factors which can in one way or another lead to unemployment or occupational mismatching such as cultural differences, educational systems variances, discriminations, etc. Therefore, it exceeds the scope of the research.

Nevertheless, the research wants to explore which level in the Swedish language knowledge can enhance and influence the refugees' employment, and which level in the Swedish language knowledge can enhance and influence the possibilities of occupational matching for the refugees. In other words, the study aims to explore which level of knowledge in the Swedish language can be seen as a key competence for employment in any occupation, and which level of knowledge in the Swedish language can be seen as a key competence to get an occupation which is to a certain degree compatible with the refugee's education and experience.

So, to give more clarification and explanation for the concepts of employment, occupational matching and level of knowledge in the Swedish language which are used in this study, these three concepts will be defined, determined and illustrated to give more clarity for the readers.

### *Employment*

As related to the concept of employment, it can be defined as a status of getting any paid job (Cambridge Dictionary, 2021) whether the refugee is employed by employers, or the refugee is self-employed. Moreover, to measure this concept and its relationship with the Swedish language knowledge in the sample of Syrian refugees, the authors have formulated 5 statements (see Table 1) which can be answered by choosing one from five alternatives ranged from 1 "Strongly Disagree" to 5 "Strongly Agree" (Grander, 1960). Furthermore, these five statements measure:

- 1- The influence of the level of language knowledge on the refugees' employment.
- 2- The influence of the language knowledge on the period of refugees' unemployment.
- 3- The influence of having career training on the refugees' employment.

### ***Occupational Matching***

Regarding to the concept of occupational matching, it can be defined as a status of attaining an occupation which is to a certain degree compatible with the refugee's education, skills and/or experience. Thus, to measure this concept and its relationship with the Swedish language knowledge in the sample of Syrian refugees, the authors have formulated 5 statements (see Table 1) which can be answered by choosing one from five alternatives ranged from 1 "Strongly Disagree" to 5 "Strongly Agree" (Grander, 1960). Actually, these five statements measure:

- 1- If the current job matches the pre-refuge training in Syria.
- 2- If the current job matches the post-refuge training in Sweden.
- 3- If the current job matches the refugee's expectations in Sweden.
- 4- Finally, if the refugee's language knowledge level contributes to match the job training and/or expectations of the refugee with the refugee's current job in Sweden.

### ***The level of knowledge in the Swedish language***

As related to the level of knowledge in the Swedish language, the authors have decided to adopt the same classification which is used in the learning process of the Swedish language to non-native Swedish speakers which is used by the Swedish National Agency for Education (2021). Actually, this classification consists of three levels which are:

- First Level: Municipal adult education Swedish for immigrants (sfi) level.
- Second Level: Municipal adult education basic level (Swedish as a second language for new arrivals basic level).
- Third Level: Municipal adult education at upper secondary level (Swedish as a second language for new arrivals upper secondary level).

Thus, according to these levels, the authors also divide and classify the knowledge in Swedish language among the sample of Syrian refugees into three levels which are:

- The Beginning Level which contains all participants who is still studying in the first level and/or who do not pass this level (Municipal adult education Swedish for immigrants (sfi) level).
- The Intermediate Level which contains all participants who pass the first level, and/or who begin studying in the second level (Municipal adult education basic level).
- The Advanced Level which contains all participants who pass the second level, who begin studying in the third level and/or who complete and pass the third level (Municipal adult education at upper secondary level).

Accordingly, to measure the concept of the level of Swedish language knowledge in the sample of Syrian refugees, the authors have formulated a question (see Table 1) which can be answered by choosing one from three alternatives which are:

- 1- SFI: Course A, B, C & D. If you completed Course D, choose the next alternative.
- 2- Basic Level: Swedish as a second language - National module 1, 2, 3 & 4. If you completed National module 4, choose the next alternative.
- 3- Upper Secondary Level: Swedish as a second language 1, 2 & 3.



Table 1 *Measurements of the Abstract Concepts*

<b>Variables</b>	<b>Aspects (indicators)</b>	<b>Statements in the questionnaire</b>
<b><i>Employment</i></b>	Employment without language training	10- I was employed without any Swedish language training.
	Length to find a job – soon after language training	11- I was employed soon after I finished my Swedish language training.
	Length to find a job – long time after language training	12- It took me long time to get a job after I finish Swedish language training.
	Easiness to find a job – only after some career training	13- I got a job opportunity only after I have received some career training in Sweden.
	Employment	14- My level of Swedish language has contributed to being employed in Sweden.
<b><i>Job match</i></b>	Job matches previous training in Syria.	15- My current job matches my training in Syria before I come to Sweden.
	Job matches training in Sweden.	16- My current job matches the training I have received in Sweden after I came here.
	Job matches expectation.	17- My current job matches my job expectation in Sweden.
	Level of Language knowledge contributes to match job and training.	18- My level of Swedish language has contributed to the matching of my job and my training.
	Occupational matching	19- My level of Swedish language has contributed to the matching of my job and my job expectation.
<b><i>Level of Swedish knowledge</i></b>	Beginning Level	6- What level of Swedish language do you have? - SFI: Course A, B, C & D. If you completed Course D, choose the next alternative.
	Intermediate Level	6- What level of Swedish language do you have? - Basic Level: Swedish as a second language - National module 1, 2, 3 & 4. If you completed National module 4, choose the next alternative.
	Advanced Level	6- What level of Swedish language do you have? - Upper Secondary Level: Swedish as a second language 1, 2 & 3.

### **3 RESEARCH METHODOLOGY**

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*This chapter presents the explanation about procedures which are taken in this study in order to find out the answer to the research questions. This research applies quantitative approach. Moreover, this chapter includes research approach, research instrument, data collection process, data analysis method, data quality issues, limitations, and ethical considerations.*

#### **3.1 RESEARCH APPROACH AND STRATEGY**

For this research, a primary data was collected from members of the refugees who were born outside Sweden with 0-9 years of residence in Sweden. Hence, a quantitative research approach was employed in order to gathering information focuses on examining the employment and occupational matching issues across a larger number of participants, thereby providing the possibility of understanding the relationship between the level of Swedish language knowledge and the employment and occupational matching among this group of refugees. Referring to Saunders et al. (2016) quantitative research methods comprise data collection and/or analysis procedures generating or using numeric data. Such numeric data can then well be used to test the relationship between the level of Swedish language knowledge and the employment and occupational matching for the refugees who were born outside Sweden with 0-9 years of residence in Sweden.

In this context, Creswell (2012) describes that quantitative approach is used if the researchers want to identify a research problem based on trends in the field or on the need to explain why something occurs. Creswell (2012) further says that describing a trend means that the research problem can be answered best by a study in which the researchers seek to establish the overall tendency of responses from individuals and to note how this tendency varies among people.

Moreover, this approach surveys a large number of individuals and applies statistical techniques to recognize overall patterns in the relation of processes. Thus, the quantitative research design is most common used as it involves gathering data from larger group or sample. From the elaboration above, the quantitative approach is the best to be employed in this study.

Based on the research question that will mainly investigate the relationship between two or more variables, this research is classified into descriptive research. Moreover, descriptive approach in this study is particularly the descriptive statistic approach due to the quantitative approach that has been elaborated in the previous paragraph. Contextually, Arikunto (2007) explains that descriptive research is the one that is intended to gather some information regarding the trend found in the field. It means that there is no administration and control in this kind of research.

Regarding the research strategy, this study focuses on the relationship between the level of Swedish language knowledge and the employment and occupational matching of the refugees who were born outside Sweden with 0-9 years of residence in Sweden. In order to explore this case in more depth, the researchers used a survey strategy which Saunders et al. (2016) explain to be a common research strategy in deductive approaches and allows the researchers to explore the potential relationships between the independent variable (the level of Swedish language knowledge ) and the dependent variables (employment and occupational matching) and to explain the impact of changes in an independent variable (the level of Swedish language knowledge) on the dependent variables (Employment and Occupational Matching) of the refugees by using multiple linear regression.

### **3.2 RESEARCH INSTRUMENT:**

The instrument that has been used in this study is questionnaire. According to Saunders et al. (2016), a self-completed online questionnaire offers the advantage of gaining a large, geographically dispersed sample size, which in return improves the representativeness of the sample. Particularly, the authors have chosen to conduct this method in order to collect the primary data from the respondents of the research sample. Hence, respondents filled in the questionnaire themselves without a researcher being present after a web link to the questionnaire was sent to them via e-mail, Facebook, Linked-in, and the WhatsApp application. The questionnaire was created and administered using the free of charge “Google Drive-Online” tool.

Initially, a set of various Closed-ended questions are used in order to form the questionnaire. Closed-ended questions are usually used to collect data for statistical analysis, they are more easily analyzed, can be more specific, take less time in large-

scale surveys, and respondents will spend less time answering the survey (Saunders et al, 2019).

Moreover, the questionnaire consists of (19) questions divided into two main parts, the first section is composed of multiple choices questions regarding to background information and demographic characteristics: gender, age, educational level, the attained Swedish language level, and the occupation status. The second section consists of several statements related to employment and occupational matching ranged from 1 “Strongly Disagree” to 5 “Strongly Agree” (Grandner, 1960). For the concept employment, five items were included in the questionnaire, the questions were related to the respondent's employment in Sweden. Meanwhile, five items were used to measure the concept of occupational matching, where the questions were related to the matching of the respondent's current job in Sweden and his/her training or expectation. Respondents are required to evaluate their answers using 5-point Likert scale that were grouped into five categories: 1- Strongly disagree. 2- Disagree. 3- Not sure. 4- Agree. 5- Strongly agree.

Furthermore, the questionnaire was organized and written in two language (Arabic and English) and then distributed on the individuals of the sample. However, the individuals of the sample would be asked to complete the informed survey forms in addition to finalize and fulfil the statistical data in thoroughly way. As well as the individuals of the sample would be given as much time as needed to complete each assessment.

### **3.3 DATA COLLECTION PROCESS**

#### **3.3.1 Population and Sample**

Indeed, a target population or sampling frame defined as a group of individuals or a group of organization with common characteristics that the researcher can identify and study (Creswell, 2004). As previously stated, the population for this study is the refugees who were born outside Sweden with 0-9 years of residence in Sweden. Moreover, this population is largely characterized by the refugee immigration that has taken place in recent times. This population characterized by poorer school results, a weaker position in the labor market, lower income, and a higher proportion of

overcrowded people, since they have been in Sweden for a short time (Statistics Sweden).

Accordingly, the researchers have decided to use Syrian refugees as an example sample to represent the research population. Furthermore, this research applies a convenience sampling where the researchers select samples that are available and willing to participate in the study. For the purpose of this study this sample was restricted to all Syrian refugees who were born outside Sweden with 0-9 years of residence in Sweden, whose ages range between 18 and 64 years old. Currently, this criterion applies to around 191,530 residents of Sweden born in Syria, as of 2019. (Statistics Sweden).

### **3.3.2 Distribution of the Questionnaire**

As stated earlier, the questionnaire was created and designed using the free of charge “Google Drive-Online” tool. Basically, the respondents in this study are the Syrian refugees who were born outside Sweden with 0-9 years of residence in Sweden.

Due to the large size of the research population that will be investigated, and the lack of time, as well as the current situation represented by the Corona (COVID-19) pandemic, which in turn affected the effectiveness and intensity of communication with the individuals of the research sample in; for instance, working places and schools due to the measures of social distancing and the reduction of gathering, meeting, and events, the researchers decided to carrying out the sampling technique by using the online-based survey through distributing the questionnaire via several channels to the respondents across the entire country and mostly outside the personal network of the researchers, rather than physical distribution methods.

This distribution was conducted through various prevalent online platforms (e.g., Facebook, Linked-in, and the WhatsApp application contacts and groups). However, according to Baltar and Brunet (2012), using Facebook for the distribution of an online survey improves the sample size and its geographical dispersion considerably more compared to offline distribution methods.

Furthermore, a form of snowball sampling was applied by asking all respondents to forward the survey to family members, friends or colleagues (Saunders et al., 2016).

Accordingly, snowball sampling technique has provided the opportunity to effectively reach a larger and geographically more dispersed sample, which improves the representativeness of the sample (Baltar and Brunet, 2012). However, the total administration of the questionnaire would be lasted between ten and fifteen minutes. Eventually, the questionnaires then would be collected upon completion.

In total, 114 respondents have filled in and completed the questionnaire, of those 114 respondents there are two responses do not belong to the targeted research sample. The respondents that do not fit the target group have been excluded from the respondent list in Google forms, remaining 112 valid responses to be used and analyzed in the study.

### **3.4 DATA ANALYSIS**

In fact, the data that has been used in this research is a primary type of data. Generally, all the data that obtained from the respondents has been analyzed by using the Statistical Package for the Social Science (SPSS) program. Technically, this program is one of the most compatible software that can be used in order to key in and analyze the data and conduct the quantitative study. Essentially, for quantitative studies, subsequent data analyses should include summary descriptive statistics and inferential statistical tests. Consequently, descriptive statistical analyses have been performed on the sample groups for presenting and describing the data and to obtain a clear understanding of the population.

In addition, inferential statistics has been used to test the relationship between the dependent variables (Employment and Occupational Matching) of the Syrian refugees and the independent variables (the level of Swedish Language Knowledge). Furthermore, data has been analyzed to figure out the frequency, as well as measures of central tendency (means, medians, and other percentiles) and dispersion (standard deviations) have been computed. Multivariate analysis of variance (MANOVA) will be conducted in order to compare the groups and tells weather the mean differences between the groups on the combination of dependent variables are likely to have occurred by chance. MANOVA is adopted as there are two dependent variables (Employment and Occupational Matching) to be analyzed. Subsequently, data has been analyzed through using the multiple regression to measure the impact of changes in an

independent variable (the level of knowledge in Swedish language) on the dependent variables (Employment and Occupational Matching). Moreover, hierarchical multiple regression will be used to assess the ability of control variables on dependent variables by Using the Statistical Package for the Social Sciences (SPSS) as mentioned earlier. Lastly, the results have been interpreted.

### **3.5 DATA QUALITY**

The Validity and Reliability of the scales used in this study are essential factors that enable the research to yield beneficial results (BMIJ, 2020). For this reason, it is fundamental to ensure that the reliability and validity of the scales are measured correctly in the research, as well as the primary purpose is to provide information of how the validity and reliability of the scales tested and used in the empirical studies and provide resources for future research. Moreover, in order to achieve this purpose, the concept of validity and reliability are introduced, and explanations have been provided regarding the main methods used in the evaluation of validity and reliability.

However, In the field of this quantitative research carried out in the study population composed from the Syrian refugees who were born outside Sweden with 0-9 years of residence in Sweden, data are collected through the use of questionnaires. These questionnaires should be checked for reliability and validity.

#### **3.5.1 Validity**

Validity is the extent to which the results of the study are congruent with reality. Validity is the quality of various conclusions you might reach based on research project (Trochim, 2005). Moreover, Whiston (2012) defined validity as obtaining data that is appropriate for the intended use of the measuring instruments. In this case, validity tests determine whether the expressions in the scale make suitable measurements according to the purpose of the research. Consequently, in order to determine the validity of the measuring instrument in this research, different types of validity have been suggested in the literature (Oluwatayo, 2012). These types can be listed as follows:

### **Construct validity**

Construct validity, is referring to the measurement of the research constructs, relates to whether the instruments used are capturing the variables they are measuring (Trochim, 2005). Moreover, Babbie (2001) stated: “tests of construct validity, then, can offer a weight of evidence that your measure either does or does not tap the quality you want to measure” (Babbie, p.144). Thus, in this research, to ensure the construct validity, the researchers constructed the questions in an evident manner to the respondents in order to measure the characteristics that are intended to be tested from the questionnaire in clear way.

Furthermore, the researchers guarantee the content validity by ensuring that appropriate expressions that represent the phenomenon intended to be measured (Bollen, 1989), and serve the purpose of the study are used in the questionnaires by using phrases and expressions that are understandable and relevant to the culture and the language of the respondents. Whereas the written language of the questionnaire is English, and since Arabic language is the native language of the Syrian people who represent members of the research sample, the questionnaires have been translated into the Arabic language, and expert translator has been employed in order to ensure the validity and accuracy of the translated information.

### **Conclusion validity**

Since the questionnaire is designed in order to answer the research questions and to ensure that the research objectives is achieved and generalizable. Lastly, conclusion validity, also called statistical conclusion validity, is the extent to which there is a statistical relationship among variables, and according to Trochim (2005), it is the “degree to which conclusions you reach about relationships in your data are reasonable” (Trochim, p.206). However, the researchers ensured the conclusion validity by carefully analyzing the study findings and examine the existing of relationship between variables and avoiding the statistical errors.



## **Internal and external validity**

Internal validity, refers to the accuracy of ascribing causality to a relationship. When discussing the internal validity, it is worthy to be mentioned that not all factors and determinants of employment and occupational matching for the refugees could be included in this research, as this exceeded the scope of the research. Nevertheless, by studying the effect of the knowledge in Swedish language on the employment and occupational matching of the refugees, as well as, applying of control variables as a measure to improve internal validity (Saunders et al. 2016), the internal validity of this study was enhanced. In this study, three of control variables were used: gender, and education, in order to strengthen the internal validity.

Regarding to the external validity, where it refers to the generalizability of a finding, and reflects whether findings hold up in settings or situations other than those involved in the actual research (W. Hammitt, 2011, p. 34). Hence, one of the limitations of the quantitative research is that the results cannot be generalized in context to a larger population, but rather be suggested. Thus, the external validity of this research cannot be ensured.

### **3.5.2 Reliability**

Reliability refers to several aspects of measurement, all focused on consistency (Babbie, 2001. Trochim, 2005). Moreover, Reliability refers to the stability of the measuring instrument used and its consistency over time. In other words, Reliability is the ability to measure instruments to give similar results when applied at different times. However, a strong positive correlation between the results of the measuring instrument is an indication of Reliability. Accordingly, the measuring instrument used in this study is the questionnaire. Hence, the term “questionnaire reliability” means the precision, the consequence and the stability of its results. That is, the degree to which, results that arise from its repeated applications, are equivalent (Carmines and Zeller, 1979).

Consequently, the reliability of a questionnaire is a very important characteristic, and it is an essential consideration for the results of the study to be healthy because when a questionnaire is characterized as reliable, then we can trust its results to reach conclusions. Therefore, in this research, the authors ensure that questionnaire used is reliable. Indeed, there are different methods used to determine the Reliability of the

scale used in empirical research, for this research, the internal consistency has been tested, this type of reliability refers to the relationship among items in a test or instrument. These items should be related to one another if they are measuring the same dimension (Babbie, 2001; Trochim, 2005).

Accordingly, a common statistic and most popular method used to measure internal consistency is Cronbach's Alpha, this technique measures the internal consistency of a questionnaire's items. The more the items of a questionnaire inter-correlate, the bigger the value of the alpha test is. Thus, the higher the Cronbach's Alpha the higher the reliability. As the Cronbach's alpha coefficient, the value of which is between 0 and 1, approaches +1, it is stated that internal consistency is high. (we are looking for a score of over .7 for high internal consistency)

The researchers have conducted Cronbach's Alpha to assess the internal consistency of the multi-item concepts of the questionnaire regarding to employment and occupational matching statements which are made up of multiple Likert-type scales. As a result from conducting Cronbach's Alpha analysis for the employment and occupational matching statements the Reliability Statistics tables have showed that Cronbach's Alpha score is ( $\alpha = 0.659$ , see Table 2). Actually, researchers are looking for a score of over 0.7 for high internal consistency. As  $\alpha = 0.659 < 0.7$  that indicates the questionnaire cannot be considered as a reliable. Because of that, the researchers need to find out which item or items need to be removed from questionnaire to increase the score of Cronbach's Alpha.

Table 2 *Reliability Statistics*

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.659	.659	10

Thus, the next table which is needed to be checked is Inter-Item Correlation Matrix, Table 3, which gives a correlation matrix which shows how each item correlates with all other items. The list of 1.000 scores across the diagonal (top left to bottom right) represents and displays the item when it has been correlated with itself. So, when the correlations are identical, the correlation value is perfect when ( $r = 1$ ).

Moreover, if all of the items are measuring the same concept, the questions will correlate well together. Accordingly, any items that have consistently low or negative correlations across the board may need to be removed from the questionnaire to make it more reliable. Through the examination of a correlation matrix table, it is recognized that there are some questions which have consistently low and negative correlation values comparison with other questions. These questions are (10 and 13) which have several negative correlation values as that is shown in Table 3. So, these abovementioned questions may need to be removed from the questionnaire to be more reliable.

Table 3 *Inter-Item Correlation Matrix*

	Employment without language training	Length to find a job – soon after language training	Length to find a job – long time after language training	Easiness to find a job – only after some career training	Employment	Job matches previous training in Syria.	Job matches training in Sweden.	Job matches expectation.	Level of Language knowledge contributes to match job and training.	Occupational matching
Employment without language training	1.000	.077	-.043	.075	-.289	-.066	-.017	.090	.013	-.002
Length to find a job – soon after language training	.077	1.000	.364	-.091	.259	-.112	.386	.175	.169	.223
Length to find a job – long time after language training	-.043	.364	1.000	-.023	.290	.168	.158	.241	.196	.128
Easiness to find a job – only after some career training	.075	-.091	-.023	1.000	-.180	.312	.058	.087	-.006	-.086
Employment	-.289	.259	.290	-.180	1.000	.004	.135	.152	.455	.195
Job matches previous training in Syria.	-.066	-.112	.168	.312	.004	1.000	.229	.449	.209	.377
Job matches training in Sweden.	-.017	.386	.158	.058	.135	.229	1.000	.272	.386	.419
Job matches expectation.	.090	.175	.241	.087	.152	.449	.272	1.000	.372	.694
Level of Language knowledge contributes to match job and training.	.013	.169	.196	-.006	.455	.209	.386	.372	1.000	.374
Occupational matching	-.002	.223	.128	-.086	.195	.377	.419	.694	.374	1.000

The other table which is needed to be checked also is Item-Total Statistics, Table 4. This table can give more accurate signs whether the questions which are recognized in the previous table (Inter-Item correlation Matrix, Table 3) as problematic questions, and they may need to be removed from the questionnaire. Actually, there are two columns which need to be considered in this table which are the Corrected Item-Total Correlation and Cronbach's Alpha if Item Deleted.

Regarding to the first column which is the Corrected Item - Total Correlation column, it can show how much each item correlates with the overall questionnaire score. Thus, any correlations which is low or negative indicates that the item may not belong to the scale, and it needs to be removed from the questionnaire. Related to this case, it is observed that questions number 10 and 13 have scored  $r=-0.035$  and  $r=0.051$  respectively. So, they are perceived as the problematic items according to these scores.

Regarding to the second column which is Cronbach's Alpha if Item Deleted, and it is considered as more important. As its name suggests, this column gives the Cronbach's Alpha score when the item is removed from the questionnaire. So, as it is presented in the Reliability Statistics, the current Cronbach's Alpha score is ( $\alpha = 0.659$ ). Thus, if this score goes down if we deleted an item, we will keep it. However, if this score goes up after the item is deleted, we may want to delete it, because that would make our questionnaire more reliable.

Regarding to the question number 10, if it is deleted, the Cronbach's Alpha score will be  $\alpha=0.698$ . Thus, the Cronbach's Alpha score will increase after removing this item from the questionnaire. Regarding to the question number 13, if it is deleted, the Cronbach's alpha score will be  $\alpha=0.685$ . Thus, the Cronbach's Alpha score will increase after removing this item from the questionnaire. As a result, the Cronbach's alpha will increase if the questions number 10 and 13 are removed, so, the questionnaire will be more reliable. So, the deletion needs to be considered, and all other items should be retained.

Table 4 *Item-Total Statistics*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Employment without language training	30.15	35.699	-.035	.164	.698
Length to find a job – soon after language training	29.25	31.354	.308	.353	.637
Length to find a job – long time after language training	29.23	30.506	.323	.243	.634
Easiness to find a job – only after some career training	29.55	34.428	.051	.190	.685
Employment	28.76	32.487	.206	.389	.656
Job matches previous training in Syria.	30.08	28.602	.355	.381	.628
Job matches training in Sweden.	29.16	28.543	.450	.362	.606
Job matches expectation.	29.26	27.107	.593	.572	.574
Level of Language knowledge contributes to match job and training.	28.79	29.967	.492	.394	.606
Occupational matching	28.95	28.605	.545	.587	.591

After deleting questions 10 and 13, the researchers have conducted Cronbach's Alpha analysis again. The Cronbach's Alpha score is  $\alpha=0.732$  in the conducted analysis as that shown in Table 5.

Table 5 *Reliability Statistics*

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.732	.741	8

Moreover, Inter-Item Correlation Matrix, Table 6, has been checked also to see how each item correlates with all other items. Through the examination of a correlation matrix table, it is recognized that there are only two questions which have a negative correlation value with each other. These questions are (11 & 15), and they have a negative correlation value. So, one of these two questions may need to be removed from the questionnaire to be more reliable.

Table 6 *Inter-Item Correlation Matrix*

	Length to find a job – soon after language training	Length to find a job – long time after language training	Employment	Job matches previous training in Syria.	Job matches training in Sweden.	Job matches expectation.	Level of language knowledge contributes to match job and training.	Occupational matching
Length to find a job – soon after language training	1.000	.364	.259	-.112	.386	.175	.169	.223
Length to find a job – long time after language training	.364	1.000	.290	.168	.158	.241	.196	.128
Employment	.259	.290	1.000	.004	.135	.152	.455	.195
Job matches previous training in Syria.	-.112	.168	.004	1.000	.229	.449	.209	.377
Job matches training in Sweden.	.386	.158	.135	.229	1.000	.272	.386	.419
Job matches expectation.	.175	.241	.152	.449	.272	1.000	.372	.694
Level of language knowledge contributes to match job and training.	.169	.196	.455	.209	.386	.372	1.000	.374
Occupational matching	.223	.128	.195	.377	.419	.694	.374	1.000

So, to be sure which question from questions (11 & 15) which needs to be removed, Item-Total Statistics, Table 7, can give more accurate signs which question may need to be removed from the questionnaire. Actually, there are two columns which need to be considered in this table which are the Corrected Item-Total Correlation and Cronbach's Alpha if Item Deleted.

Regarding to the first column which is the Corrected Item-Total Correlation column, it can show how much each item correlates with the overall questionnaire score. Thus, the correlation which is lower between these two questions (11 & 15) indicates that the

item may not belong to the scale, and it needs to be removed from the questionnaire. Related to this case, it is observed that questions number 10 and 15 have scored  $r=0.326$  and  $r=0.310$  respectively. So, it is clear that question number 15 which has a lower correlation than question number 11. Thus, question number 15 only item which appears as problematic according to this measure.

Regarding to the second column which is Cronbach's Alpha if Item Deleted, and it is considered as more important. So, as it is presented in the Reliability Statistics, the current Cronbach's Alpha score is ( $\alpha = 0.732$ ). If this score goes down if we deleted an item, we will keep it. However, if this score goes up after the item is deleted, we may want to delete it, because that would make our questionnaire more reliable.

Regarding to the question number 11, if it is deleted, the Cronbach's Alpha score will be  $\alpha=0.723$ . Thus, the Cronbach's Alpha score will decrease after removing this item from the questionnaire. Regarding to the question number 15, if it is deleted, the Cronbach's alpha score will be  $\alpha=0.735$ . Thus, the Cronbach's Alpha score will increase after removing this item from the questionnaire. As a result, the Cronbach's alpha will increase if the question number 15 is removed, so, the questionnaire will be more reliable. So, the deletion needs to be considered, and all other items should be retained.

Table 7 *Item-Total Statistics*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Length to find a job – soon after language training	23.80	28.542	.326	.339	.723
Length to find a job – long time after language training	23.78	27.544	.355	.240	.719
Employment	23.31	28.445	.323	.289	.724
Job matches previous training in Syria.	24.63	26.718	.310	.306	.735
Job matches training in Sweden.	23.71	25.904	.463	.354	.697
Job matches expectation.	23.81	24.863	.578	.557	.673
Level of language knowledge contributes to match job and training.	23.34	27.214	.514	.376	.692
Occupational matching	23.50	25.595	.597	.557	.673

So, after deleting this item (question 15) the Cronbach's Alpha scores  $\alpha=0.735$  as it is presented in Table 8. Accordingly, inter-item correlation values are all positive as it is shown in Table 9.

Table 8 *Reliability Statistics*

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.735	.739	7

Table 9 *Inter-Item Correlation Matrix*

	Length to find a job – soon after language training	Length to find a job – long time after language training	Employment	Job matches training in Sweden.	Job matches expectation.	Level of language knowledge contributes to match job and training.	Occupational matching.
Length to find a job – soon after language training	1.000	.364	.259	.386	.175	.169	.223
Length to find a job – long time after language training	.364	1.000	.290	.158	.241	.196	.128
Employment	.259	.290	1.000	.135	.152	.455	.195
Job matches training in Sweden.	.386	.158	.135	1.000	.272	.386	.419
Job matches expectation.	.175	.241	.152	.272	1.000	.372	.694
Level of language knowledge contributes to match job and training.	.169	.196	.455	.386	.372	1.000	.374
Occupational matching	.223	.128	.195	.419	.694	.374	1.000

Regarding to corrected item-total correlation values, they are all larger than 0.3 as it is seen in Table 10. According to the column of Cronbach's Alpha if Item Deleted, if any item was deleted, the Cronbach's Alpha score would be  $(\alpha) < (0.735)$ . So, all items should be remained, accordingly, the questionnaire will be more reliable.



Table 10 *Item-Total Statistics*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Length to find a job – soon after language training	21.30	21.099	.416	.270	.711
Length to find a job – long time after language training	21.28	21.113	.350	.213	.728
Employment	20.81	21.395	.371	.285	.721
Job matches training in Sweden.	21.21	19.739	.453	.333	.703
Job matches expectation.	21.31	19.509	.500	.525	.691
Level of language knowledge contributes to match job and training.	20.84	20.796	.519	.375	.691
Occupational matching	21.00	19.823	.551	.552	.681

### 3.6 LIMITATION:

In fact, research methodology serves as the backbone of a research study (Saunders, 2009). The quantitative research's main purpose is the quantification of the data. It allows generalizations of the results by measuring the views and responses of the sample population. Moreover, research methodology consists of two broad phases namely planning and execution (Younus 2014). Therefore, it is evident that within these two phases, there likely to have limitations which are beyond the researchers' control (Simon 2011).

Among these limitations in the study, improper representation of the target population might hinder the researchers for achieving their desired aims and objectives. Whereas despite of applying appropriate sampling plan representation of the population, there is a scope of getting partial information about the extent of employment and occupational matching from the sampled regarding their competences whether in language or educational level, owing to its meagre form against the total

population. Hence, the results of the study cannot be generalized in context to a larger population, but rather be suggested.

Moreover, quantitative research methodology usually requires a large sample size. However, due to the lack of resources for data collection this large-scale research becomes intricate. Furthermore, quantitative research method involves structured questionnaire with close ended questions. It leads to limited outcomes cannot always represent the actual occurring, in a generalized form. As well as limited options of responses based on the questions made by the researchers. Additionally, this quantitative research is difficult, expensive and requires a lot of time to perform the analysis (Morgan 1980). Lastly, the inability to obtain explicit answers due to the different circumstances surrounding some respondents and their future intentions, in addition to some biased responses.

### **3.7 ETHICAL CONSIDERATIONS**

Ethical considerations in research are largely a matter of finding a reasonable balance between various interests that are all legitimate. Moreover, Researchers are expected to strive to conduct research of high quality. Accordingly, their work must be free of external influence and manipulation, and they should not act in their own personal interests or in the interests of other stakeholders (Stafström, 2017).

Additionally, Ethical considerations are necessary for research projects as all participants have moral and legal rights. Consequently, for this study, Dalarna University instructions regarding ethical issues, in the one hand, and the proper and decent research requirements and processes that are based on society's general ethical norms and values, on the other hand, have been highly considered.

Whereas the authors ensured that they would interact with the participants in an evident and decent manner, and that they clearly informed the participants that they do not invade their privacy, that the research does not cause any harm to them, and that all the information received from them will be acknowledged and accurately represented. These are important features according to Greetham (2009) and Walliman and Buckler (2008).

Moreover, ethical considerations that our study ensured for the participants are:

***Privacy and confidentiality:***

- Guaranteeing that all respondents identifying information will be anonymous to maintain privacy and confidentiality.
- Ensuring that information provided will be unidentifiable by anybody other than by the researchers.
- Guaranteeing that all data will be stored in a password encrypted laptop.

***Safety:***

- Confirming that the research is not harmful for participants and certifies proper use of information.
- Inform the respondents of the importance of research and notify them of its positive returns in the field of work and employment and eliminate any risk elements.

***Autonomy:***

- The researcher ensured that the participant's contribution is completely voluntary and that they may withdraw from the research at any time.

***Dignity:***

- All participants had the freedom to make their own fully informed decisions.
- All participants were treated with great respect.

## 4 RESULTS

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*The result section reports the results of the study. Moreover, this section presents the statistical results of the conducted analysis by using the Statistical Package for the Social Sciences (SPSS) in order to achieve the testing of the research hypotheses. Consequently, the researchers have conducted descriptive analysis for demographic characteristics of the sample, multivariate analysis of variance (MANOVA), hierarchical multiple regression and multiple linear regression to exploring the impacts of the level of knowledge in Swedish language on employment and occupational matching.*

### 4.1 DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE

In this section, the demographic characteristics of the sample such as the age, gender, education, level of Swedish language and employment status are presented to give to some extent more illustration and understanding about the respondents who constitute the sample. In fact, the responses of the questionnaire have been collected through the use of the survey tool “Google Drive-Online”. In total, a number of 114 respondents have answered the questionnaire. However, after checking all received responses, the researchers have found two respondents who do not belong to the targeted geographic area which is Sweden. In other words, these two respondents dwell outside Sweden. Thus, these two respondents have been withdrawn from the data entry. Consequently, 112 out of 114 collected responses are valid and used for the data analyzing in the study.

Moreover, this sample has been collected from Syrian refugees who represent the target research population to be studied, which is the refugees who were born outside Europe with 0-9 years of residence in Sweden. Actually, this group of people, who were born outside Europe with 0-9 years of residence in Sweden, constitutes about 6 per cent from the all population reside in Sweden. Also, about two thirds have been less than 5 years in Sweden while one third have a residence period between 5-9 years. Additionally, 28 per cent of this group of people born in Syria (Integration – Report 13, 2019). Thus, despite that there are some racial, cultural and social differences among the targeted population of refugee who were born outside Europe with 0-9 years of

residence in Sweden, the sample from Syrian refugees can be to a certain degree a good representative for this targeted population of refugees.

#### 4.1.1 Gender

In the Table 11, the respondents' gender is shown. Accordingly, 37 respondents who constitute 33 per cent of the overall respondents are females, and 75 respondents who constitute 67 per cent of the overall respondents are males. Actually, this difference between males and females can somewhat be explained by two reasons. The first one is that there are more males than females among the population who were born outside Europe with 0-9 years of residence in Sweden, 54 per cent are men and 46 per cent women (Integration – Report 13, 2019). The second reason is related to the culture to which the sample has belonged. In this culture, there is a tendency which considers men as responsible for economic issues in the family. Accordingly, there is more obligations and pressures on men who need to search and find a job to supply their families. So, the female participants are less than the male ones, because they have not encountered same obligations and pressures which males have.

Table 11 *Gender*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	75	67.0	67.0	67.0
	Female	37	33.0	33.0	100.0
	Total	112	100.0	100.0	

#### 4.1.2 Age

Moreover, Table 12 presents the categories of the respondents' age. Thus, as it is shown in the table, 40 respondents who constitute 35.7 per cent from the overall respondents belong to the first category which has all respondents who are between 18 and 29 years old. Also, 56 respondents who constitute 50 per cent from the overall respondents belong to the second category which is constituted from all respondents who are between 30 and 44 years old. The last category which is constituted from all

respondents who are between 45 and 64 years old shows that 16 respondents who constitute 14.3 per cent of overall respondents belong to this category.

Actually, these numbers, which are presented in the Table 12, can to a certain degree be explained by that close to 50 per cent of the group of people who were born outside Europe with 0-9 years of residence in Sweden are aged between 20-39 (Integration – Report 13, 2019). Accordingly, when the individuals from this group who are under 18 and over 64 years old are removed from the statistics, then, the percentage for the refugees who are aged between 20-39 can significantly be increased over 50 per cent. Also, as it is observed from the figure which is presented by Sweden Statistics in the Integration Report (Integration: Report 13, 2019), the group of population who were born outside Europe with 0-9 years of residence in Sweden and aged between 18-45 constitutes between 75-80 percent from the people who are aged between 18-65 years old.

Table 12 *Age*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 - 29	40	35.7	35.7	35.7
	30 - 44	56	50.0	50.0	85.7
	45 - 64	16	14.3	14.3	100.0
	Total	112	100.0	100.0	

#### 4.1.3 Education

In Table 13, the respondents' levels of education are presented to give more illustration about the sample. Hence, the levels of education have been divided to 7 classes which range from (Did not attend school) to (Post graduate degree). This table shows that only one respondent who constitutes 0.9 per cent from the all respondents did not attend school, and 10 respondents who constitutes 8.9 per cent from the all respondents have attended primary school (1<sup>st</sup> – 9<sup>th</sup>) grades. Also, the table shows that 13 respondents, 11.6 per cent from the sample, have finished the primary school and have attended high school. Moreover, 31 respondents, 27.7 per cent, have graduated from the high school, and 9 respondents, 8 per cent from the sample, have vocational

education. The last two classes which are College graduate and Post graduate degree have 40 and 8 respondents, 35.7 per cent and 7.1 per cent respectively from the overall sample.

Actually, these percentages which are presented in Table 13 are to a certain degree near to the results which are shown by Sweden Statistics in (Integration: Report 13, 2019). In this report, the percentage for people who have not attended school to those who have some high school education but have not graduated is close to 27 percent from the population who were born outside Europe with 0-9 years of residence in Sweden (Integration – Report 13, 2019). However, in this research the percentage for the Syrian refugees is 21,4 per cent.

Furthermore, the Sweden Statistics' report has also shown that the percentage for people who have completed high school education is near to 22 percent from the population who were born outside Europe with 0-9 years of residence in Sweden (Integration – Report 13, 2019). In the sample of this study, the Syrian refugees who have completed the high school is 27,7 per cent.

Regarding to the people who have studied after high school, the Sweden Statistics' report has also revealed that the percentage for this people is close to 41 percent from the population who were born outside Europe with 0-9 years of residence in Sweden (Integration – Report 13, 2019). Nevertheless, in this study, the sample of Syrian refugees who have studied after the high school is about 50,8 per cent.

However, the differences between the percentages from the Sweden Statistics' report and the percentages from the sample of Syrian refugees can be explained by that the collected data for the Sweden Statistics' report has been gathered from all immigrants including refugees and from all nationalities who were born outside Europe with 0-9 years of residence in Sweden. Additionally, the Sweden Statistics' report has mentioned that the data has been collected in 2018 from the age group between 30-64 (Integration: Report 13, 2019). Nevertheless, in this research the data has been collected in 2021 from the sample of Syrian refugees aged between 18-64. Thus, these differences in age group and time of data collection may somewhat affect these percentages.

Table 13 *The last grade of school completed*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Did not attend school	1	.9	.9	.9
	1st - 9th Grades (Primary School)	10	8.9	8.9	9.8
	10th - 12th Grades (High School - Not graduated)	13	11.6	11.6	21.4
	Graduated from high school	31	27.7	27.7	49.1
	Vocational education	9	8.0	8.0	57.1
	College graduate	40	35.7	35.7	92.9
	Post graduate degree	8	7.1	7.1	100.0
	Total	112	100.0	100.0	

#### 4.1.4 Level of Swedish Language

Related to this research, the levels of Swedish language have been classified to three categories as it is presented in Table 14. The first one is the Beginning Level, and it has 25 respondents, 22.3 per cent, from the sample. The second category is the Intermediate Level which has 28 respondents, 25 per cent, from the sample. Finally, the third one is called Advanced Level which is constituted of 59 respondents, 52.7 per cent, from the overall respondents.

Table 14 *The level of Swedish language*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Beginning Level	25	22.3	22.3	22.3
	Intermediate Level	28	25.0	25.0	47.3
	Advanced Level	59	52.7	52.7	100.0
	Total	112	100.0	100.0	



#### **4.1.5 Employment Status**

The last table, Table 15, shows the employment status of the respondents who are the sample from Syrian refugees who represent the refugee population who were born outside Sweden and with residency period between 0 – 9 years in Sweden. This table shows that 80 respondents who constitute 71.4 per cent of the overall respondents are employed.

However, according to Sweden Statistics as that has been mentioned in (Integration – Report 13, 2019), in 2017, the proportion of gainfully employed people was 41 per cent in this group of people who were born outside Europe and with residency period between 0 – 9 years in Sweden. Moreover, the proportion is significantly higher for those born outside Europe with a longer period of residence. The proportion of gainfully employed is about 70 percent in this group (Integration – Report 13, 2019).

This difference in results between the Sweden Statistics' report (Integration – Report 13, 2019) and the collected data from the sample of Syrian refugees can be attributed to that the collected data for the Sweden Statistics' report has been gathered in 2017, and the collected data for this research has been collected in 2021.

Thus, the number of Syrian refugees, who have begun coming to Sweden in 2012 with small numbers (7814), has reached to its peak in 2014 and 2015 with 30583 and 51338 respectively (Swedish Migration Agency, 2021). Accordingly, most Syrian refugees have arrived to Sweden between 2014 and 2015, so, when the data has been gathered from the Sweden Statistics, most of Syrian refugees have lived in Sweden between two or three years. Hence, the increasing of employment statuses among the sample of Syrian refugees in this research can be attributed to the period of living in Sweden after 2017 which has enhanced the employment opportunities for the Syrians refugees. Also, from the facts which have been presented in the Sweden Statistics' report (Integration – Report 13, 2019) which ensure that more time of residency in Sweden means more employment statuses among the people who were born outside Europe.

Table 15 *Employment*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	80	71.4	71.4	71.4
	No	32	28.6	28.6	100.0
	Total	112	100.0	100.0	

## 4.2 DESCRIPTIVE RESULTS OF MULTI-ITEM CONCEPTS

### 4.2.1 Descriptive Results of Concepts

In this research, the multi-items/statements concepts which are (Multi-items for employment) and (Multi-items for Occupational Matching) have been assessed by five-point scale from 1 to 5 (1 = Strongly Disagree and 5 = Strongly Agree).

Related to the (Multi-items for employment) concept, the researchers have noticed that the Syrian refugee sample have perceived that the Swedish language can positively influence their employment and performance in their work places. Additionally, the respondents have seen the Swedish language knowledge contributes to their employment opportunities. As seen in Table 16, the average of multi-item scales of employment concept scores (Means = 3.50 and Standard Deviation = 1.18).

Regarding to the concept of (occupational matching), the Syrian refugee sample have showed that Swedish language knowledge can positively influence their occupational matching in Sweden. Also, the respondents have recognized that the occupational matching between their current jobs and their training in Syria are not highly achieved. However, the respondents have noticed that the occupational matching between their jobs and their training in Sweden are highly perceived. Also, it is worthy to be mentioned that the concept of (occupational matching) scores in average (Means = 3.53 and Standard Deviation = 1.19) as seen in Table 16.

Consequently, the average of multi-item scales for employment (Means = 3.50 and Standard Deviation = 1.18) and the average of multi-item scales for occupational matching (Means = 3.53 and Standard Deviation = 1.19) are approximately equal scores. That indicates the Syrian refugees have perceived that the Swedish language knowledge has same influence on employment and occupational matching.

Table 16 *Multi-items Descriptive Statistics*

<b>n = 112 (total)</b> <b>n = 80 (Employed)</b>	<b>mean</b>	<b>Std. Dev.</b>
<b>All multi-items</b>	<b>3.52</b>	<b>1.18</b>
<b>Multi-items for Employment</b>	<b>3.50</b>	<b>1.18</b>
Item 10 – Employment without language training – <i>No control</i>	n.a.	n.a.
Item 11 – Length to find a job – soon after language training	3.33	1.134
Item 12 – Length to find a job – long time after language training. (rev. coded)	3.35	1.254
Item 13 – Easiness to find a job – only after some career training – <i>No control</i>	n.a.	n.a.
Item 14 – Employment	3.81	1.159
<b>Multi-items for Occupational Matching</b>	<b>3.53</b>	<b>1.19</b>
Item 15 – Job matches previous training in Syria – <i>No control</i>	n.a.	n.a.
Item 16 – Job matches training in Sweden.	3.41	1.309
Item 17 – Job matches expectation.	3.31	1.269
Item 18 – Level of language knowledge contributes to match job and training.	3.79	1.027
Item 19 - Occupational matching	3.62	1.140

### 4.3 MULTIPLE LINEAR REGRESSION ANALYSIS

Multiple linear regression is commonly used in the quantitative data analysis and can be applied on wide range of research questions. In this section, the researchers will conduct two multiple linear regression analyses in order to estimate the relationship of Swedish Language Knowledge as the solely independent variable on Employment and Occupational Matching Status as two separated dependent variables.

### 4.3.1 The Knowledge in Swedish Language and Employment

As a result from conducting the first multiple linear regression analysis to test the first hypothesis (H1a), three important tables, which are **Model Summary**, **ANOVA** and **Coefficients**, are produced. Hence, these three important tables will be illustrated, and their values will be clarified.

Hence, the first table to be illustrated is Model Summary, Table 17. In this table the Adjusted R Square which varies between 0 and 1 is presented. It is the value which solves the fact that adding additional variables, and it can in its turn adjust the influence of the sample size on R Square, therefore, it is more accurate, and it is more preferred. Thus, the Adjusted R Square for this analysis is (= 0.174), and it indicates that 17.4% ( $0.174 \times 100$ ) of variance in dependent variable Employment (Item 14, see Table 1) is explained by the independent variables (Items 10, 11, 12 & 13, see Table 1).

Table 17 *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.465 <sup>a</sup>	.216	.174	1.053

a. Predictors: (Constant), Employment without language knowledge, Length to find a job – soon after language training, Length to find a job – long time after language training, Easiness to find a job – only after some career training.

The second table which is illustrated in this section is ANOVA, Table 18. In fact, the importance of ANOVA table in the regression analysis stems from that it shows the overall appropriateness and relevance of the regression model. Actually, in this table, the Null hypothesis for H1a is examined and tested when that all coefficients beta ( $\beta$ ) is simultaneously equal to zero. In addition, ANOVA table shows if the null hypothesis can be rejected, or it cannot be rejected. In this table, the researchers concern about Sig. which demonstrates the P-value.

Table 18 ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.963	4	5.741	5.173	.001 <sup>b</sup>
	Residual	83.225	75	1.110		
	Total	106.188	79			

a. Dependent Variable: Employment.

b. Predictors: (Constant), Employment without language knowledge, Length to find a job – soon after language training, Length to find a job – long time after language training, Easiness to find a job – only after some career training.

In ANOVA table, P-value = 0.001. So, the P-value is less than 0.05 (P-value < 0.05). Thus, the result indicates that there is statistically significant relationship between Swedish language knowledge and the employment of the refugees, accordingly, that indicates that the null hypothesis can be rejected and H1a can be accepted. Hence, the regression model statistically significant, and it is a good fit for the data.

The last table in the multiple linear regression output is the Coefficients table, Table 19. In this table, it can be measured to what extent the change in each independent variable influences the dependent variable Employment (Item 14, see Table 1).

Table 19 *Coefficients*<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.617	.576		6.285	.000
	Employment without language training	-.286	.103	-.285	-2.764	.007
	Length to find a job – soon after language training	.199	.113	.194	1.753	.084
	Length to find a job – long time after language training	.188	.102	.203	1.848	.069
	Easiness to find a job – only after some career training	-.133	.100	-.136	-1.324	.190

a. Dependent Variable: Employment

Consequently, the Coefficients table, Table 19, shows that the unstandardized  $\beta$  scores -0.286 for the independent variable (Employment without language training). Which means that the dependent variable (Employment) will be negatively influenced when the refugee has been employed without language training. This indicates that the refugees' employment will be decreased when the refugee does not have language training. Consequently, the P-value for the (Employment without language training) scores 0.007, which is  $< 0.05$ , so, this indicates that there is statistically significant relationship between the Swedish language knowledge and the Employment of the Syrian refugees.

However, related to the independent variables associated to (Length to find a job after language training, Items 11 & 12), the unstandardized  $\beta$  scores are 0.199 and 0.188, and the P-value (Sig.) scores are 0.084 and 0.069 respectively which are  $> 0.05$ . These results indicate that there is no a statistically significant relationship between the refugees' employment and (Length to find a job after language training, Items 11 & 12).

Regarding to the independent variable (Easiness to find a job – only after some career training, item 13), the unstandardized  $\beta$  scores -0.133 and the P-value (Sig.) scores are 0.190  $> 0.05$ . These results indicate that there is no a statistically significant relationship between the refugees' employment and (Easiness to find a job – only after some career training).

In conclusion, the multiple linear regression analysis has assessed the first hypothesis (H1a), and the result has confirmed that there is a statistically significant relationship between the Swedish language knowledge and the employment of the Syrian refugees in Sweden. Consequently, the Null hypothesis for the first hypothesis (H1a) can be rejected.

#### **4.3.2 The Knowledge in Swedish Language and Occupational Matching**

After conducting the second multiple linear regression analysis to test the hypothesis (H2a), three important tables, which are **Model Summary**, **ANOVA** and **Coefficients**, are also produced as outputs. Accordingly, these three tables will be illustrated, and their values will be explained.

Regarding to the first table which is Model Summary table, Table 20, the Adjusted R Square is (= 0.519), and it indicates that 51.9 per cent ( $0.519 \times 100$ ) of variance in dependent variable (Occupational Matching) is explained by the independent variables (Items 15, 16, 17 & 18, see Table 1).

Table 20 *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.737 <sup>a</sup>	.544	.519	.791

a. Predictors: (Constant), Job matches previous training in Syria, Job matches training in Sweden, Job matches expectation, Level of language knowledge contributes to match job and training.

Regarding to the second table which is ANOVA table, Table 21, the null hypothesis is examined and tested when that all coefficients beta ( $\beta$ ) is simultaneously equal to zero. In addition, ANOVA Table shows if the null hypothesis can be rejected, or it cannot be rejected.

Table 21 *ANOVA<sup>a</sup>*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.860	4	13.965	22.337	.000 <sup>b</sup>
	Residual	46.890	75	.625		
	Total	102.750	79			

a. Dependent Variable: Occupational matching.

b. Predictors: (Constant), Job matches previous training in Syria, Job matches training in Sweden, Job matches expectation, Level of language knowledge contributes to match job and training.

Thus, the Table 21 shows that the P-value (Sig) = 0.000. So, the P-value is less than 0.05 (P-value < 0.05). Thus, this indicates that there is a statistically significant relationship, and that indicates that the Null hypothesis for H2a can be rejected.

The last table in the multiple linear regression output is the Coefficients table, Table 22. In this table, it can be found to what extent the independent variables influence the dependent variable (Occupational Matching).

Table 22 *Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.865	.374		2.316	.023
	Job matches previous training in Syria.	.037	.067	.049	.558	.579
	Job matches training in Sweden.	.196	.075	.225	2.611	.011
	Job matches expectation.	.530	.083	.590	6.378	.000
	Level of language knowledge contributes to match job and training.	.064	.098	.058	.650	.518

a. Dependent Variable: Occupational matching.

Subsequently, the Coefficients Table shows that the unstandardized  $\beta$  score is 0.037 and the P-value for the (Job matches previous training in Syria) score is 0.579 which is larger than 0.05 ( $P\text{-value} > 0.05$ ). So, this indicates that there is no statistically significant relationship between the (Job matches previous training in Syria) and the Occupational Matching for Syrian refugees.

Related to the independent variable (Job matches training in Sweden), the unstandardized  $\beta$  score is 0.196 which means that the dependent variable (Occupational matching) will be positively influenced when the refugee has gotten training in Sweden. Moreover, the P-value score is 0.011 which is less than 0.05 ( $P\text{-value} < 0.05$ ). So, that indicates that there is a statistically significant relationship between the independent variable (Job matches training in Sweden) and the dependent variable (Occupational Matching) for the Syrian refugees.



Next, the unstandardized  $\beta$  for the independent variable (Job matches expectation) score is 0.530 which means that the dependent variable (Occupational Matching) will also be positively influenced when the refugee has gotten a job which matches with his or her expectations. Furthermore, the P-value for it scores 0.000 which is less than 0.05 (P-value < 0.05). So, this indicates that there is a statistically significant relationship between the (Job matches expectation) and the occupational matching for Syrian refugees.

Regarding to the (Language knowledge contributes to match job and training), the unstandardized  $\beta$  score is 0.064 and the P-value score is 0.518 which is larger than 0.05 (P-value > 0.05). So, that indicates that there is no statistically significant relationship between the (Job matches training in Sweden) and the occupational matching for the Syrian refugees.

In conclusion, the multiple linear regression analysis has assessed the second hypothesis (H2a), and the result has confirmed that there is a statistically significant relationship between the Swedish language knowledge and the occupational matching of the Syrian refugees in Sweden. Consequently, the Null hypothesis for the second hypothesis (H2a) can be rejected.

#### **4.4 MULTIVARIATE ANALYSIS OF VARIANCE (MANOVA)**

Multivariate analysis of variance (MANOVA) is conducted, because there are two dependent variables in this research which are (Employment) and (Occupational Matching). The aim from conducting MANOVA is that can inform if there is a significant difference between the independent variables on the tow or more dependent variables. In other words, MANOVA will tests the Null hypotheses for the hypotheses H1b and H2b.

Also, it can give the univariate results for each of the dependent variables separately. Furthermore, the researchers have decided to use One-Way MANOVA, because it is adopted when there is one categorical independent variable (The Level of Knowledge in Swedish Language) and two or more continuous dependent variables (Employment and Occupational Matching).

The key aspects of the output generated by MANOVA are presented below:

By checking the N values in the descriptive statistics table (Table 23), the N value in each cell have more cases than the number of the dependent variables. So, any violation of normality or equality of variance that may exist are not going to matter to much. Moreover, we have a total of 6 cells (two dependent variables and three levels of Swedish language knowledge of the independent variable for each).

Table 23 *Descriptive Statistics*

	The level of Swedish language	Mean	Std. Deviation	N
Employment	Beginning Level	3.33	1.188	18
	Intermediate Level	3.88	1.453	17
	Advanced Level	3.98	.988	45
	Total	3.81	1.159	80
Occupational Matching	Beginning Level	3.61	.979	18
	Intermediate Level	3.41	1.502	17
	Advanced Level	3.71	1.058	45
	Total	3.62	1.140	80

The next table which needs to be checked is Box's Test of Equality of Covariance Matrices table (Table 24). The Sig. value needs to be larger than 0.001 to ensure that we have not violated the assumption of homogeneity of variance-covariance matrices. Accordingly, the Sig. value in this table is  $> 0.001$ , so, that indicates that we have not violated the assumption of homogeneity of variance-covariance matrices.

Table 24 *Box's Test of Equality of Covariance Matrices<sup>a</sup>*

Box's M	7.945
F	1.261
df1	6
df2	24136.672
Sig.	.272

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + Swedish

In Levene's Test of Equality of Error Variancesa table, Table 25, we need to look in Sig. column for any value which is less than 0.05. So, this will indicate that the assumption of equality of variance for that variables has been violated. In this research, the Sig. values for the Employment as dependent variables are  $> 0.05$ , thus, the assumption of equality of variance for that variable has been not violated. Therefore, we can assume equal variance for Employment as dependent variable.

However, regarding to Occupational Matching, all Sig. values are  $< 0.05$ , thus, the assumption of equality of variance for this variable has been violated. Accordingly, we need to set a more conservative Alpha level for determining significance for this dependent variable (Occupational Matching) in the univariate F-test. Hence, the researchers have decided to use Alpha level = 0.01 rather than conventional 0.05 level (Tabachnick & Fidell, 2007). Thus, according to the new Alpha value which is 0.01, all the Sig. values for the dependent variables in Table 25 are  $> 0.05$ , thus, the assumption of equality of variance for these variables have been not violated. Therefore, we can assume equal variances for Employment and Occupational Matching as dependent variables.

Table 25 *Levene's Test of Equality of Error Variances<sup>a</sup>*

		Levene Statistic	df1	df2	Sig.
Employment	Based on Mean	2.605	2	77	.080
	Based on Median	2.057	2	77	.135
	Based on Median and with adjusted df	2.057	2	68.539	.136
	Based on trimmed mean	1.994	2	77	.143
Occupational Matching	Based on Mean	4.578	2	77	.013
	Based on Median	3.349	2	77	.040
	Based on Median and with adjusted df	3.349	2	75.731	.040
	Based on trimmed mean	4.547	2	77	.014

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Swedish

The next table which needs to be checked is Multivariate Test, Table 26, this set of multivariate tests of significance indicates whether there are statistically significant differences among the groups on a linear combination of the dependent variables. Because of small sample size (112) and unequal N values, then, the Pillai's Trace is more robust (Tabachnick & Fidell, 2007).

Here we got Pillai's Trace value of 0.063 with Sig. value of 0.295 which is larger than Alpha 0.05, then, we conclude that there is no statistically significant difference between the level of Swedish language knowledge in terms of their impacts on employment and occupational matching of Syrian refugees.

Table 26 *Multivariate Tests<sup>a</sup>*

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.936	552.930 <sup>b</sup>	2.000	76.000	.000	.936
	Wilks' Lambda	.064	552.930 <sup>b</sup>	2.000	76.000	.000	.936
	Hotelling's Trace	14.551	552.930 <sup>b</sup>	2.000	76.000	.000	.936
	Roy's Largest Root	14.551	552.930 <sup>b</sup>	2.000	76.000	.000	.936
Swedish	Pillai's Trace	.063	1.243	4.000	154.000	.295	.031
	Wilks' Lambda	.938	1.236 <sup>b</sup>	4.000	152.000	.298	.032
	Hotelling's Trace	.066	1.229	4.000	150.000	.301	.032
	Roy's Largest Root	.055	2.110 <sup>c</sup>	2.000	77.000	.128	.052

a. Design: Intercept + Swedish

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

### ***Presenting the results MANOVA***

The results of the multivariate analysis of variance (MANOVA) can be presented as follow:

A one-way between-groups multivariate analysis of variance was conducted to investigate the level of knowledge in Swedish language differences in employment and occupational matching for Syrian refugees.

Two dependent variables are used: employment and occupational matching. The independent variable was the level of knowledge in Swedish language. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity, with no serious violations noted.

Moreover, there is no a statistically significant difference among the three level of knowledge in Swedish language (Beginning, Intermediate and Advanced levels) on the combined dependent variables,  $F(4, 154) = 1.243$ ,  $p = 0.295$ ; Pillai's Trace = 0.063; partial eta squared = 0.031. As a result, we conclude that there is no a statistically significant differences between the level of Swedish language knowledge in terms of their impacts on employment and occupational matching of Syrian refugees. We conclude that hypotheses H1b and H2b cannot be accepted, so, the Null hypotheses cannot be rejected.

## **4.5 HIERARCHICAL MULTIPLE REGRESSION**

In this part from results' section, the researchers have decided to conduct a hierarchical linear regression which is a special form of a multiple linear regression analysis. In order to examine if the control variables (Gender, Age and Education) have statistically significant effect in the dependent variables (Employment and Occupational Matching) after accounting all other variables.

#### 4.5.1 Hierarchical multiple regression for Employment

After conducting the hierarchical multiple regression for Employment as a dependent variable, some of the outputs which have been generated from this procedure are shown below.

In the Model Summary table, Table 27, there are two models listed. Model 1 refers to the first block of variables that were entered (Gender, Age and Education), while model 2 indicates all the variables which were entered in both blocks (Gender, Age, Education, Employment without language knowledge, Length to find a job – soon after language training, Length to find a job – long time after language training and Easiness to find a job – only after some career training).

Table 27 *Model Summary*<sup>c</sup>

Model					Change Statistics				
	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.379 <sup>a</sup>	.144	.110	1.094	.144	4.259	3	76	.008
2	.543 <sup>b</sup>	.295	.227	1.019	.151	3.867	4	72	.007

a. Predictors: (Constant), Education, Gender, Age

b. Predictors: (Constant), The last grade of school completed, Gender, Age, Employment without language knowledge, Length to find a job – soon after language training, Length to find a job – long time after language training, Easiness to find a job – only after some career training

c. Dependent Variable: Employment

In the Model Summary table, Table 27, we need to check the R Square values. After the variables in Block 1 (Gender, Age and Education) have been entered, the overall model explains 14.4 per cent of the variance ( $0.144 \times 100$ ). After variables (Employment without language knowledge, Length to find a job – soon after language training, Length to find a job – long time after language training and Easiness to find a job – only after some career training) have also been included in Block 2, the model as a whole explains 29.5 per cent ( $0.295 \times 100$ ). It is important to note that this second R square value includes all the variables from both blocks, not just those included in the second step.

The second value which we need to check in this table is R Square change to find out how much of this overall variance is explained by our variables of interest (Employment without language knowledge, Length to find a job – soon after language training, Length to find a job – long time after language training and Easiness to find a job – only after some career training) after the effects of gender, age and education responding are removed. In the output presented above you will see, on the line marked Model 2, that the R square change value is 0.151. This means that (Employment without language knowledge, Length to find a job – soon after language training, Length to find a job – long time after language training and Easiness to find a job – only after some career training) explain an additional 15.1 per cent ( $0.151 \times 100$ ) of the variance in Employment, even when the effects of gender, age and education responding are statistically controlled for. This is a statistically significant contribution, as indicated by the Sig. F change value for this line (0.007).

The next table which needs to be checked also is ANOVA table, Table 28. Actually, this table indicates that the model as a whole, which includes both blocks of variables, is significant,  $F(7, 72) = 4.310$ ,  $p = 0.007$  which is  $< 0.05$ .

Table 28 ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.282	3	5.094	4.259	.008 <sup>b</sup>
	Residual	90.906	76	1.196		
	Total	106.188	79			
2	Regression	31.359	7	4.480	4.310	.000 <sup>c</sup>
	Residual	74.829	72	1.039		
	Total	106.188	79			

a. Dependent Variable: Employment

b. Predictors: (Constant), Education, Gender, Age

c. Predictors: (Constant), The last grade of school completed, Gender, Age, Employment without language knowledge, Length to find a job – soon after language training, Length to find a job – long time after language training, Easiness to find a job – only after some career training.

The last table which needs to be checked is Coefficients table, Table 29, to find out how each of the variables contributes to the final equation. Accordingly, we need to look in the Model 2 row in the Sig. Column. There is only one variable that make a statistically significant contribution (less than 0.05) which is education (beta = 0.247). However, all other variables do not have statistically significant relationships with the employment as independent variable. This beta value represents the unique contribution of each variable, when the overlapping effects of all other variables are statistically removed.

Table 29 *Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3.708	.696		5.327	.000					
	Gender	-.525	.276	-.214	-1.902	.061	-.272	-.213	-.202	.892	1.122
	Age	-.123	.193	-.072	-.637	.526	.064	-.073	-.068	.883	1.132
	Education	.218	.088	.282	2.488	.015	.320	.274	.264	.875	1.143
2	(Constant)	3.174	.927		3.424	.001					
	Gender	-.334	.264	-.136	-1.265	.210	-.272	-.147	-.125	.844	1.185
	Age	-.095	.182	-.055	-.521	.604	.064	-.061	-.052	.867	1.154
	Education	.191	.086	.247	2.210	.030	.320	.252	.219	.785	1.274
	Employment without language knowledge.	-.197	.105	-.196	-1.868	.066	-.289	-.215	-.185	.890	1.124
	Length to find a job – soon after language training.	.217	.112	.213	1.940	.056	.259	.223	.192	.815	1.227
	Length to find a job – long time after language training.	.151	.100	.163	1.509	.136	.290	.175	.149	.840	1.191
	Easiness to find a job – only after some career training.	-.130	.098	-.133	-1.328	.188	-.180	-.155	-.131	.976	1.025

a. Dependent Variable: Employment.

As a conclusion, only education as a control variable has a statistically significant relationship with the employment as independent variable. However, all other variables do not have statistically significant relationships with the employment as independent variable.



#### 4.5.2 Hierarchical multiple regression for Occupational Matching

After conducting the hierarchical multiple regression for Occupational Matching as a dependent variable, some of the outputs which have been generated from this procedure are shown below.

The first table that needs to be checked is the model summary table, Table 30, there are two models listed. Model 1 refers to the first block of variables that were entered (Gender, Age and Education), while model 2 indicates all the variables which were entered in both blocks (Gender, Age, Education, Job matches previous training in Syria, Job matches training in Sweden, Job matches expectation, Language knowledge contributes to match job and training).

Table 30 *Model Summary*<sup>c</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.153 <sup>a</sup>	.023	-.015	1.149	.023	.604	3	76	.615
2	.754 <sup>b</sup>	.569	.527	.784	.546	22.798	4	72	.000

a. Predictors: (Constant), Education, Gender, Age

b. Predictors: (Constant), Education, Gender, Age, Job matches previous training in Syria, Job matches training in Sweden, Job matches expectation, Level of language knowledge contributes to match job and training.

c. Dependent Variable: Occupational matching

In the model summary table, Table 30, we need to check the R Square values. After the variables in Block 1 (Gender, Age and Education) have been entered, the overall model explains 2.3 per cent of the variance ( $0.023 \times 100$ ). After variables (Job matches previous training in Syria, Job matches training in Sweden, Job matches expectation, Language knowledge contributes to match job and training) have also been included in Block 2, the model as a whole explains 56.9 per cent ( $0.569 \times 100$ ). It is important to note that this second R square value includes all the variables from both blocks, not just those included in the second step.

The second value which we need to check in this table is R Square change to find out how much of this overall variance is explained by our variables of interest (Job matches previous training in Syria, Job matches training in Sweden, Job matches expectation, Language knowledge contributes to match job and training) after the effects of gender, age and education responding are removed. In the output presented above you will see, on the line marked Model 2, that the R square change value is 0.546. This means that (Job matches previous training in Syria, Job matches training in Sweden, Job matches expectation, Language knowledge contributes to match job and training) explain an additional 54.6 per cent ( $0.546 \times 100$ ) of the variance in Occupational Matching, even when the effects of gender, age and education responding are statistically controlled for. This is a statistically significant contribution, as indicated by the Sig. F change value for this line (0.000).

The next table which needs to be checked also is ANOVA table, Table 31. Actually, this table indicates that the model as a whole, which includes both blocks of variables, is significant,  $F(7, 72) = 13.583$ ,  $p = 0.000$  which is  $< 0.05$ .

Table 31 ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.392	3	.797	.604	.615 <sup>b</sup>
	Residual	100.358	76	1.321		
	Total	102.750	79			
2	Regression	58.472	7	8.353	13.583	.000 <sup>c</sup>
	Residual	44.278	72	.615		
	Total	102.750	79			

a. Dependent Variable: Occupational matching

b. Predictors: (Constant), Education, Gender, Age

c. Predictors: (Constant), Education, Gender, Age, Job matches previous training in Syria, Job matches training in Sweden, Job matches expectation, Level of language knowledge contributes to match job and training.

The last table which needs to be checked is Coefficients table, Table 32, to find out how each of the variables contributes to the final equation. Consequently, we need to look in the Model 2 row in the Sig. Column. There are only two variable that make a statistically significant contribution (less than 0.05) which are Job matches training in Sweden and Job matches expectation (beta = 0.198 and beta = 0.598) respectively. However, all other variables do not have statistically significant relationships with the occupational matching as independent variable. These beta value represent the unique contribution of each variable, when the overlapping effects of all other variables are statistically removed.

Table 32 *Coefficients<sup>a</sup>*

		Unstandardized Coefficients		Standardized Coefficients					Collinearity Statistics		
		B	Std. Error	Beta	t	Sig.	Correlations				
Model							Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.969	.731		4.060	.000					
	Gender	.380	.290	.157	1.310	.194	.144	.149	.148	.892	1.122
	Age	.086	.203	.051	.424	.673	.011	.049	.048	.883	1.132
	The last grade of school completed	-.001	.092	-.001	-.007	.994	-.029	-.001	-.001	.875	1.143
2	(Constant)	1.467	.624		2.351	.021					
	Gender	-.025	.217	-.010	-.114	.909	.144	-.013	-.009	.741	1.350
	Age	-.190	.148	-.113	-1.285	.203	.011	-.150	-.099	.774	1.292
	Education	-.081	.065	-.107	-1.254	.214	-.029	-.146	-.097	.826	1.211
	Job matches previous training in Syria.	.082	.070	.108	1.177	.243	.377	.137	.091	.708	1.413
	Job matches training in Sweden	.172	.077	.198	2.240	.028	.419	.255	.173	.767	1.303
	Job matches expectation.	.537	.089	.598	6.003	.000	.694	.578	.464	.604	1.655
	Level of language knowledge contributes to match job and training.	.089	.100	.081	.898	.372	.374	.105	.069	.743	1.346

a. Dependent Variable: Occupational matching.

As a conclusion, only Job matches training in Sweden and Job matches expectation as control variables have statistically significant relationships with the occupational matching as an independent variable. However, all other variables do not have statistically significant relationships with the occupational matching.

## 5 DISCUSSION

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*The discussion section, according to Ghasemi, (2019) and Moore, (2016), is the section that telling a story about the research. Contextually, the previous chapter has highlighted the results and finding that were obtained from the study. In this section, the argument about the results and findings will be discussed, and the discussion of the previous studies which have been mentioned in the theoretical framework in this research will be argued.*

### 5.1 KNOWLEDGE IN SWEDISH LANGUAGE AND REFUGEES' EMPLOYMENT

The results of the study revealed a statistically significant relationship between the knowledge in Swedish language and the Employment of Syrian refugees, which this corresponds to a numerous number of studies that presented during this research, for example, (McManus, Gould, and Welch 1983; Kossoudji 1988; Tainer 1988; Chiswick 1991) which have dealt with the importance of learning the language of the host country in order to gain the ability to integrate and engage within the labor market in this country. These researches and studies conducted in countries which characterized with large immigrant populations, such as Canada, Germany, Israel, Australia, and the United States. Thus, the acquisition of the host country language something that may increase and enhance the opportunities for a faster access to the work market as that argued by Mangrio et al. (2020).

Furthermore, the major findings of the study indicate a positive influence of the knowledge in Swedish language towards refugees' employment, where most of the participants' responses were with a positive direction and compatible with the importance of learning the Swedish language to increase employment opportunities in the labor market as that has been presented in Table 16, the Means for Multi-items for employment scores 3.50. This, in turn, indicates that the knowledge of Swedish language plays a vital role in the employment of refugees in the Swedish labor market. Consequently, the hypothesis (H1a) is accepted, the p-value is 0.001, and the Null hypothesis is rejected.

According to the statement 10 (See table 16) which refers to the relationship between the Swedish language training and refugees' employment, it can be observed that the result shows that the refugees' employment will be negatively influenced when the refugees employed without language training,  $\beta$  is -0.286 and p-value is 0.007.

Regarding to the lengthen to find a job after language training (Items 11 & 12), the results show that there is no influence for the Swedish language knowledge on the length to find a job after getting some knowledge in Swedish language, p-value 0.084 for the Item 11 and 0.069 for the Item 12. Related to the easiness of find a job after some career training (Item 13), the result indicates that the Item 13 has no effect on the refugees' employment.

## **5.2 THE LEVEL OF KNOWLEDGE IN SWEDISH LANGUAGE AND REFUGEES' EMPLOYMENT**

As a result from conducting multivariate analysis of variance (MANOVA), the relationships between the levels of Swedish language knowledge (Beginning, Intermediate and Advanced Levels) and the employment of the Syrian refugees have been examined to see if there is any significantly relationship between them. However, the MANOVA has shown that there is no any statistically significant relationship between any level of knowledge in Swedish language and the Syrian refugees' employment p-value is 0.295. Thus, the hypothesis (H1b) is rejected, and the Null hypothesis cannot be rejected accordingly.

## **5.3 KNOWLEDGE IN SWEDISH LANGUAGE AND REFUGEES' OCCUPATIONAL MATCHING**

With regard to the relationship between the occupational matching and the knowledge in Swedish Language of refugees, the results have showed that there is a statistically significance relationship between the occupational matching of Syrian refugees and their knowledge in Swedish language. So, as that is mentioned by (Trache, 2016) and (Frank & Hou, 2018) who have argued that the language knowledge in the host country can be seen as vital and essential competence to attaining an occupational matching for refugees in the host countries.

Moreover, the respondents have shown in their responses on the statement or the multi-items for occupational matching (Means is 3.53, See Table 16), the importance of the knowledge in Swedish Language and their opportunities to obtain job that matches their job career or training. Hence, the hypothesis (H2a) is valid and worthy to be accepted, the p-value is 0.000, and the Null hypothesis can be rejected.

Regarding to the Item 16 which is (Job matches training in Sweden, see Table 16), the result, which is presented in Table 22, confirms that the training in Sweden obtained by the Syrian refugee's enhances the occupational matching possibilities for the refugees,  $\beta$  is 0.196 and p-value is 0.011.

Moreover, the Item 17 which is (Job matches expectations, see table 16), the result, which is presented in Table 22, confirms that the job expectation of the Syrian refugee's matches his or her current job in Sweden,  $\beta$  is 0.530 and p-value is 0.000.

Concerning to the Items 15 which is (Job matches previous training in Syria), the result shows that the previous training before coming to Sweden does not positively influence the refugees' occupational matching in Sweden.

Related to the Item 18 (see table 16) which is (Level of language knowledge contribute to match job and training), the results show that there is no affect for the level of knowledge in Swedish language on occupational for the Syrian refugees. Moreover, the results for Item 18 are compatible with the results of the MANOVA.

#### **5.4 THE LEVEL OF KNOWLEDGE IN SWEDISH LANGUAGE AND REFUGEES' OCCUPATIONAL MATCHING**

By conducting multivariate analysis of variance (MANOVA), the relationships between the levels of Swedish language knowledge (Beginning, Intermediate and Advanced Levels) and the occupational matching of the Syrian refugees have been examined to see if there is any significantly relationship between them. Nevertheless, the MANOVA has shown that there is no any statistically significant relationship between any level of knowledge in Swedish language and the Syrian refugees' occupational matching, p-value is 0.295. Consequently, the hypothesis (H2b) is rejected, and the Null hypothesis cannot be rejected accordingly.

## **5.5 EMPLOYMENT, OCCUPATIONAL MATCHING AND DEMOGRAPHIC CHARACTERISTICS OF REFUGEES**

### **5.5.1 Employment and Demographic Characteristics of Refugees**

After conducting the hierarchical multiple regression to explore the effect of the demographic variables (Education, gender and age) on refugees' Employment, there is only one variable that has an influence in the refugees' employment which is education, (beta = 0.247, p-value 0.030). Accordingly, when the education level of the refugee upgrades with one level, the refugee's employment possibility will be positively influenced. So, this result is contradicted with the argue of Lundborg (2013) who has said that the education is not considerable in refugees' employment. Thus, the education can enhance the refugees' employment possibilities in Sweden.

Regarding to the gender and age which their beta values are -0.136 and -0.55. So, that indicates that when the refugee gender moves one more step (moves from 1 to 2, from male to female), the refugee's employment possibility will be negatively influenced. Furthermore, related to the age, when the refugee age moves one higher age stage, the refugee's employment possibility will also be negatively influenced. However, the p-values for gender and age are 0.210 and 0.604 respectively. So, these results are not improved in the analysis, because the p-values are  $> 0.05$ . Thus, there effects are not valuable. So, these results contradict the claims of Lundborg (2013) who has argued that gender and age variables can be to a certain degree influenceable on the refugees' employment in the Swedish labor market.

As a conclusion, only education as a control variable has a sinfluence on the employment of the refugees. However, all other variables do not have any considerable influence on the employment of the refugees.

### **5.5.2 Occupational Matching and Demographic Characteristics of Refugees**

Moreover, after conducting the hierarchical multiple regression to measure the influence of the demographic variables (Education, gender and age) on refugees' occupational matching, the results have shown that the beta values are -0.107, -0.010 and -0.113 respectively. Consequently, that indicates that when the refugee level of education goes up with one more step, the refugee's employment possibility will be negatively influenced. Related to the gender, when the refugee gender moves one more

step (moves from 1 to 2, from male to female), the refugee's employment possibility will also be negatively influenced. Furthermore, related to the age, when the refugee age moves one higher age stage, the refugee's employment possibility will also be negatively influenced. However, these variables' p-values are 0.214, 0.909 and 0.203 respectively. Consequently, these control variables do not have any significant influence on the occupational matching of the refugees.

To conclude, control variables (education, gender and age) don't have any considerable influence on the occupational matching of the refugees.



## 6 CONCLUSION

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*In this chapter, the researchers will answer the research questions, provide the academic and practical relevance of the research, mention the research's limitations and give some recommendations for future researches.*

### 6.1 ANSWER TO THE RESEARCH QUESTIONS

In this research, the authors have addressed two research questions, and they have conducted several empirical steps and analyses in order to answer these two questions.

The first question is:

*What is the relationship between the knowledge in Swedish language and employment and occupational matching?*

Regarding to this first question, the research has revealed that the knowledge in Swedish language positively and significantly impact the refugees' employment and occupational matching possibilities. Thus, this indicates that the language knowledge in the host country, which is Sweden, plays a vital and considerable role in the employment and the occupational match of the refugee in the Swedish labor market. Accordingly, the learning of the Swedish language can be considered as a key competence for entering to the labor market and for getting an occupation which is to a certain degree compatible with the refugee's education and experience. Moreover, the research has found that the demographic factors (education, gender and age) do not impact the employment and occupational matching. The only exception has been found is the relationship between the education and employment in which the education has positive impact on the refugees' employment.

Regarding to the second research question, which is:

*What is the relationship between the level of knowledge in Swedish language and employment and occupational matching?*

Based on the findings of this research, it is detected that the level of the Swedish language does not play a considerable or notable impact on the refugees' employment and/or occupational matching in Swedish labor market. So, attaining specific level in

the Swedish language knowledge does not positively impact the refugees' employment and/or occupational matching in Sweden.

## **6.2 ACADEMIC AND PRACTICAL RELEVANCE OF THE RESEARCH**

### **Academic contribution**

As stated earlier in the research gap section and regarding to the impacts of the level of knowledge in Swedish language on employment and/or occupational matching, it has noticed that there are no previous researches which have been conducted to exploring or handling the impacts of the level of knowledge in Swedish language on employment and occupational matching for the refugees in Sweden. Accordingly, this research may help to a certain degree to bridge this gap and may help to give some illustrations about it.

### **Practical implication of research**

This research has made practical implications that can be derived. The research highlighted the importance of language knowledge as a key merit in the employment and occupational matching of the refugees, and its significant impact in entering the labor market in the host country in which they reside. Moreover, the positive impact of language knowledge is not limited to employment of the refugees, but also on finding job that matches the language knowledge obtained by the refugees. furthermore, this research provides practical implications for the employers and the researches centres on the extent of occupational matching for refugees between their current job and their previous career training.

## **6.3 RESEARCH LIMITATIONS**

Actually, the researchers have taken in their considerations that the research may have some limitations which may affect the research results and findings. One of this limitation is the authentic and reliable facts which about the sample of Syrian refugees related to their education levels and their level of knowledge in the Swedish language. Additionally, the authenticity and the reliability of the answers which are delivered by the sample of Syrian refugees.

Regarding to the questionnaire by which the data for this research have been collected, actually, this questionnaire has been distributed to readily available respondents from the researchers' personal network. Additionally, despite that the statistical inferences about the entire research population have been made based on a sample of 112 respondents which gives a 95 per cent confidence level for a 5 per cent margin of error (Saunders et al., 2016), nevertheless, it needs to be considered that the collected data is to some extent biased and may not accurately depict the entire research population. So, this case may also generate some biased in the targeted sample of Syrian refugees.

#### **6.4 RECOMMENDATIONS FOR FUTURE RESEARCHES**

In this research, the authors have addressed the impacts of the language knowledge and the impacts of the level of knowledge in Swedish language on the refugees' employment and occupational matching possibilities in the Swedish labour market. However, more studies can be conducted with wider and diverse sample in order to obtain more reliable results. Also, the time limitation for this research should be taken in consideration, which more in-depth future researches could be conducted to gain more reliable findings.

However, more studies or researches can be conducted about this gap regarding to Swedish employers to give more illustration about the importance of the language knowledge and the level of knowledge in language from their perspectives, and how this language knowledge or level of knowledge in Swedish language can affect the recruitment and hiring processes in their businesses and organizations.

Moreover, more researches and studies can be conducted regarding to the impacts of communication and conversation skills in Swedish language (the spoken language) of the refugees, and how these skills can increase their opportunities to find a job in the Swedish labor market. Also, more studies can be done about how the writing and reading skills in Swedish language can influence and enhance the refugees' employment and occupational matching possibilities in Sweden.

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## APPENDIX

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### Survey in English

Dear participant, are you between 18 and 64 years old and from Syria? Did you arrive to Sweden from 2012 and after?

Then we seek you!

We are Yaman Srour and Omar Abualhayjaa from Dalarna University in Sweden and as part of our master thesis in Business Administration we investigate impacts of the level of Swedish language knowledge on refugees' employment and occupational matching.

We want to find out the link between the level of your Swedish language and the employment opportunity for you in Sweden. Your opinion is of great value for us.

Please take 12-15 minutes and help us by filling in the following survey. Participation in the survey is voluntary and you have the possibility to withdraw from it at any time. The collected data is coded anonymously, remains confidential, is solely used for the purpose of the thesis and not forwarded to third parties.

If you have any questions and/or comments, please do not hesitate to contact us or our supervisor, Tao Yang (HDa):

Omar Abualhayjaa: h20omaab@du.se

Yaman Srour: h20yasro@du.se

Supervisor: Tao Yang (HDa): tjn@du.se

Your participation is highly appreciated!

Thank you very much for your support!

Yaman & Omar

Which of the following languages would you feel comfortable completing a survey in?

- Arabic – العربية
- English - الإنكليزية

1- What is your gender?

- Female
- Male

2- What is your age?

- 18 - 29
- 30 - 44
- 45 – 64

3- What city do you currently live in?

4- What is the last grade of school you completed?

- Did not attend school
- 1st - 9th Grades (Primary School)
- 10th - 12th Grades (High School - Not graduated)
- Graduated from high school
- Vocational education
- College graduate



- Post graduate degree

5- Do you speak English fluently?

- Yes
- No

6- What level of Swedish language do you have?

- SFI: Course A, B, C & D. If you
- completed Course D, choose the next
- alternative.
- Basic Level: Swedish as a second
- language - National module 1, 2, 3 & 4.
- If you completed National module 4,
- choose the next alternative.
- Upper Secondary Level: Swedish as a
- second language 1, 2 & 3.

7- Are you employed?

- Yes, continue to question number 9.
- No, go to question number 8.

Please indicate in the following statement to what extent you agree or disagree on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree) by clicking on the applicable number.

8- I believe my limited Swedish language skill have influenced my opportunity to get a job in Sweden.

1- Strongly disagree

2- Disagree

3- Not sure

4- Agree

5- Strongly agree

Thank you for your answer! After this question go to the end of the questionnaire and click “Submit” to withdraw from the questionnaire.

9- How often do you use the Swedish language in your job?

- Always
- Very often
- Often
- Seldom
- Not at all

The following statements are related to your employment in Sweden.

10- I was employed without any Swedish language training.

1- Strongly disagree

2- Disagree

3- Not sure

4- Agree

5- Strongly agree

11- I was employed soon after I finished my Swedish language training.

12- It took me long time to get a job after I finish Swedish language training.

13- I got a job opportunity only after I have received some career training in Sweden.

14- My level of Swedish language has contributed to being employed in Sweden.

The following statements are related to the matching of your current job in Sweden and your training or expectation.

15- My current job matches my training in Syria before I come to Sweden.

16- My current job matches the training I have received in Sweden after I came here.

17- My current job matches my job expectation in Sweden.

18- My level of Swedish language has contributed to the matching of my job and my training.

19- My level of Swedish language has contributed to the matching of my job and my job expectation.

## Survey in Arabic

عزيزي المشارك ، عزيزتي المشاركة ، هل عمرك بين 18 و 64 سنة وأنت من سوريا؟ هل قدمت إلى السويد منذ عام 2012 وما بعده؟

!عندئذٍ نحن نبحت عنك

نحن الباحثان يمان سرور وعمر أبو الهيجاء من جامعة دالارنا في السويد ، وكجزء من أطروحة الماجستير في إدارة الأعمال خاصتنا نود التحقيق في آثار مستوى المعرفة في اللغة السويدية على التوظيف و التوافق المهني للاجئين.

لذا نود معرفة الرابط بين مستوى لغتك السويدية وفرصة العمل لديك في السويد. رأيك له قيمة كبيرة بالنسبة لنا.

نرجو من حضرتكم تخصيص 12-15 دقيقة ومساعدتنا عن طريق الإجابة على الاستبيان المرفق. الرجاء أخذ العلم أن المشاركة في الاستبيان طوعية ويمكنك الإنسحاب منه في أي وقت. ونؤكد لكم على أن جميع المعلومات المفصح عنها من قبلكم ستبقى مجهولة و سرية ، وستستخدم فقط لغرض الأطروحة و ليس لها أي هدف آخر ولن يتم إرسالها إلى أي طرف ثالث.

:إذا كانت لديك أي أسئلة و/أو تعليقات ، فلا تتردد في الاتصال بنا أو بمشرفتنا السيدة تاو يانغ

Omar Abualhayjaa: h20omaab@du.se

Yaman Srou: h20yasro@du.se

Supervisor: Tao Yang (HDa): tjn@du.se

!نقدر مشاركتك عاليا

!شكرا جزيلا لدعمكم

يمان و عمر

ما هو جنسك؟ -1

- أنثى
- ذكر

ما هو عمرك؟ -2

• 18 - 29

• 30 - 44

• 45 – 64

3- ما هي المدينة التي تقيم (تقيمي) بها حالياً؟

4- ما هي آخر مرحلة دراسية أكملتتها؟

• لم ألتحق بالمدرسة

• التعليم الأساسي من الصف الأول إلى الصف التاسع

• التعليم الثانوي من الصف العاشر إلى الصف الثاني عشر

- (غير متخرج/غير متخرجة)

• التعليم الثانوي - (متخرج/متخرجة)

• التعليم المهني - (متخرج/متخرجة)

• خريج جامعي - خريجة جامعية

• - خريج دراسات عليا / خريجة دراسات عليا - (دبلوم

(ماجستير - دكتوراه

هل تتحدث (تتحدثي) الإنكليزية بطلاقة؟ -5

• نعم

• لا

6- ما هو مستوى اللغة السويدية الحاصل (الحاصلة) عليه؟

• الرجاء إختيار الخيار). A, B, C & D مستوى - SFI

(إذا أكملت المستوى "D" التالي

• مستوى التعليم الأساسي - السويدية كلغة ثانية المستوى

الأول، الثاني، الثالث و الرابع. (إذا أكملت المستوى الرابع

(الرجاء إختيار الخيار التالي

- مستوى التعليم الثانوي - السويدية كلغة ثانية المستوى

الأول، الثاني و الثالث.

هل أنت موظف (موظفة)؟ -7

- إنتقل (إنتقلي) إلى السؤال رقم 9 - نعم
- إذهب (إذهبي) إلى السؤال رقم 8 - لا

يرجى الإشارة في العبارات التالية إلى أي مدى توافق (توافقي) أو لا توافق (لا توافقي) على مقياس من 1 إلى 5 (لا أوافق بشدة) إلى 5 (أوافق بشدة) من خلال النقر على الرقم المناسب.

أعتقد أن مهاراتي المحدودة في اللغة السويدية قد أثرت على فرصتي في الحصول على وظيفة في السويد؟

1- لا أوافق بشدة

2- لا أوافق

3- لست متأكد

4- أوافق

5- أوافق بشدة

شكراً لإجابتك ! بعد هذا السؤال إنتقل إلى نهاية الإستبيان و انقر على "إرسال" للإستبيان من الإستبيان

كيف تستخدم (تستخدمي) عادة اللغة السويدية في عملك؟ -9

- دائماً
- كثيراً جداً
- غالباً
- نادراً

- لا على الإطلاق

العبارات التالية تتعلق بوظيفتك في السويد

10- لقد تم توظيفي دون أي تدريب على اللغة السويدية -

1- لا أوافق بشدة -

2- لا أوافق -

3- لست متأكد / لست متأكدة -

4- أوافق -

5- أوافق بشدة -

11- لقد تم توظيفي بعدة فترة وجيزة من إنتهائي من التدريب على اللغة السويدية -

12- لقد إستغرق الأمر وقتاً طويلاً للحصول على وظيفة بعد أن أنهيت التدريب على اللغة السويدية -

13- حصلت على فرصة عمل فقط بعد أن تلقيت بعض التدريب في مجالي الوظيفي في السويد -

14- ساهم مستواي في اللغة السويدية في حصولي على عمل في السويد -

تتعلق العبارات التالية بمطابقة وظيفتك الحالية في السويد مع تدريبك أو توقعاتك

15- وظيفتي الحالية تتوافق مع تدريبي في سورية قبل قدومي إلى السويد -

16- وظيفتي الحالية تتوافق مع التدريب الذي تلقيته في السويد بعد قدومي إلى السويد -

17- وظيفتي الحالية تتوافق مع توقعاتي الوظيفية في السويد -

18- لقد ساهم مستواي في اللغة السويدية في توافق وظيفتي مع تدريبي -

18- لقد ساهم مستواي في اللغة السويدية في توافق وظيفتي مع تدريبي -