

# DOCTORAL (PHD) DISSERTATION

IMRAN SARIHASAN

Debrecen

2020

**UNIVERSITY OF DEBRECEN**  
**FACULTY OF ECONOMICS AND BUSINESS**



**KÁROLY IHRIG DOCTORAL SCHOOL OF MANAGEMENT AND  
BUSINESS ADMINISTRATION**

*Head of the Doctoral School: Prof. Dr. Péter Balogh, DSC*

**THE CHARACTERISTICS OF MIGRATION  
DIFFERENCES  
IN THE CASE OF OECD COUNTRIES**

*Prepared by:*

**Imran Sarihasan**

*Supervisor:*

**Dr. Máté Domicián**

**DEBRECEN**

**2020**

**THE CHARACTERISTICS OF MIGRATION DIFFERENCES  
IN THE CASE OF OECD COUNTRIES**

The aim of this dissertation is to obtain a doctoral (PhD) degree in the scientific field of „Management and Business”

Written by: Imran Sarihasan..... certified .....

Supervisor: Dr. Máté Domicián

**Doctoral final exam committee:**

	name	academic degree
Chair:	.....	.....
Members:	.....	.....
	.....	.....
	.....	.....

**Date of the doctoral final exam:** 20.... ..

**Reviewers of the Dissertation:**

	name, academic degree	signature
.....	.....	.....
.....	.....	.....

**Review committee:**

	name, academic degree	signature
Chair:	.....	.....
Secretary:	.....	.....
Members:	.....	.....
	.....	.....
	.....	.....
	.....	.....
	.....	.....

**Date of doctoral thesis defence:**

## DECLARATION

I undersigned (name: **Imran Sarihasan** date of birth: 05/01/1991) declare under penalty of perjury and certify with my signature that the dissertation I submitted in order to obtain doctoral (PhD) degree is entirely my own work.

Furthermore, I declare the following:

- I examined the Code of the Károly Ihrig Doctoral School of Management and Business Administration and I acknowledge the points laid down in the code as mandatory;
- I handled the technical literature sources used in my dissertation fairly and I conformed to the provisions and stipulations related to the dissertation;
- I indicated the original source of other authors' unpublished thoughts and data in the references section in a complete and correct way in consideration of the prevailing copyright protection rules;
- No dissertation which is fully or partly identical to the present dissertation was submitted to any other university or doctoral school for the purpose of obtaining a PhD degree.

Debrecen, 03.11. 2020.

---

Imran Sarihasan

*Imran Sarihasan*

signature

## **LIST OF THE ABBREVIATIONS**

- EU-LFS = EUROPEAN UNION LABOR FORCE SURVEY
- FDI = FOREIGN DIRECT INVESTMENT
- HCT = HUMAN CAPITAL THEORY
- ILO = INTERNATIONAL LABOUR ORGANIZATION
- IOM =INTERNATIONAL ORGANIZATION OF MIGRATION
- ISCED = INTERNATIONAL STANDART CLASSIFICATION OF EDUCATION
- NSO = NATIONAL STATISTIC OFFICE
- NELM = NEW ECONOMICS OF LABOUR MIGRATION
- OECD=ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT
- LMS= LABOUR MARKET STATUS
- LFS= LABOUR FORCE STATUS
- UN= UNITED NATION
- UNHCR= UNITED NATION HIGH COMMISIONER OF REFUGEES

## TABLE OF CONTENTS

<b>INTRODUCTION .....</b>	<b>5</b>
<b>Migration Growth Tendencies in OECD Countries .....</b>	<b>6</b>
<b>1. Topics and Objectives.....</b>	<b>9</b>
1.1. Aims of the Research .....	9
1.2. Research Objectives.....	9
1.3. Research Questions.....	9
1.4. Structure of the Thesis .....	10
1.5. Research Approach.....	12
<b>2. Literature Review and Hypotheses Development .....</b>	<b>13</b>
2.1. The Determinants of Migration .....	15
2.2. Theories Explaining International Migration.....	18
2.2.1. <i>Neo-Classical Economics of Migration</i> .....	21
2.2.2. <i>World-System Theory of Migration</i> .....	23
2.2.3. <i>Dual-Labour Market Theory of Migration</i> .....	24
2.2.4. <i>The New Economics of Labour Migration</i> .....	25
2.2.5. <i>The Human Capital Theory of Migration</i> .....	28
2.3. Summary of the Theories.....	31
2.4. Characteristics of Migration Differences.....	32
2.4.1. <i>Regional Differences in Migration</i> .....	33
2.4.2. <i>Educational Attainment and Migration</i> .....	37
2.4.3. <i>Gender Differences in Migration</i> .....	40
2.4.4. <i>Labour Market Status and Migration</i> .....	44
2.4.5. <i>Labour Market Institutions and Migration</i> .....	45
2.5. Hypotheses Development .....	47
2.6. Concluding Remarks.....	50
<b>3. MATERIALS AND METHODS .....</b>	<b>52</b>
3.1. Source of International Migration Data .....	52
3.2. Data Collection and Sample.....	53
3.3. Definitions of Variables.....	54

3.4. Methodology .....	56
3.4.1. <i>Descriptive Statistics and Cross-Tabulation</i> .....	56
3.4.2. <i>Independent-Sample Test</i> .....	57
3.4.3. <i>Binary (Binomial) and Multinomial Logistic Regression</i> .....	57
3.5. Model Specifications .....	58
3.5.1. <i>Region of Birth</i> .....	58
3.5.2. <i>Country of Birth</i> .....	59
3.5.3. <i>Labour Force Status Differences</i> .....	60
3.5.4. <i>Nativity Status</i> .....	60
3.5.5. <i>Gender Differences</i> .....	61
3.5.6. <i>Educational Attainment and Migration Differences</i> .....	61
3.5.7. <i>Age Differences</i> .....	62
<b>4. RESEARCH FINDINGS AND EVALUATIONS</b> .....	<b>62</b>
4.1. Result of Descriptive Statistics .....	63
4.2. Result of Cross Tab Analysis.....	63
4.3. Independent Sample U-Test.....	66
4.4. Result of the Regression Analyses.....	69
4.5. Discussion and Comparison of the Results.....	81
<b>5. CONCLUSION</b> .....	<b>84</b>
<b>5.1. Findings of the Research</b> .....	<b>84</b>
5.2. Implications .....	87
5.3. Limitations and Future Direction of the Study .....	90
5.4. Main Conclusion and Novel Findings of the Study .....	91
<b>6. SUMMARY</b> .....	<b>93</b>
<b>REFERENCES</b> .....	<b>94</b>

## INTRODUCTION

International migration emerged as one of the main factors in the twenty-first century ever since it became a crucial aspect of population mobility growth and took on new forms, globally. Recently, it has become an important aspect for the number of migrants have increased almost by 40 million in the first half of the 21<sup>st</sup> century (De Haas, 2005 & Koser, 2010).

Global migrant numbers are still increasing. They reached 244 million people (3% of the world population) 80 million in Asia, 78 million in Europe, 58 million in North America, 25 million in Africa, 10 million in Latin America and the Caribbean and 8 million in Oceania in 2017 (UN, 2018).

The reasons for this massive migration is mostly related with economic, demographic and social issues along with political rights, religious freedom, personal safety and environmental factors (climate, seaside location). They all make people move to other countries. Additionally, an advanced transportation system that makes migration easier, cheaper and faster contributes to the numbers. The presence of large migrant populations globally creates a need to understand and address socio-demographic and economic differences.

Increase in migration is a multifaceted reality. Therefore, analysing migratory behaviours considering several uncertainties allows for various interpretations and definitions of certain aspects of it. There still is no common definition of migration and researchers disagree about how far a person must travel or how long one must reside in the destination to qualify as a migrant. The types of migration are another cause for indecisiveness about it. For example, *migration* defines crossing the national boundary of a political or administrative unit for a specified minimum period and the person taking the action in this humanitarian flow is called as a *migrant*. *Internal migration* refers to a move from one area to another within the same country. *International migration* means people crossing the border into another country. Many scholars debate that internal and international migration are part of the same process and should be analysed together. However, the dissimilarities between them can be fallacious (Castles, 2010).

Another uncertainty develops due to the difference between *asylum seekers*, *refugees* and *migrants*. Using these terms interchangeably has always been a confusing and contentious issue. However, they all have different meanings that need to be addressed to state the problems and analyse them better.

Migration is well recognized as a complex and multi-faceted process with several changing and often unrelated purposes. Despite the complexity of migration, it is essential to determine socio-demographic differences based on the migrants' region and country of birth to formulate effective future migration policies. *Thus, this dissertation deals with the underlying socio-demographic and economic factors driving international migration by studying the differences in regional background (region and country of birth) among OECD (Organisation for Economic Co-operation and Development) countries.* Empirical evidence about factors determining migration differences are presented in the literature review. The socio-demographic differences in international migration are based on coexisting (economic) theories.

Each model is based on these differences in migration that have been empirically tested. The databases gathered from data *OECD's International Migration Databases (DIOC)* for empirical analysis. DIOC makes an essential contribution to understanding the multidimensional aspects of bilateral migration between 34 countries of destination and more than 230 countries of origin by providing *a comparative perspective and extensive evidence about a broad range of demographic and labour market characteristics of migrants living in OECD countries.* The dissertation used the last update of *DIOC 2015/16* data. However, exact migration issues require a long-term perspective. Short-run data gives provisional results and it is difficult to determine if significant trends are emerging. Meanwhile, representative data on international migration are scarce and difficult to analyze. It was one of the major challenges to detailed socio-demographic differences in migration from this perspective. The uncertainty of the types of migration presents another challenge. However, this study only examines *the characteristics of international migrants.*

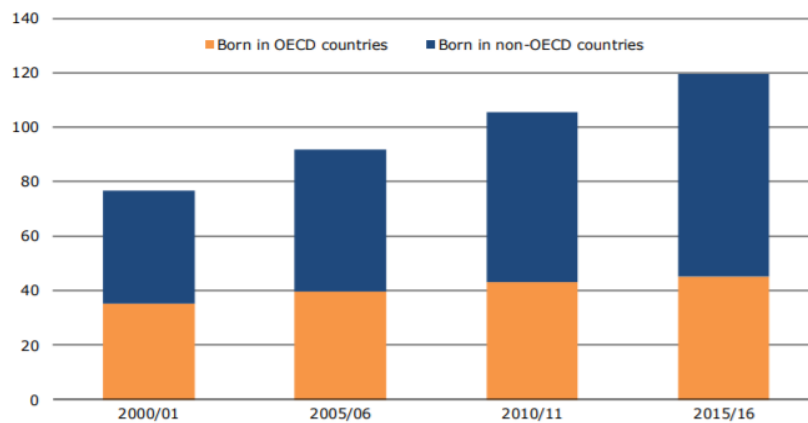
### **Migration Growth Tendencies in OECD Countries**

Migrants' regional background, age and sexual differences, educational qualifications and labour market status influence political implications in the destination countries. These differences also play a role in regional development (Südekum, 2003) and determine the major driving forces for international migration (Kibele & Janssen, 2013; Pietsch & Clark, 2015), especially in OECD countries.

The migration in OECD countries has risen over the last decade. Notably, due to economic, demographic and social issues regarding human security and discrimination. For example, the newly initiated wall between USA and Mexico, the socio-economic and political crisis in

Venezuela, the Syrian war and the free human capital flow in the EU attracts numerous migrants from the OECD countries.

Often, migrants arriving in the OECD countries lodge individual claims for protection which makes them *asylum seekers*. Recently, OECD countries have taken 120 million migrants aged 15 and older (OECD, 2019). On the other hand, the United Nations estimated 154 million migrants in 2000 and 223 million in 2015 globally. Approximately 45 per cent of them immigrate to OECD countries. This estimate indicates that the accepted migrants increased by 39 per cent in the non-OECD countries. Thus, the increased in the migrant population is higher than the population growth in OECD countries from 9 to 12 per cent for people aged over 15 in the past 15 years (OECD, 2019 also See figure 0-1).



**Figure 0-1:** Share of the migrants in OECD by country birth versus the non-OECD countries from 2000/01 to 2015/16 (in millions)

Source: International Migration Data (DIOC, 2019)

Conversely, it is essential to mention that the number of highly educated migrants in the OECD countries is also increasing. According to the OECD report (2019), the highly educated migration has risen from 27 per cent to 35 per cent among those born outside of the OECD and from 21 per cent to 30 per cent for those born in the OECD between 2000/11 and 2015/16.

Another vital aspect of migration is gender differences. Undoubtedly, there are substantial gender-based differences among migrants. According to the United Nation (2015), the number of female migrants from all regions except Africa and Asia to the OECD countries has been increasing since 2000. There are fewer female migrants than males. Moreover, the proportion of female migrants has declined from 49 per cent to 48 per cent between 2000 and 2015

(OECD, 2019). United Nation (2015) estimated a percentage rise in female migrants from 51.6 per cent in 2000 to 52.4 in 2015 that, in Europe. In North America, it is increased from 50.5 to 51.2 (from 2000 to 2015). However, for Asia and Africa, the number of male migrants is higher than female migrants. For instance, between 2000 and 2015, the number of male migrants in Asia increased from 27 million to 44 million. Yet, the female migrant percentage decrease from 45.6 to 42. The same phenomenon can be observed in Africa where the female percentage declined from 42 to 37 per cent (from 2000 to 2015) and for Europe, Latin America and the Caribbean, Northern America and Oceania, the number of female migrants grew more than male migrants.

## **1. Topics and Objectives**

This chapter aims to demonstrate the research background, goals, objectives, questions, hypotheses and significance of the study. It also briefly overviews the research methodology and structure of the dissertation.

### **1.1. Aims of the Research**

This dissertation intends to address the factors driving the *socio-demographic and economic characteristics of international migration differences and regional background for OECD countries*. These differences are based on region, labour force, nativity, gender, educational attainment and age difference.

### **1.2. Research Objectives**

The dissertation has following objectives:

1. To examine the influence of regional differences on migration.
2. To examine the socio-demographic differences of in the labour force status of migrants.
3. To explore the gender-based differences in migration.
4. To demonstrate the gaps in the educational attainment of migrants.
5. To highlight the role of ageing in migration differences.
6. To find the proper methodologies and adapt models suitable for analysing cross-country differences in migration.

### **1.3. Research Questions**

The objectives of the research have been shaped by the following research questions. These questions guide the empirical work and findings of the dissertation.

1. Does regional background influence migration characteristics?
2. What determines the labour force status of migrants?
3. Do differences in migration cause gender-based division?
4. Is educational attainment associated with migration differences?
5. Does ageing cause differences among migrants?

#### **1.4. Structure of the Thesis**

This section is an overview of the path that will be followed to attain the research objectives and the research structure, topics and objectives, literature review, data and methodology, analyses, result, conclusion and lastly main conclusion and novel findings (see figure 1-1).

*Chapter 1* clarifies the topics and objectives of the dissertation. The main objectives of the study demonstrate migration differences. Furthermore, descriptive methods are proposed and empirically tested to determine how these differences interact with each other.

*Chapter 2* is a literature review. It shows that migration differences account for a considerable portion of the theoretical background about international migration. This chapter also forms the theoretical basis used to hypothesise and analyse this dissertation.

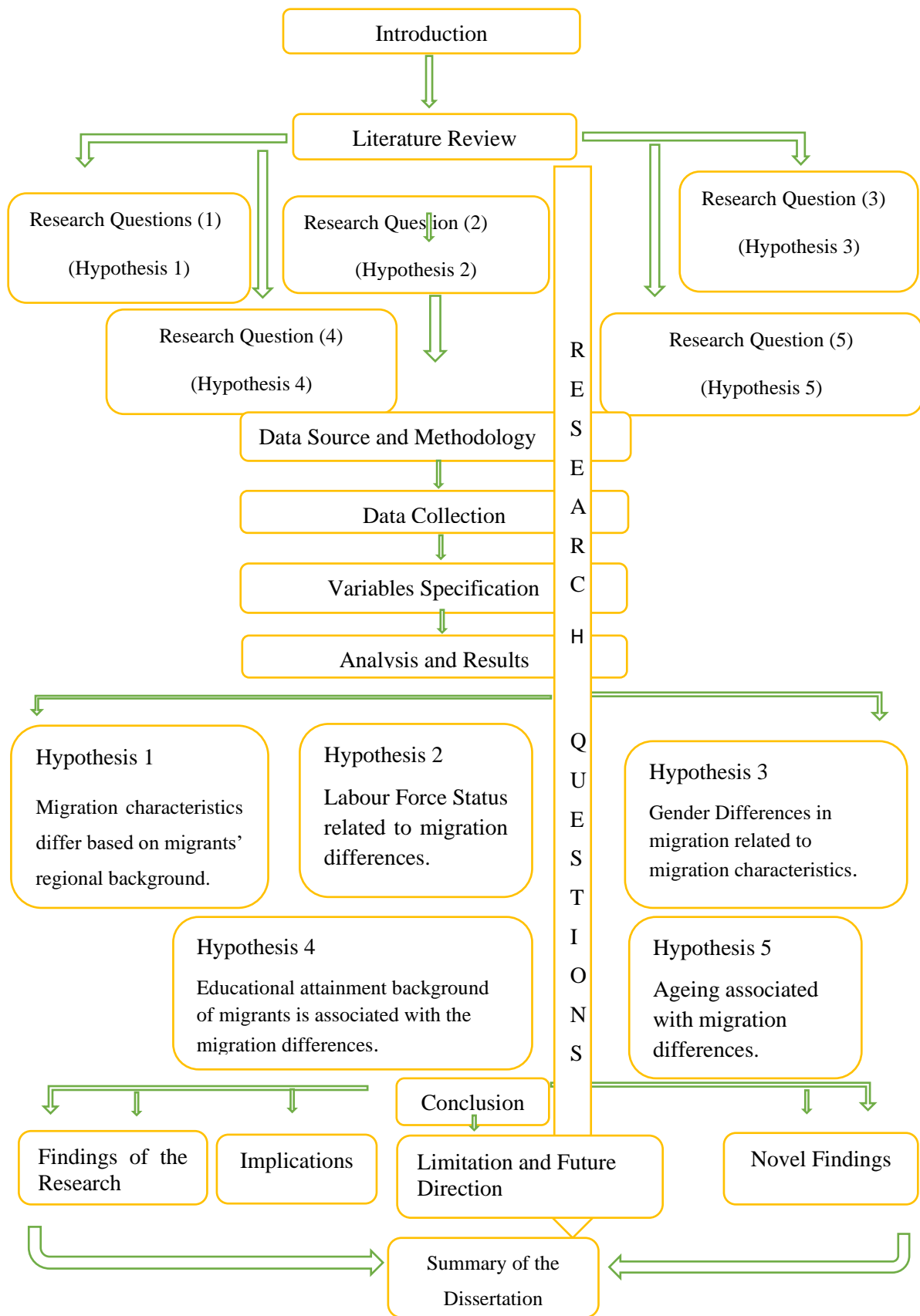
*Chapter 3* explains the databases and methods applied to attain the research objectives and answers the research questions. SPSS is used for empirical testing that explores the socio-demographic and economic characteristics of migration differences in the country and region of birth.

*Chapter 4* shows the research findings. The variables are compared at the beginning of the chapter. Cross-tab functions analysis and independent sample U-test are employed to test the research questions and demonstrate the relationship between each variable. Finally, binary (binomial) and multinomial logistic regression are used to test the hypotheses of the study.

*Chapter 5* discusses the concluding remarks of the study and specifies the limitations based on the implications, which also include future directions and recommendations for policymakers.

*Chapter 6* states the results and novel findings of the dissertation.

The dissertation ends with a list of tables, figures, publications and references.

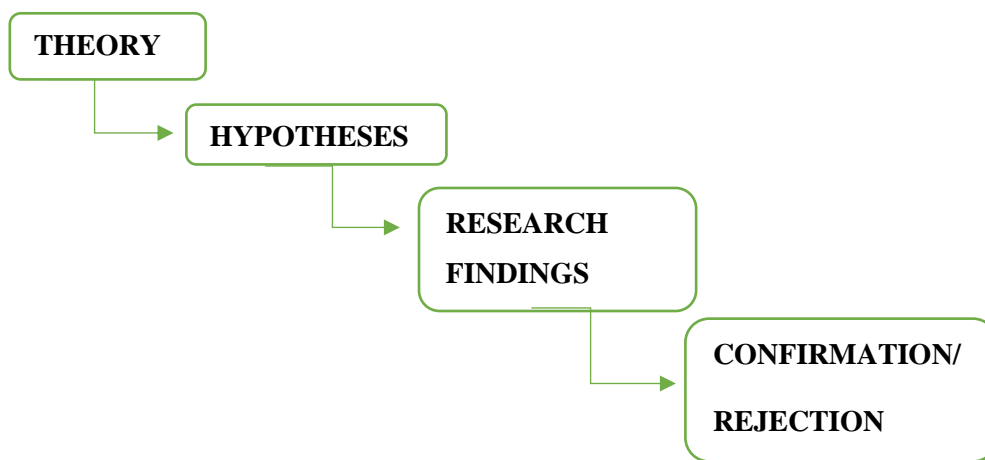


**Figure 1- 1: The Sequencing of Each Sections of the Dissertation**

Source: Author's compilation (2020)

### 1.5. Research Approach

A deductive model was used for the literature review with a quantitative research design to accomplish the research objectives. Conversely, the quantitative design covered a wide range of methods informed by positive assumptions. Objectives and theories were examined by the relationship between each variable. Additionally, deductive research was conducted to test theories (Creswell, 2003). Figure 1-2 shows the research model used in this research.



*Figure 1- 2: Research Applied Model in the Dissertation*

*Source: (Soiferman, 2010)*

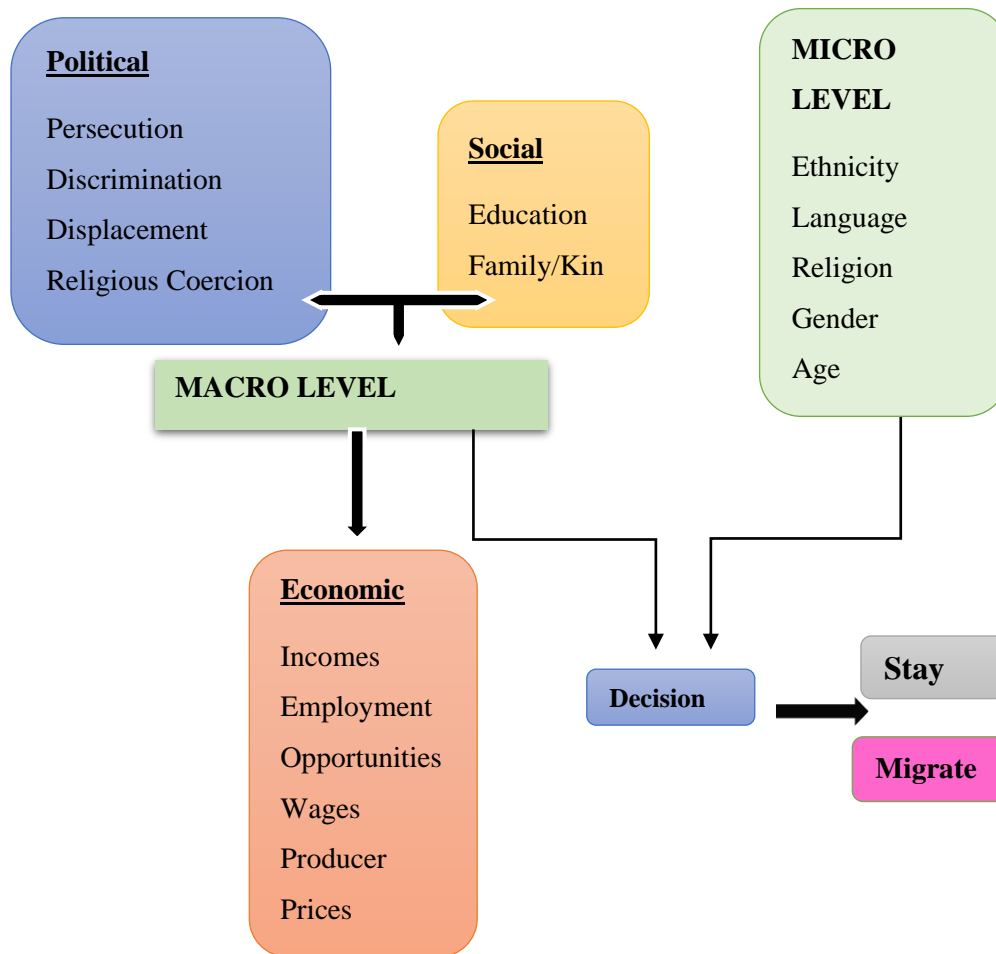
## 2. Literature Review and Hypotheses Development

This section reviews previous studies and theories of migration and develops of hypotheses.

International migration has become one of the most contentious and significant topics of the twenty-first century. Much of its importance may be attributed to the steadily increasing migrant numbers (McGovern, 2007).

However, theories about migration are entirely new. More than a decade ago, while reviewing conceptual approaches to migration, Douglas Massey et al. (1993) reviewed the theories explaining the initiation of migration in developed as well as developing countries. Massey et al. (1993) stated that *“At present, there is no single theory widely accepted by social scientists to account for the emergence and perpetuation of international migration throughout the world, only a fragmented set of theories that have developed largely in isolation from one another, sometimes but not always segmented by disciplinary boundaries”*. Several theoretical models have attempted to explain international migration. However, there still is no single theory completely explaining human migration. Thus, the question “why do people migrate?” points towards a socially, demographically, politically and economically complex phenomenon that considers the country of origin or birth, the destination countries, etc.

This chapter aims to combine the micro and macro perspectives to immigration due to the diverse determinants of the migration process, including regions, etc. (Gordon, 1995 & de Haas, 2010). Moreover, these perspectives consider different driving factors for migration. Figure 2-1 illustrates the details about macro- and micro-level factors determining migration.



**Figure 2- 1:** Drivers of Migration (Macro and Micro-level)

Source: ( Castelli, 2018 & Author's own compilation, 2019)

Macro- and micro-factors show that every migrant’s story of the exodus is different. These factors also explain each factor contributing to migration with different theories to clearly understand the determinants, reasons and consequences for migration flows, influences over determined conditions and source countries. Therefore, understanding and completely explaining the phenomenon is essential for analysing the source and host countries’ features (Castles, 2004). However, it is difficult to determine its variables. Instead of including them all, it may be better to analyse some specific cases to and focus on some general ones that can be present for migration.

The following section explains the determinants of migration. Subsequently, the most important theories for the international migration are discussed and the influence of regional, educational, labour institutions, gender differences and labour market status on source and destination countries is determined. Also, regional differences, educational attainment, gender

gap, labour institutions and status, household income and migrants characteristics (age, family backgrounds, language proficiency, etc.) as a stable explanation for migration are stated (Verwiebe, 2014).

## **2.1. The Determinants of Migration**

Migration influences almost all areas in life demographic, economic, social and political. This makes analysing migration more complicated (Greenwood & Sweetland, 1972). However, it is essential to understand the determinants of migration to identify its crucial implications for migrants as well as future migration policies in source and host countries (Borodak & Piracha, 2013). Although it is evident that, violent conflict is as much a determinant of migration as international migration. On the other hand, migration research broadly focuses on why migration is increasing (Haug, 2008), what are the reasons for it and where do people choose to go and why (Carling & Collins, 2018). These may be the initial concerns for migrating to another country. However, it is always attractive to discover new living spaces and contemplate the decision to migrate since migrants have several alternatives for the location they choose (Greenwood & Sweetland, 1972).

Bodvarsson & Berg (2013) divided migration into three categories, which further clarified the factors. These categories were demographic, economic, socio-economic features of migrants (Yorimitsu, 1985). Additionally, the model considered that driving forces of migration were constantly evolving due to economic, demographic and political circumstances (Wesselbaum & Aburn, 2019). For instance, income differences between source and host countries play a critical role in determining where people migrate (Tani, 2017). Furthermore, the population, limited access to natural resources, density of economic growth (Naude, 2010) are other determinants which make people leave their country of birth and migrate to different places. The nature of the households is another determinant. Broadly, migration is decided on at a household level, when the family income is insufficient to survive, partners' careers and other factors push people to migrate (Huinink, Vidal, & Kley, 2014). Nivalainen (1999) emphasises that families' living standards, life cycle and life plan are also essential determinants for migration.

Migration from a country of origin to a destination has several indicators and it is difficult to observe and measure them all (Docquier, Peri, & Ruysen, 2014). While most individuals' migration decisions intend to maximise the incentives offered by the determinants of migration, the destination country represents the demand side (Mayda, 2010). According to this approach,

the choice to move is determined by the advantages of migration exceeding the cost of living (Navratil & Doyle, 1977; Ortega & Peri, 2013). In this case, economic determinants are a crucial component of migration for economic opportunities the advantages they are like to get in the host country (Portes & Sensenbrenner, 1993). From this point of view, Greenwood & Sweetland (1972) mentioned that income is another determinant of migration. Migrants tend to choose destination country according to the value of the expected income and the benefits of the labour sector. In this point of view, migratory flows would be if there was an opportunity to improve an individual's or family's income one would choose to be a migrant. This unequivocally establishes a link between income opportunities and migratory movements that migration occurs when individuals benefit the most at a minimal cost as some countries pull the migrants to where they can get higher wages, some countries push migrants out due to lower wages and high unemployment number (Garcia, Pindolia, Lopiano, & Tatem, 2015; Tapinos, 2000). Thus, if there are no economic factors pushing people to migrate to another country, they may have migrated because a network exists between the source and host region, the family may have social relationships in the host countries (Verwiebe, 2014).

On the other hand, migration has some risk such as finding a job in the host country, getting paid enough to live in the urban areas and adapting to the new environment with unfamiliar people (Yang & Guo, 1999). Due to that, choosing the location is an additional determinant. Migrants prefer locations that are known to have previously accepted migrants because their cultural and linguistic similarities make it easier to adapt in the host county. This is known as the magnitude effect (Zavodny, 1999). Socio-cultural and psychological integration and cultural maintenance as essential for adapting to the host country since similar historical backgrounds and languages also help integration (K. Kim & Cohen, 2010; Hou, Schellenberg, and Berry, 2018).

Lee (1966) states that it does not matter if the way is short or long and if the journey is easy or hard. The crucial factor for migration involves an origin, a destination and an intervening set of obstacles. It may involve long-distance travelling, across or within the borders of a country from one region to another with a distinctly different cultural, political or social environment (Biswas, McHardy, & Nolan, 2005). In this regard, the first scholarly contribution to migration research was two articles by the nineteenth-century geographer Ravenstein (1885; 1889) who formulated the "laws of migration" for describing the migratory relationship between origin and destination countries. The first migration theory was based on a unique approach. For instance, most people move only a short distance to large cities for higher incomes and

employment opportunities. These positively influence migration while long-distance migration increases the cost of moving and it negatively affects migration (Kandemir, 2012; Bodvarsson & Van den Berg, 2013). Reviewing these, it may be found that most are explicit cases of the norm for least effort, which suggests that actors decide to move based on known comparative costs (Zelinsky, 1971). It also accounted for internal migration between rural-rural, rural-urban or urban-urban areas and international migration. Conversely, theories have also highlighted the underlying objective conditions, which act as ‘push’ and ‘pull’ factors for migration. The push factors for economic migration typically include economic circumstances such as unemployment, low salaries or low per capita income compared to the destination country. Pull factors include migration legislation and the labour market situation in destination countries (Boswell, 2002). Notably, developed countries encourage migration only for the most talented, skilled migrants from developing countries, which may lead to some economic problems in the country of origin (Lara, 2015).

Ravenstein’s seven laws of migration (Lee, 1966) provided the basis for the push-pull factors of migration that gained traction in later decades. Lee developed the push and pull factors theory based on Ravenstein’s theory. The theory stated that push and pull factors are determined by the distance diversification between places. The push factors determine situations that give people a reason to be dissatisfied with their currently country. The pull factors determine the properties of unsociable places that make them appear appealing. Based on this, Lee (1966) estimated that there are four main factors influencing mobility. They are:

- Factors associated with the origin,
- Factors associated with the destination,
- Intervening obstacles and
- Personal factors (Lee, 1966).

The main push factors from origin countries are low productivity, high unemployment rate, poor economic conditions, natural disasters, religious persecution, poor infrastructure, education system and politics and even the geographical location (Remeikiene & Gaspareniene, 2019). Pull factors for host countries are unlike push factors. For example, better employment, higher wages and facilities, better working conditions, and improved civic freedoms being some of them. Apart from this, push and pull factors are different for each migrant and change for female and male migrants (see Table 2-1). The Eurostat comparative report (2000) indicated the push and pull factors for migrants. For example, male migrants

were predominantly motivated by economic factors while female migrants mostly moved for familial reasons (Eurostat, 2000).

**Table 2- 1: Push and Pull Factors of Migration**

Economic Reasons for Push/Pull Factors		Non-Economic Reasons for Push/Pull Factors	
Push Factors	Pull Factors	Push Factors	Pull Factors
Wages	Job Opportunities	Natural Disaster	Freedom
High Unemployment	Demand for Labour	Poor Housing	Education
Number	Low Cost of Living	Persecution of Religion	Opportunities
High Taxes	Strong Economic Growth	Corruption	Security
Poverty			Family Links

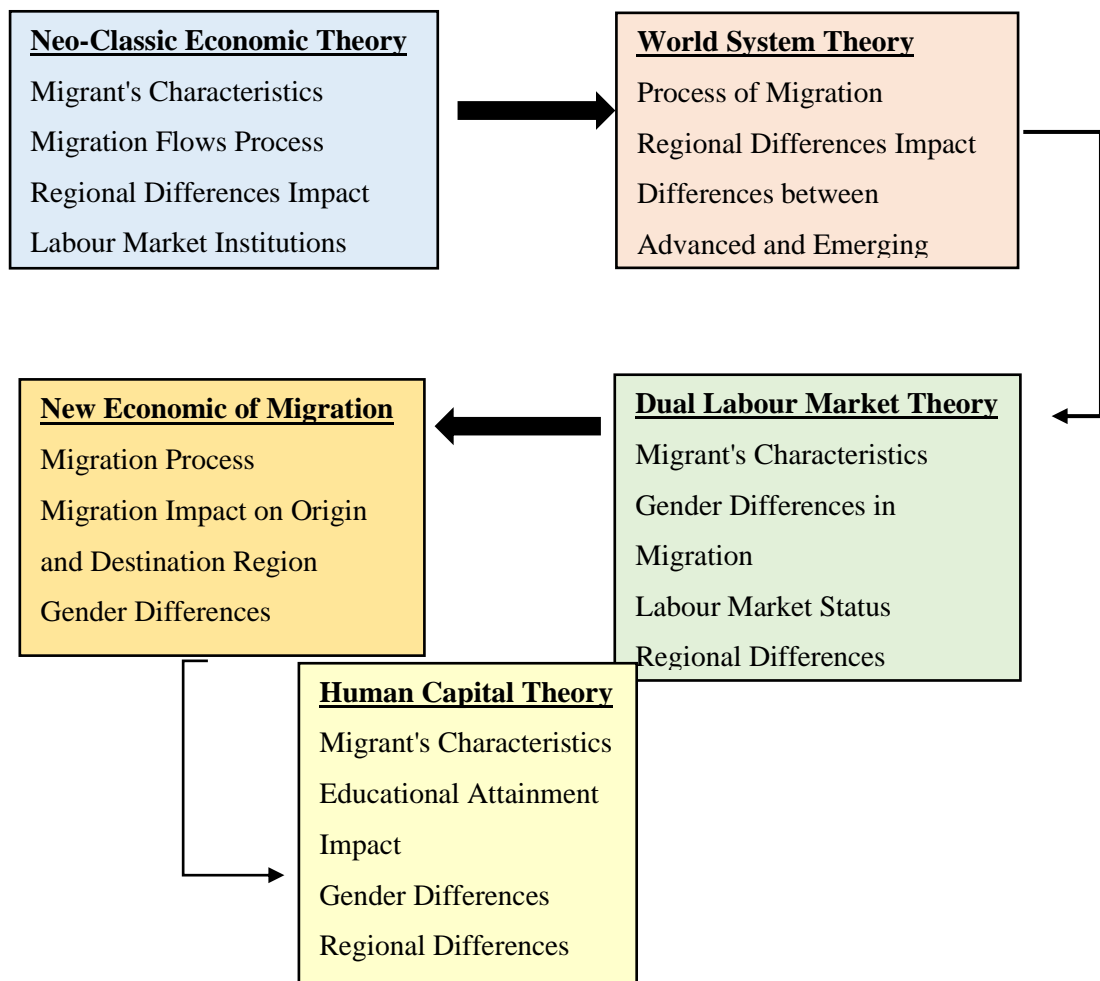
*Source: (Lee, 1966 & Simpson, 2017)*

Lee also mentioned that migration increases when the factors are incredibly different between the country of origin and destination (Kalinowska & Knapi, 2009). Furthermore, push factors are mainly economic but can also include terrain, distance, age, class, gender, education and family ties (Pullin, 2017). Indeed, political and economic factors play a crucial role. Complicated political and economic circumstances create uncertainty for individuals. They can also be a push factor. Economically and politically stable countries with a well-functioned and democratic government may attract new migrants (Greenwood, 1985; Simpson, 2017).

## 2.2. Theories Explaining International Migration

This sub-chapter attempts to establish that a significant part of the theoretical background on international migration (presented in Figure 2-2) is followed and these theories intend to answer the following questions:

- Where and why does migration flow?
- What are the main characteristics of international migration?
- What is the central effect of migration on the economies of origin and destination countries?
- What are the adjustments in the labour market status of migrants (Borjas, 1989a)?



**Figure 2- 2: Theories based on explanation of migration**

Source: Author's own compilation (2020)

The theoretical literature on international migration theories presents different explanations and identifies appropriate reasons for when and why migration began and how migration systems and networks work. Table 2-2 briefly describes the theories of international migration used to derive the causalities.

**Table 2- 2: Theories of Migration**

<b>Macro Level</b>	<b>Meso Level</b>	<b>Micro Level</b>
Neo-Classic Macro Economic Theory	Social Capital Theory	Lee's Push/Pull Factors
Dual Labour Market Theory	Institutional Theory	Neo-Classic Micro Migration Theory
World System Theory	Network Theory	Behavioural Models
Mobility Transition	Cumulative Theory	Theory of Social System
	New Economic Labor Migration	

Source: (Massey et al., 1993 & Hagen-Zanker, 2008)

Massey et al. (1993) developed the initiation theories for international migration and separated them into categories. The first approach briefly explains how migration begins. This theoretical approach, first, uses the neo-classic approach to migration, the world system theory, the dual market approach, the new economics approach and the human capital approach to explain migration initiation and what determines the international migration. Second, these approaches support the distinction between regional, educational and labour market institutions and gender differences in migration. On the other hand, theories falling into macro-level theories contain neo-classical macro-economic theory, dual labour market, the world systems and mobility theory and meso level theories include social capital theory. Institutional theories are network and cumulative theory and new economic labour migration. Finally, micro-level migration theories implications involve Lee's push/pull factors, neo-classic micro migration theory, behavioural models and theory of social system.

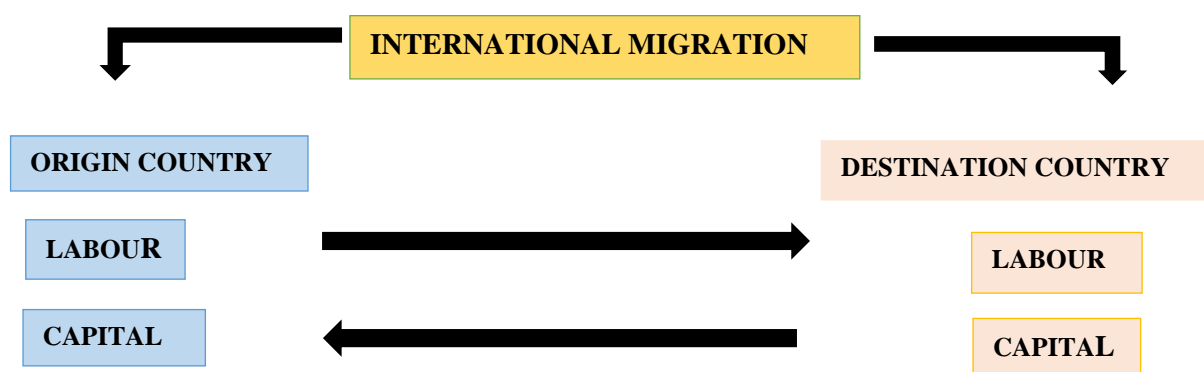
All migration theories can be explained differently while making migration decisions and processes (Castles, Haas, & Miller, 2013). However, the complexity of international migration makes it difficult to understand theoretical approaches (Stecklov, Carletto, Azzarri, & Davis, 2010). To better understand international migration, this title reviews various migration theories, which explain the causes and consequences of migration.

General migration studies focus on economic and non-economic factors while economic determinants influence people's decisions to migrate to other countries. Thus, the first and probably most influential theory about migration was the theory that proceeds from neo-classic economics about migration. The theory is based on familiar tenets such as rational choice, utility maximisation, expected net returns, factor mobility and wage differentials (Arango, 2000). Although, the neo-classical economic theory of migration is an explanation of labour

mobility (Assirelli, Barone, & Recchi, 2018) and focuses on differentials in wages and employment conditions between countries and migration costs. It conceives movement as an individual decision for income maximisation. It defines the migration stream as a reallocation of labour from rural, agricultural areas to urban, industrial sectors and influenced by economic motivators geographical differences in the supply and demand of labour by the host countries (Cangiano, 2014). This is considered as a qualification for economic growth. Hence, it is concentrated as a constituent ingredient of the whole development process (De Haas, 2010a).

### 2.2.1. Neo-Classical Economics of Migration

The neo-classical economic theory of migration is the first theory of human migration. This theory demonstrates internal and external migration at the regional, national and international level. *This theory was developed by Micheal Todaro (1969)*. He focuses on migration from the rural to urban areas determined by the expected earnings in the destination country and return migration to develop the region of origin. However, the link between migration and development has been studied since the 1960s. It has argued against initiating natural equilibrium-restoring mechanisms between low and high-wage countries through financial remittances and the transfer of human capital after return migration (Faist, 2008). Mirroring the flow of workers from labour-abundant to labour-scarce countries is a flow of investment capital from capital-rich to capital-poor countries (Massey et al., 1993, see also figure 2-3).



*Figure 2- 3: Neo-Classical Economics of Migration*

Source: Based on Massey et al. (1993).

Neo-classical economic theory illustrates that wage *differences push people to migrate from low-wage to high-wage countries* (Jennissen, 2007a). Since, the internal migration stream is a part of economic development and the theory generally focuses on wages (Hagen and Zanker

,2008). This approach is supported by Borjas (1989b); Massey et al. (1993) and Bauer and Zimmermann (1999) who acknowledged that wages determine the decision to migrate and there is already linear relationship between wage and migration streams to other countries. On the other hand, many other migration studies also found a positive relationship between migration and wages (Borjas,1987; Clark, Hatton & Williamson, 2007).

Neoclassical economic theory predicts that migration affects the supply and demand levels in the international labour market (O'Reilly, 2013). For instance, the supply of labour decreases and wages rise in developing countries despite the supply of labour increasing and wages falling in capital-rich countries and causes an outward shift in the supply of labour. This shift reduces the wages in the country of origin. On the other hand, from the neo-classical economic perspective, migrants like to maximise their income that one of the reasons for migration are benefits, costs and desire to increase return (Kurekova, 2010). Moreover, this theory also emphasises that if employees have the ability to do the job well, they should be compensated with appropriate wages. If highly skilled employees work for low-wages, they tend to migrate to better paying places (Marshall, Marshall, & Alfred, 1890). Massey et al. (1993) explained this using the neo-classical economic theory and separated it based on a macro and micro perspective:

- Firstly, migration causes wage differences between countries, educational background, labour market experiences and language skills, which influence their rate of remuneration in the destination country. Also, these features of migration affect the socio-economic development in the host country (Milczarek & Szkudlarek, 2015).
- Thus, migration cannot occur without differences in income and employment opportunities among regions. Until these factors equalise, migration will continue to increase globally.
- Finally, the high skilled workers respond differently to host countries and the origin countries after returning. These circumstances trigger a distinct pattern of migration among unskilled workers (Massey et al., 1993).

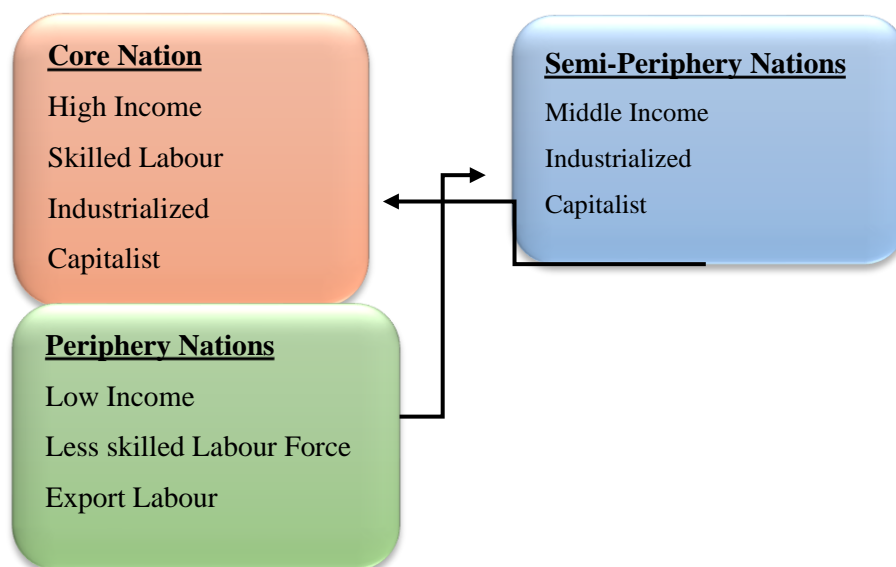
Lastly, the neoclassical economic theory of migration predicts that, in long run, migration will equalise the wages between developing and developed countries. Moreover, Boustan, Fishback, and Kantor, (2010) and Cigagna and Sulis (2015) declared that migration decreases the wages among the native population in the host country. This is due to the outward shift in the labour supply. Moreover, wages also affect migration. For instance, assume that wage

elasticity for the demand of low-skilled labour continually changes. Conversely, if wage elasticity is rigid, a migrant chooses to move to a country to higher wages. Hence, this stream affects native populations in the destination country. Thus, migrants and natives tend to be substituted in the labour market which affect natives' labour positions supply and demand shock (Venturini & Villosi, 2006; Giulietti, 2015).

### 2.2.2. World-System Theory of Migration

The world system theory developed by *Immanuel Wallerstein in 1987* with the publication of *The Rise and Future Demise of the World Capitalist System*. According to this theory, *the world is economically, politically and legally interdependent*. Wallerstein pointed out that cultural variety also plays an active role in this system (Wallerstein, 1974). Social change also contributes to the rising recognition within states which explains why each country has different migratory processes (Chase-Dunn & Hall, 1994). Thus, the world system theory proposed that these differences also occur due to specific changes in geographical regions. This issue was demonstrated under regional differences.

Wallerstein unequivocally explains how capitalism impacts the world system (Wallerstein, 1974 & Skocpol, 1977) and based on this, theory divides nations into three categories: core, periphery and semi-periphery (see Table 2-4). These nations are essential components of the theory. These countries depend on each other. However, as shown in figure 2-4, underdeveloped countries depend on wealthier nations.



**Figure 2- 4:** World-System Theory of Migration

Source: Based on Wallerstein (1974) and Author's own compilation (2019)

Therefore, the theory assumes that migration is a part of the global capitalist system and another component for developing countries (O'Reilly, 2013). Furthermore, Massey et al. (1993), stated in their research, that migration is inevitable for the progression of capitalist growth for developed countries because they need foreign labour with low wages.

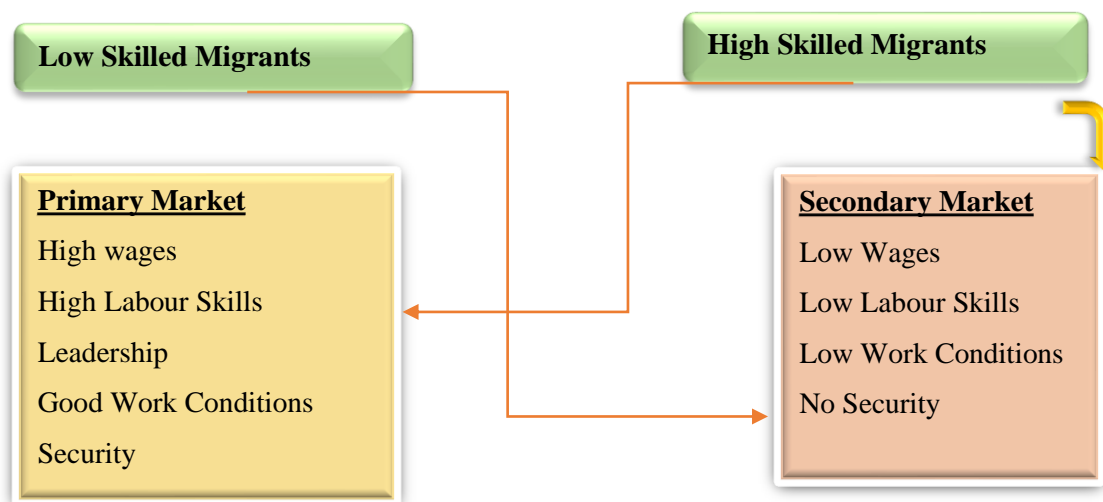
Moreover, Wallerstein (1974) also supported in the world-system theory countries' development depends on having necessary goods and raw materials. The human population has also been incorporated in the system since it needs to be expanded between regions. For example, raw materials and labour force move from peripheral nations to semi-peripheral and core nations and increase the human migration flows to developed countries (Massey et al., 1993).

Advanced countries export labour, goods and raw material from other countries. This system is called it 'structural unbalancing'. It indicates that developed countries technologically dominate developing countries (Portes, 2009). This phenomenon increases migration to other countries and increases the unskilled employment growth in the developing countries. In other words, wealthy countries are increasing their productivity but developing countries remain weak.

### **2.2.3. Dual-Labour Market Theory of Migration**

The dual labour market approach developed by *Michael Piore in 1978*. It separated the labour sector into the primary and secondary sectors. The primary and secondary sectors were differentiated by stability characteristics and their labour market status and characterised by higher wages, security and prospects for advancement and leadership (Wachter, et al., 1974; see Figure 2-5). Conversely, in the labour-concentrated secondary sector, workers have unbalanced, unskilled jobs (Massey et al., 1993) which will be cause of the employer to generally lose money by retaining workers during slack periods. Secondary jobs are taken by minority workers, women and youth (Reich, Gordon, & Edwards, 1973) and mostly not particularly associated with specific firms (Veiga, 2007).

*The dual labour market theory highlighted that international migration is caused by a permanent demand for foreign labour inherent to the economic structure of developed countries.* Therefore, wages not only reflect the conditions of supply and demand but also confer status and prestige (Hirschman et al., 1999).



**Figure 2- 5: Dual Labour Market Theory of Migration**

*Source: Based on Piore (1978) and Author's own compilation (2019)*

In this theory, positive developments occur in the primary sector. Changes in the secondary sector only reinforce dominant characteristics such as its lack of structure, stagnant technology and absence of differentiation between workers (Rubery, 2015). While some researchers find this segmentation to be a necessary step for the labour markets' initial encouragement for international migration (Piore, 1978).

Consequently, according to the dual labour market theory, developed countries characterised by the primary labour markets with high wages, better social security standards, the right employment conditions and high demand. Features of the secondary labour market include low wages, unfavourable working conditions with little or no job security (Piore, 1978). Consequently, native workers tend to work in the primary sector and are not willing to accept jobs in the secondary sector (Danzer & Dietz, 2008). Thus, migrants end up working in the secondary sector. Finally, this approach aims to demonstrate international migration relations and their effect on the labour market (Gordon, 1995).

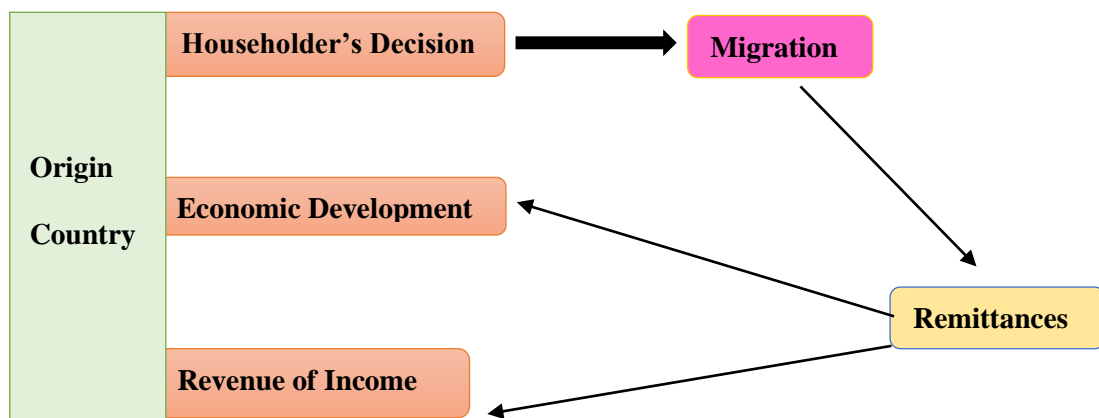
#### **2.2.4. The New Economics of Labour Migration**

The New Economics of Migration (NELM) was developed by *Oded Stark* (Stark and Bloom, 1985). The theory, facilitated by geographers, anthropologists and sociologists, conducted

micro-research in rural communities in developing countries in the late 1970s (Haas & van Rooij, 2010).

*The NELM argues that, particularly in the developing countries, migration decision cannot be taken independent of the householder’s decisions. Migration decisions are a family strategy about maximizing income by diversifying the source of income* (Arango, 2000; Geist & McManus, 2012). The household income primarily contributes to labour migration from the origin country (Salt & Almeida, 2010). In poor and developing countries, if a family member migrates to a developed country or city, their remit earning increases family income.

Moreover, It is indicated in the theory, migration also reduces price variations and unemployment rate (Geist & McManus, 2012). Thus, migration is an alternative form of credit for the origin countries, particularly remittances. This approach assumes that remittances positively impact the origin country because they increase demand which is met by national production (Portes, 2009). On the other hand, as Koska, Saygin, Çağatay and Artal-Tur (2013) demonstrated, remittances are a significant source of income for non-migrant households in the origin countries and challenge and tighten labour and credit restrictions in rural households (Sindi, 2006, see Figure 2-6).



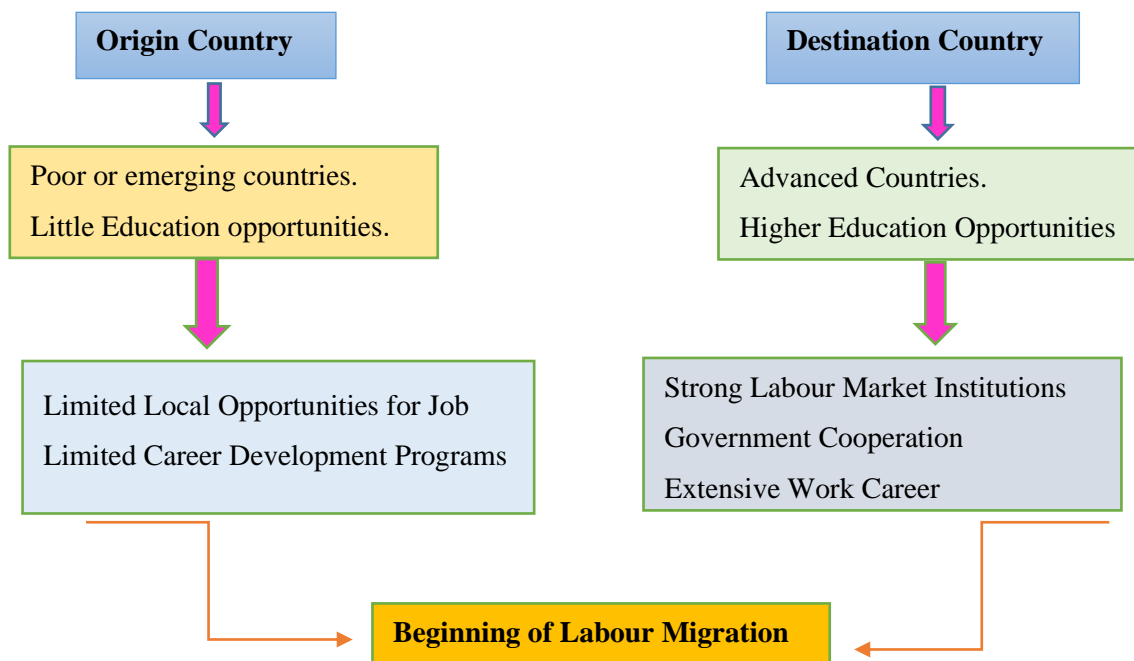
**Figure 2- 6: New Economics of Migration System**

*Source: Based on Stark and Bloom (1985 ) and Author's own compilation (2020)*

Taylor (1999) also distinguished between remittances positively affecting the economy of the origin country and called it the developmental perspective. For the developmental perspective, production and investment decisions remain unchanged only due to the use of hired labour remittance transfer that positively affects the consumption in origin countries (Wouterse & Taylor, 2008). In addition to the direct influence of migrants, the combined migration

remittance may affect labour inputs by those who choose to stay in their country of birth (Lucas, 2007). Furthermore, Carling (2008) mentioned that functional determinants may identify remittances' characteristics. For example, gender, educational background, ethnicity, etc. Furthermore, NELM considers migrants as an individuals who are going to stay in the host country for a while, and subsequently, return to their country of origin, when they are permanently settled and reunited with their families while succeeding at providing households to maximise their earnings (Rozelle et al., 1999).

Consequently, this approach to migration highlights the importance of sending remittances to the country of origin after migration. It becomes a source of income for an economically developing country and householders' income. This theory also demonstrates that migration decisions are not always an individual choice but a family decision. As shown in Figure 2-7, the first step involves the householders' decision to migrate. The second step involves a person migrating to find a job and sending remittances to their home country.



**Figure 2- 7: Start Point of Labour Migration**

Source: Portes & Celaya (2013) and Author's own compilation (2019)

Some other factors also trigger labour migration such as from the poor or emerging countries, some factors push people to move as a labour migrant to other advanced countries. For instance, insufficient education, limited local job opportunities and deficient career development

programs. On the other hand, developed countries have better educational opportunities and stronger labour market institutional legislation, which ensures the security of the labour market as well as good cooperation with governments. These elements initiate labour migration.

Broadly studying international labour migration for employment demonstrated that labour is exported and foreign workers are received from developing countries (Martin, 1991). However, labour migration is not only a movement between regions but also different cities within a country (Asis and Piper, 2008), particularly in the United States, Canada, Australia and New Zealand exclusively have immense labour migration within the same country.

### **2.2.5. The Human Capital Theory of Migration**

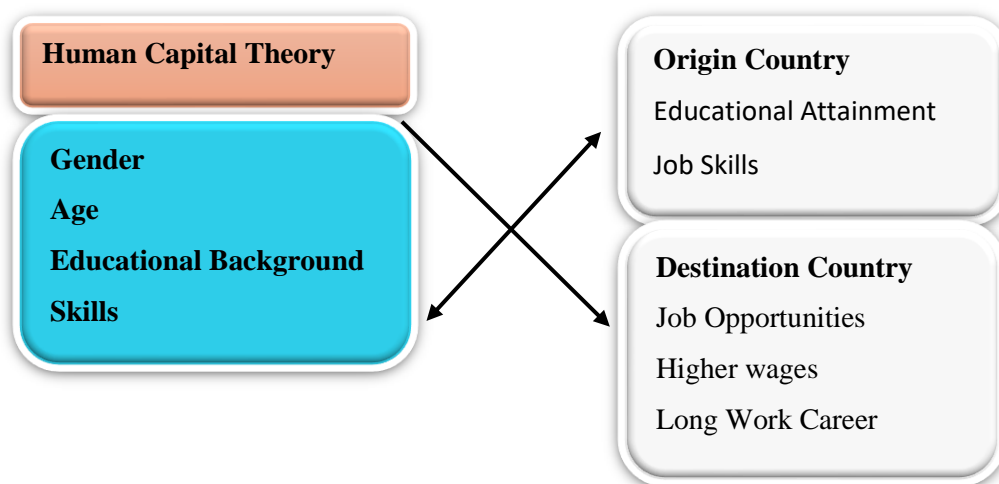
*Theodore Schultz (1960)* developed the human capital theory in the 1960s with the publication of *Investment in Human Beings* (Blaug, 1976). It has been one of the essential theories on this subject ever since. Human Capital Theory proposes that investment in people through schooling, job training, medical care, etc. not only improves people's physical and mental abilities but also their real income prospects. This investment also consistently benefits people economically since human capital is the primary source for improving entrepreneurial skills (Becker, 1962; Sweetland, 1996; Deller, Kures, & Conroy, 2019). Those investments for improving the workforce enhances productivity but it needs several variables and activities, like educational capital, to improve an employee's skills (Bodenhöfer, 1967). In this point of view, O'Rourke & Sinnott (2006) made an exciting implication about skilled and unskilled workers. If a developed country has higher-skilled workers, their wages will be lower. Consequently, the high-skilled workers will migrate to developing countries where unskilled workers can earn higher wages. Conversely, unskilled workers will migrate to rich countries for the same reason.

The human capital approach is related to the neo-classical micro- level migration theory. Based on the work of Becker (1962), migration is treated as an individual investment decision to increase the productivity of human capital thereby, focusing on the labour market but also explaining the discrimination against various migrants. Considering migration as an investment tests the effectiveness of migration in reducing wage differences and creates a possibility for significant comparisons between migration and auxiliary methods of promoting better resource allocation (Sjaastad, 1962b).

Korpi and Clark stated that the human capital theory focuses on people's decision to migrate and their expectation from it compared to staying in their country of birth (Korpi & Clark,

2015). The human capital approach also explores gendered differences and emphasises on the different aspects of female and male migrants' motivations (Taylor, 1999). Besides, this theory provides relatively straightforward clarifications for why migrants tend to be young and the relationship between ageing and migration (Taylor, 1999 & De Haas, 2010). Stark and Taylor (1991) pointed out that the human capital theory of migration detects gender differences and determines the difference in the characteristics between male and female migrants. Moreover, they stated that young people migrate more than elders due to their long term career plans in the host country.

The human capital theory concludes that every migrant gets jobs according to their skills in the host country (Borjas, 1995; see also figure 2-8). If the migrants are more skilled and educated than natives, they tend to substitute natives with migrants due to low wages. Although Docquier, Ozden and Peri (2014) observed that migration negatively affects the wages and employee status of natives' who are less educated than the migrants. Borjas et al. (1997) observed that if migrants' and natives' skills match each other, the migration flows will not affect the natives' wages and employee structure. Less-skilled natives are given a job where highly skilled migrants can be more productive in that position. This wastes migrants' skills. Reitz (2001) highlighted that destination countries must utilise migrants' skills. The influence on the labour market depends on the foreign and native workers' skills in the host country. If migrant workers are more skilled than native ones, the competitiveness of the labour market increases and reduces the natives' wages (Ruhs & Vargas-Silva, 2017).



**Figure 2- 8: Human Capital Theory of Migration**

Source: (Becker, 1962; Stuhler, Thomassen & Zimmermann, 2008; Author's own compilation, 2019).

To summarise, according to human capital theory, the effect of age, gender, educational background and labour status strongly depend on migrants' characteristics. This heterogeneity between people, even from the same country, determines the different features influencing the choice of different migration destinations (Stuhler et al., 2008). As Figure 2-8 demonstrates, education, gender, experiences of work, even language proficiency are an essential determinant of migration in the human capital theory. On the other hand, according to the theory, highly skilled individuals tend to migrate more than low-skilled ones. It is assumed that highly-educated people may have better employment opportunities in the host country (Danzer & Dietz, 2008) and will migrate when they get a great opportunity in the host country rather than staying in their country of origin (Takenaka & Pren, 2010).

### 2.3. Summary of the Theories

A variety of theoretical models have been proposed to explain why international migration begins. Although each theory explains the same subject, they employ radically different concepts, assumptions and frames of references and take perspective determined by social, economic and political factors (Cox, 1981). Table 2-3 lists the migration theories, their developers and most essential assumptions.

**Table 2- 3:Contributors of Theories and Their Assumptions with Limitations**

No	Theory	Contributor	Assumptions	Limitations
1	<b>Neo-Classic Economic Theory of Migration</b>	<i>Micheal Todaro(1969)</i>	Wage differences push people to migrate from low-wage to high-wage countries people are migrating to enhance their income	Limitation of this theory to explain migration based on an individual level. However, migration is not always an individual decision.
2	<b>World-System Theory</b>	<i>Immanuel Wallerstein(1987)</i>	The world interdependent to each other with an economically, politically and legal frame and migration is the outgrowth process of capitalist development.	This theory focuses on too much on the economic process of migration and does not accept there are cultural aspects of the social system too. However, cultural differences also play and crucial role of migration.
3	<b>Dual Labour Market Theory</b>	<i>Micheal Piore (1979)</i>	Divide to labour market into the two-sector and migrants mostly working in the secondary sector under poor condition.	This theory only focuses on the segmentation of the market and assume that migration occurs due to only pull factors in the destination country. However, many empirical studies showed that pull factors also play an essential role in this stream.
4	<b>New Economics of Labour Migration</b>	<i>Oded Stark and David Bloom(1985)</i>	Migration is instead a householder's decisions and sending remittances from destination country can have a positive impact on the source region because they spirit up demand, which is met by national manufacture.	This theory assumes that all migrants will come back with a successful story or sending remittances from destination country will improve householder s income. However, it does not explain the migration process and hardship in the flow.
5	<b>Human Capital Theory</b>	<i>Theodore Schultz (1960)</i>	Investment in people, such as investment on schooling, job training, medical care, improves the physical and mental abilities of people also improve real income prospects, as well as this investment consistently derives economic benefits in people.	Main limitation of this theory, it assumes that higher levels of educational attainment and quality will yield greater productivity and wages across the board. However, such treatment of education is problematic because the process of human capital formation varies for individuals and groups. People learn inversely, and a “quality” education in one framework may prove ineffectual in another.

*Source: Author's own compilation (2020)*

On the other hand, different theoretical mechanisms may influence particular settings strongly or weakly in explaining out-migration. Considering that theories conceptualise causal process at such different levels of analysis, i.e. (individual, household, the national and international), it cannot be assumed, a priori, to be inherently incompatible. Nonetheless, the various theories reflect different research objectives, interests and ways of decomposing enormously complex subjects. Table 2-4 demonstrates differences between the theories by comparing them.

**Table 2- 4: Comparison of Migration Theories**

<ul style="list-style-type: none"><li>❖ <b>Neo-Classic Economic Theory:</b> Migration is an individual decision and mostly occurred due to wage differences of countries.</li> <li>❖ <b>World System Theory:</b> International migration has little to do with wage differences of countries. It follows the dynamics of market creation on the structure of the global economy.</li> <li>❖ <b>Dual Labour market theory:</b> Wages can fall, due to the supply of migrant worker, migration flows will continue.</li> <li>❖ <b>New Economics of Labour Migration:</b> Migration decision is based on the household decision, not an individual decision and wage differences between countries are not the reason for migration decision, but the family decision is.</li> <li>❖ <b>Human Capital Theory:</b> Individual human capital characteristics that increase the likely rate of probability of employment.</li></ul>
---

*Source: Author's own compilation (2020)*

#### **2.4. Characteristics of Migration Differences**

This section of the dissertation specifies the differences in migration. How do differences in regional backgrounds impact migrants' lives in the destination countries because the labour status as well as the role of labour market institution will be examined based on these differences.

Subsequently, educational attainment is considered as a fundamental determinant, especially for labour market status. Moreover, early migration theories did not explicitly attend to gender roles. However, this section also attempts to show that gender differences in migration are a critical for understand that labour market segmentation plays a unique role (Rao, 2009).

#### **2.4.1. Regional Differences in Migration**

Migration has been an issue in regional, geographical and economic sciences for several years. This interest can be explained by the many effects of migration on the region of origin, the region of destination as well as the migrants (van Dijk & Folmer, 2019). Moreover, differences between origin and destination countries significantly influence regional economic and demographic growth due to international migration (Williams, 2009). Plane (1993) pointed out that regional migration is affected by demographic changes due to the difference between the country of origin and destination as well as change in the labour market conditions. These effects include the individual's economic status, wages and the unemployment and employment rates of migrants (Van Hear et al., 2018). Other effects include educational attainment, labour market status, age and gender differences, detailed under their specific titles. As Sjaastad (1962) mentioned, migration flows between regions positively correlate with the human capital characteristics of migrants. On the other hand, Ortega and Peri (2013) emphasized that geographical distance between the origin and destination country requires long travelling – this reduces the migration stream to countries with the same colonial background, same language and family ties and increases the migration stream to other regions.

Regional migration research can be divided into three categories. The first category focuses on the determinant of migration. The second category studies the consequences of migration (Lee, 1966 & Greenwood, 1969; Yorimitsu, 1985). However, before the 1960s the theory of migration mostly focused on internal migration and linked it to the location models from regional economics. Most of the researcher within it paid little attention to the role of geography in the economic process of migration (Martin & Sunley, 1996). Lately, academics and policymakers have started increasingly focusing on the importance of regional migration as a source of economic development at the national and regional levels (Ritsilä & Ovaskainen, 2001). E. G Ravenstein was one of the first researchers to contribute to analyses of regional migration (Lee, 1966) and classify migration by the distance of replacement.

Additionally, the laws of migration that were discussed implied some observations that were a useful starting point of regional migration (Greenwood, 1985). This theory underlines that

migrants prefer distance based on, first, excellent centres of commerce or industry. However, most migrants move only a short distance. Urban natives tend to migrate lesser than people from rural. Women are more likely to migrate than men. Most migrants are adults and, generally, they migrate outside their country of birth. The predominant direction for migration is from rural to urban areas (Grigg, 1977). Adam Smith's economic theory developed in *The Wealth of Nations* (1776) emphasises that people move from low-wage to high-wage areas (Greenwood & Hunt, 2003) and this differences of wages forms the basis for the fundamental law of regional migration.

Migration between two regions directly varies due to the economic opportunities in the destination country and inversely due to the economic conditions in the origin region (Gabriel, Shack-Marquez & Wascher, 1993). Moreover, the transportation costs and geographical risks of moving should also be considered (Devillanova, 2001). Beyond all these, individuals are also affected by personal factors such as age, education, cultural background, language, colonial ties, etc. (Greenwood & Hunt, 2003; Geis, Uebelmesser & Werding, 2013). Thus, the choice of destination country is affected by several variables. Even the individual's unique experiences play an essential role in the country of origin and on the country of destination.

Lee and Caselli discuss the differences caused by the demographic structure, economic conditions (wages, unemployment and employment rates) and economic status (micro-level) of the country of origin (Luy & Caselli, 2007). However, regional migration is based on regional economics. Thus, wages, regional labour employment and unemployment are discussed (Epifani & Gancia, 2005). Above all, it should be mentioned that migration aids regional development. Continuous regional development leads to economic development system. Neo-classical economics of migration emphasises that if labour migration is effectively used in the destination country it increase the economic development in the host country (Folmer & Oosterhaven, 1979; Fielding, 1989). Brandsma, Kancs, and Persyn (2014) proposed that labour market institutions and regulations are a vital element of regional integration and economic crises (Goss & Lindquist, 1995).

#### **2.4.1.1. How Can Regional Differences and Migration Interact?**

Migration can cause inequality in the labour market. Unemployed people can find better work opportunities by migrating to another region with better employment rates (Jackman & Savouri, 1992). International migration flows increase when regional wages and unemployment differences have initiate or persist in the form of differentials (Südekum, 2003). Hence, according to the neo-classical economic theory, immigrants' play a part in economic development mostly as a consequences of geographical differences between origin and destination countries.

As mentioned earlier, people migrate from low-wage regions to high-wage regions to maximising their income (Gerber, 2006). People migrate between regions (Martin, 1998) due to wage differences between countries (Jennissen, 2007b). Migration also occurs because individuals or families want better employment opportunities and higher wages in the other regions (Baryla & Dotterweich, 2001). This situation may also increase the differences in regional wage levels (Alecke, Mitze, & Untiedt, 2010).

Migration flows between regions can equalise wages and conditions between the country of origin and destination according to the neo-classical perspective. The theory assumes that migrants have excellent knowledge about wages and employment opportunities in the country of destination, in the long term. However, the long-term effects should not just be about regional wage differentials because labour supply and demand between destination and origin countries are balanced (Castles, 2009), but also because remittances from migrants increase their earning (Jones & Findlay, 1998; Gheasi, & Nijkamp, 2017). Conversely, Kang and Kim, (2018) highlight that, in the long run, migration flows decrease economic growth per capita through the capital suspension effect in the host country.

Many studies concluded that, people tend to migrate to better developed regions with lower unemployment rates. In aggregate terms, if the unemployment rate in a region is increasing more than another, the net migration of this region should reduce (Pissarides & McMaster, 1990). The high unemployment makes regions less attractive for migrants (Pissarides & Wadsworth, 1989) because regions with high productivity have lower unemployment numbers (Epifani & Gancia, 2005). The human capital approach to migration accepts that individuals choose the region depending on the income they expect in the destination country. If it has a high unemployment rate, it makes the country less attractive (Sjaastad, 1962b). On the other hand, Reed (2001) emphasises that wages are not an essential determinant of regional

migration. At the regional level, higher wages and lower unemployment are more attractive for migrants (Máté, Sarihasan, & Dajnoki, 2017).

Every migrant chooses to leave their home for different reasons but they all bring their life experiences, knowledge, culture and ambitions with them. As they settle into their host countries, they acquire new skills and contribute to their families and communities in their country of origin by sending money home. Remittances can aid countries' economic growth as well as positively affect households' incomes (De Haas, 2010b). Consequently, remittances expand income. This expansion makes the region attract labour and human capital from other regions. However, it also has some negative impacts. For example, adapting to a new society can be a challenge for migrants (Azam, Gubert, Azam, & Gubert, 2006).

Over the last two decades, the analysis of human capital has had an increasingly central role in discussions about the growth and success of nations and regions (Capello & Nijkamp, 2010). For instance, when it comes to the success of a nation and of a region, it is crucial to have educated, more skilled and geographically mobile workers (Dickey, 2014). Thus, attracting talented people is important for a region to improve its economic knowledge and make the labour market more competitive because labour migration is one of the fundamental mechanisms for regional differences in economic vitality (Hansen & Niedomysl, 2008; Levy, Mouw & Perez, 2017). On the other hand, differences in skills, educational levels, gender and age indicated some differences within regions (Rabe & Taylor, 2012) and these differences could be region specific for human capital in host countries. Distinguishing between different types of labour is not only essential but also determines the skill level and geographical mobility of migrants. Südekum (2003) considered that every region differently affects the destination countries. Migrants' social and educational backgrounds vary (Cote, 1997). These factors affect the quality of the labour market in regions. Thus, the social mobility of native workers and immigration flows of foreign labour affect the quality of human capital in the destination country (Massey et al., 1993). To summarise, migration flows depend on differentiating regional economics and they are essential for regional distribution (Zagorski, 1990). On the other hand, regional differences in migration may cause differences in the wages, supply and demand curve, labour market, educational and gender differences in host countries. Consequently, understanding these differences in migration makes it easier to determine the major driving force for regional migration (Kibele & Janssen, 2013; Pietsch & Clark, 2015).

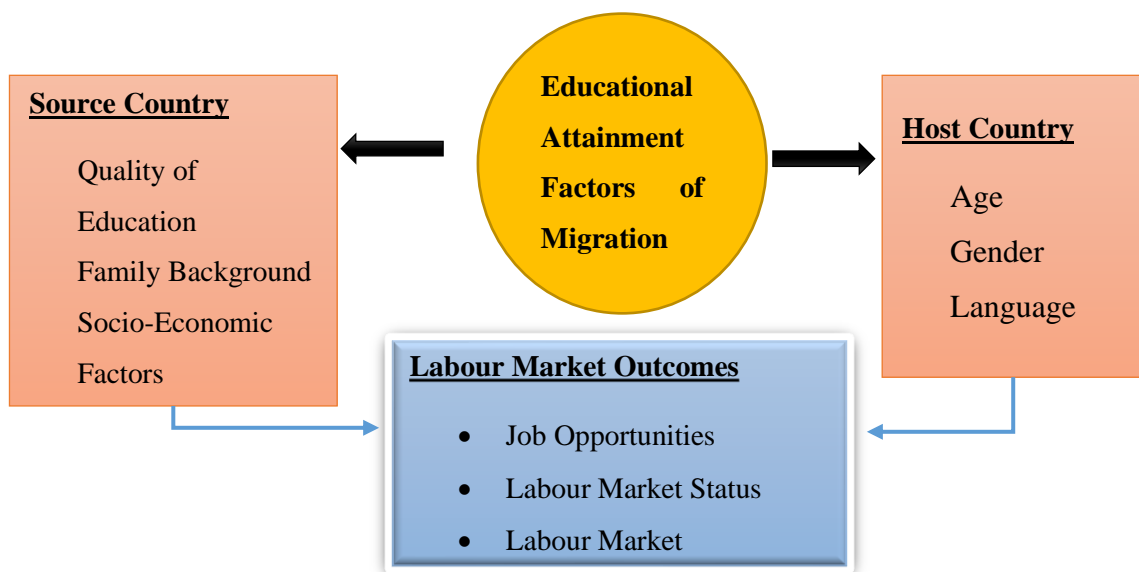
#### **2.4.2. Educational Attainment and Migration**

Education has been widely accepted as an essential component for migrants and their children. Successful integration into the educational system as well as adapting to the social and economic life of the host country mostly depends on migrants' educational attainment (Parasnis & Swan, 2017). Therefore, several studies focus on the relationship between educational attainment and migration. Several theories review the relationship between educational attainment and migration, such as the neo-classical economic theory, new economics theory of migration, dual labour market theory, world system theory and human capital theory. The prevailing perspective among all these theories emphasises on educational attainment as one of the factors influence migration decisions (Quinn & Rubb, 2005). As Ginsburg et al., (2016) indicated, giving importance of the relationship between educational attainment and migrants is essential because it is a crucial factor of migrants' economic and social development in the destination country. Besides, Bernard and Bell (2018) acknowledged that migration is one of the ways for individuals to pursue their goals, dreams and education. On the one hand, education can support migrants to increase their economic facilities such as wages (Borjas, 1989).

When people migrate to a country, they became part of that society. Therefore, improving migrants' education level is as vital as it is for the natives. Moreover, it is essential for the further development of a country. Especially in developing countries, that have so many impediments to getting educated. Furthermore, education can improve economic growth (Lauer, 2003). The migrants' social background plays an essential role in the educational success of destination countries. While every migrant does not have the same background and countries have a different numbers of migrants (Schneeweis, 2011). Hence, the socio-economic status is related to family structure. Families with little incomes lead to lower educational attainment and children from these families tend to have lower educational backgrounds. This affects an individual's job opportunities and their integration into societies (Cohen, Zach, & Chiswick (1997) mentioned that, an excellent educational background from the source country, the higher schooling level of its migrants in the host country.

Some migrants can have deficient access to educational attainment in the source country. This situation negatively affects their life and causes inequality in schooling for migrants' children (Hutchings & Unesco, 2017). Thus, functional integration of migrant children in the host countries' education system is essential to make them feel like they are a part of the socio-economic development in the host country (Parasnis & Swan,2017).

Besides, many studies specify that educational attainment is a fundamental determinant for migrants children’s school performance and integration into society because their families face several other problems in the host countries (Ma et al., 2018). Moreover, these differences include the reasons for differences between the family backgrounds and socio-economic status of migrant and native students and natives (Buchmann & Parrado, 2006). Educational attainment significantly influences labour market outcomes (Kristen & Granato, 2007; Thomas, 2008; see Figure 2-9). Migrants choose to leave their country of origin to improve their skills, determined by education.



**Figure 2- 9: Educational Attainment and Migration**

*Source: (Becker, 1965; Borjas, 1994; Ginsburg et al., 2016)*

Moreover, Valverde and Vila, (2003) found that the reason for migrants often being a part of the lower strata of the labour market in the destination country is their insufficient education background. Another reason is that educational attainment is affected by various dimensions. As mentioned above, family background, socio-economic status, including insufficient work experience (Crystal, Shea, & Krishnaswami, 1992) affects migrants’ occupation status. Dustmann and Glitz (2011) remarked that migrant’s educational background is a fundamental indicator in the host country. However, empirical studies show that even if migrants are more educated than the native population, they are not employed equally in the labour market (Borjas, 1994).

Bradly, migration has been considered as a stream of great opportunities for migrating people in the host country (Rendall & Parker, 2014). Educational attainment plays a crucial role in obtaining these opportunities (Preston, 1987). Riphahn (2003) observed that sufficient educational background affects migrants' social integration which affects their economic efficiency in the destination country. Migration theories related to educational attainment paid attention to economic and social factors. The human capital theory directly acknowledged that educational attainment significantly influences the development of countries and emphasises several essential points about educational attainment affecting the labour market productivity in destination countries. To explain this finding, Buzdugan and Halli (2009) documented that education includes knowledge about jobs – through job training and skills – which affect job productivity as well as earnings. Knowing the destination countries' official language also provides many opportunities to migrants. For instance, those who speak the language are likely to earn better than others who cannot (Kanas & Tubergen, 2009). Moreover, the human capital theory also highlights that education is one of the critical components improving migrants' productivity by increasing their specific skills of the labour market in the host country (McNabb, 1987).

Furthermore, labour quality is measured by the quality of schooling (Cubas, Ravikumar, Ventura, 2016) and educational attainment. It is essential to improve migrants' education for economic and social improvement and labour productivity (Ginsburg et al., 2016). Grossmann (2016) highlighted that educated migrants enhance foreign direct investment (FDI) and support firms to find more opportunities out of the country. It is another aspect which increases the output growth per capita in the destination country.

McKenzie and Rapoport (2011) documented remittance transfer as another aspect for increasing educational attainment among migrant families. Furthermore, household inputs influence educational attainment (Chiswick, 1988; Gang & Zimmermann, 2000). The origin countries' education system is as vital as the destination countries' since the migrants permanently stay in the destination country. Returned migrants always bring back their educational and work experience to the country of origin.

As discussed earlier, migrants' educational level is a significant predictor of their income level, job quality and economic development in the destination country (Stamps & Bohon, 2006; Schwartz, 1976). Ferrer and Riddell (2008) suggested that job opportunities increase with educational level and contribute to increased growth. Lower education implies fewer job opportunities for migrants (Browne, 2017). Furthermore, age affects the educational attainment

since the level of education has increased over time and the younger generations are better educated than the older. It makes young migrants better educated than the older ones. It also positively affects their entry into the labour force (Funkhouser & Trejo, 1995).

Therefore, the HCT observed that wage levels have also been increasing with age. Additionally, Gottlieb and Fogarty (2003) found that the past educational attainment is not considered an essential component of regional development. However, adapting to the social and cultural environment of the host country is crucial for migrant parents and children alike. Furthermore, educational attainment is significant for the native population in many ways. Jenssen and Engesbak (1994) introduced it from a different perspective. They emphasise that because the education system respects other people's culture, the racism towards migrants decreases. Additionally, education makes people confident.

### **2.4.3. Gender Differences in Migration**

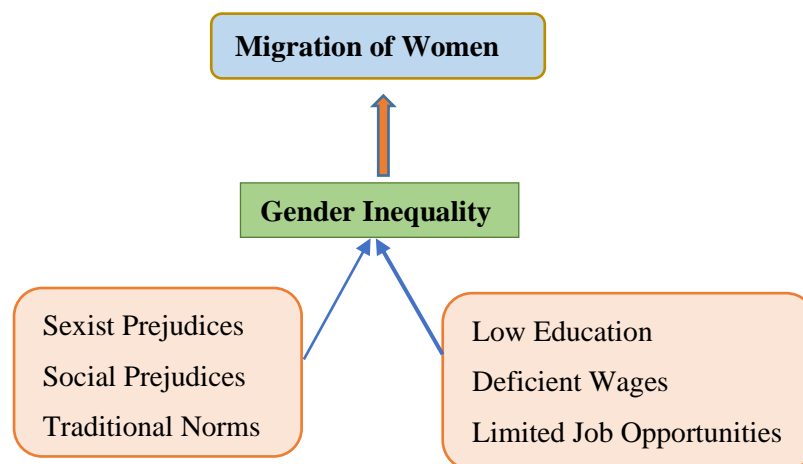
In recent years, migration streams have become very complex and dynamic. It has diverse gender, age and ethnic configurations. This diversity in migration diversely impacts economic, demographic, cultural and even population variations between regions. Gender is one of the critical components helping shape these differences (Tacoli & Mabala, 2010). However, the relationship between gender and migration has not been extensively studied under migration studies (Sotelo & Cranford, 2006). Despite economic, demographic and cultural diversity, gender differences also organise and detect job opportunities, principles in social life and even the status in societies.

Gender differences in migration were an invisible issue for years in migration research. However, it has been negotiated in the social sciences and become a unit in the migration studies and immigration analysis (Manalansan, 2006). This topic emerged in the 1970s and early 1980s (Nawyn, 2010) in migration studies. Before that, these differences have not considered and the role of gender has not considered as a determinant of migration (Yang & Guo, 1999). Afterwards, researchers realised that gender differences are one of the determinants of migration and that the motivations for migration differ for both genders.

Even so, the relationship between gender and migration is a complex phenomenon that has been a part of international migration studies (Massey et al., 1993). However, it is essential to demonstrate the reasons and consequences of international migration from a gendered perspective due to its vital role in shaping the experience of migration. Considering gender as a factor influencing migration improves research and helps incorporate a gendered perception

into the policies on migration (Piper, 2005). Desai and Banerji (2008) divided the gender effect into the two categories. First, women take on a role which they did not when their husbands migrate. Second, women's position as a householder is strengthened in the destination country. Gubhaju and De Jong (2009) mentioned that in the neo-classical economic theory of migration, household need to be balanced. Thus, it is understandable for a woman to take on the role of a man after he migrates to another country, for the benefit of rest of the family like the children. The migrant men could improve women's position by sending remittance to the source country this also increases women's financial autonomy. This situation shows that migration is an extremely gender-based process where labour market differences in both source and host countries have dissimilar consequences (Curran & Saguy, 2001).

The broad explanations of the gendered nature of migration were the preponderance of men in the migration flows. Most studies about labour migration have focused on migrant men (see figure 2-10). Men are considered as the only decision-makers in the migratory process. Nonetheless, studies demonstrated that women migrants have the same motivators and processes for migration as men (Kifleyesus, 2012). However, this approach is not right. Fan (2000) reported the reasons for the gendered perspective to migration which mostly focused on migrant men. First, men play a more central role than women in many societies. Particularly in traditional societies. Secondly, it is easier for men to travel long distance than women. Finally, men commonly decide to migrate due to economic reasons while women migrate mostly for social reasons. After international flows from low-income to high-income countries, the number of female migrants has started to increase (Truong, 1996) and the economic approach has begun considering the role of women migrants (Stecklov et al., 2010).



**Figure 2- 10: Gender Inequality in Migration**

Source: Baudassé & Bazillier (2014); Author's own compilation (2019)

The extensive literature about migration indicates the relationship between geographical movement and economic well-being. However, recent studies of migration indicate that the gender gap influences this relationship (Geist & McManus, 2012) and that women are also an essential part of the migratory process (Llacer, Zunzunegui, del Amo, Mazarrasa & Bolumar, 2007). Although Pedraza (1991) considered migration as a stream where men migrate and women follow, Ravenstein (1885) was a pioneering migration researcher who emphasised, in his fifth “law” of migration, that women tend to migrate more than men, albeit for short distances (Lee, 1996). On the other hand, the neo-classical economic theory assumes that women are members of households, migration begins with the decision of family members and family migration impacts men and women equally (Barot, Bradley & Fenton, 1999). However, the theory emphasises that women migrants are always behind migrant men due to family migration and gendered differences. It also influences women’s employment options as well as essential features of their labour market status in developed and developing host countries (Chattopadhyay, 2000).

Conversely, according to human capital theory, it is likely for skilled workers to move from a low-wage to high-wage region without gender discrimination (Mansori, 2003; Agesa, 2003). As Chattopadhyay (2000) stated, in traditional societies (characterised and organised according to traditions such as segregation of labour by age, gender and status differences) women are mostly just considered to be potential wives or mothers. In such an environment, women are expected to have lower educational qualifications and a lesser role in the labour sector and the migration process than men. On the contrary, having a gender balance of international migration is an essential factor for gender selectivity demand of the labour market in the destination country (Carling, 2005). Young females broadly leave their country with a desire to have more comfort and new employment opportunities in the destination country. For instance, they must learn how to adapt to the new society, live and work there (Zhang, 2009). Also, Tacoli (1999) and Piper (2005) observed that migrant women work in low-paid occupations, include lower labour force participation in the poor working conditions. Only limited number of migrant women work in the agriculture sector in the host country and some of them work as householders in wealthy families’ homes (Lutz, 2017). This situation highlights gender-selectivity and segregation in migration. Gender segregation causes disadvantages and gender discrimination in migration, i.e. sexual or physical exploitation of migrant women (Kreimer, 2004).

Above this, labour market institutions and policies about gender equality in migration impact the role of women migrants in the labour sector (Fortin, 2005). The educational attainment also affects their participation and chosen job sectors. Smyth (2005) acknowledged that the educational background in destination countries influences gender differences. Williams (2009) found that in many rural areas, men like to immigrate and seek employment opportunities more than women. In this condition, educational attainment affects migrant men more than migrant women. On the other hand, in developing countries, migrant women are less educated than men (Beine & Salomone, 2013). This leads to fewer employment opportunities for women in the host country (Baker & Benjamin, 1997).

The quality of the education system for men and women also affect the labour market outcome for men and women in the host country. This factor shapes their economic conditions and integration in social relations (Fuller & Vosko, 2008). Nonetheless, education, employment status and wages influence the status of migrant men and women differently (Gubhaju & De Jong, 2009). Female migrants were not considered a substantial component of international migrants for a brief period in the past. Nonetheless, motivators and processes show the differences between them, i.e. migration flows between rural areas to urban areas. It is another factor which causes a gender gap in migration. Many studies indicate that, in developing countries, migrants are mostly men and they are more educated than women (Máté, Sarihasan, Popp, & Oláh, 2018). It is one of the aspects which affect the migration process positively for men but negatively for women.

Moreover, migrant women face worse working situations than men in the host country. Initially, it is harder for migrant women to find jobs than men. They mostly work in the secondary sector, under poor conditions and with little wages. Some of them work as householders in wealthy homes. Their insufficient educational background causes these inequalities (Chattopadhyay, 1997). Most studies focus on female migrant's problem in the host countries and disregard the problems caused by the origin countries.

To summarise, previously, gendered differences in migration were not considered an essential topic for migration studies. However, in recent years, many studies demonstrate that women and men play different roles in the migration decision and process. It is essential to identify these differences between genders since both genders have different impact and role in the destination countries' economic development process, socio-economic structure and status in the labour market. A majority of previous researches on migration focused on the role of male migrants explaining migration decision and process. However, due to increased numbers of

migrant women, studies started focusing on the role of women in the migration decision, its causes and consequences.

#### **2.4.4. Labour Market Status and Migration**

The relationship between the labour market and migration was first studied by Chiswick (1978) in their *The Effect of Americanization on the Earnings of Foreign-Born Men* (Chiswick & DebBurman, 2004). Labour migration contributes to the host country in many ways. For instance, economic growth, development and employment positions. However, migration also has significant disadvantages for developing countries. The most influential one being the loss of educated, talented individuals (Valadez, 2012; Grossmann, 2016).

Labour market status can be substituted by an indicator, such as employment, unemployment and vacancies. Employment refers to people who already have a job. Unemployment includes people who are searching for a job. Vacancies are positions, which cannot be fulfilled with current job seekers. The relationship between labour market status and migration is an undoubtedly critical field in labour economics and migration studies. It is also fundamental for demonstrating the limitation in employment opportunities for migrants and determines the unemployment rate of the destination country. The labour market status of the migrants is crucial for understanding migrants' contribution to the labour sector.

Labour market status changes for migrants. Regional differences, educational attainment, labour market institutions and gender differences play an essential role in demonstrating unemployment and employment status in source and host countries. Moreover, some other implications also shape unemployment and employment status. However, studies have shown that education positively affects the employment status for migrants (Chiswick, Cohen & Zach, 1997). If migrants have strong educational qualifications from their country of origin, they are more likely to be employed. This approach is supported by the human capital theory of migration. The educational background, language proficiency, job skills are fundamental features for employment opportunities in the host country (Becker, 1965).

On the other hand, the labour market status is affected by gender differences. According to OECD (2018), female migrants are more unemployed than men. As indicated earlier, women migrants' educational background is not as strong as men's. Due to lack of education and work experience, they face more discrimination than men in the host country. Besides, even if a woman migrant is skilled and educated, they have less complimentary jobs than male (Figure 2-10). Therefore, the gender gap negatively impacts migrant women. Similarly, age also effects

the labour status of migrants. Becker (1965) indicated, the expected earnings and employment probability for migrants decreases with increasing age.

Unemployed workers continue searching for a job. These workers are likely to be affected by migrants in the labour market (Avila & Bacarreza, 2016). Thus, the native population's main concern is that migrants take their job and reduce wages. This also increases the unemployment rate between local workers. However, migration does not significantly impact job opportunities or wages for natives if they are better educated and talented than migrants. Ortega et al. (2015) reported that even if migrants and natives share the same work experience and educational background, it does not directly increase competition between them. The neo-classical theory of migration assumes that if wages are falling for migrants, it will increase the supply of labour. When migrants are willing to work at low wages, it can affect the wages of native workers in the same sector. Some native workers are not willing to work for low wages in their working conditions. In this case, migration also can be a reason for voluntary unemployment in the host country (Dustmann, Glitz & Frattini 2008).

While choosing the destination country, labour status (employment and unemployment) plays a critical role (Rabe & Taylor, 2012). If migrants are talented, skilled and have labour market experience, they have a better employment status in the destination country. However, if they do not, it increases the unemployment level in the host country. Therefore, countries take advantages of the cheap labour brought in by migration. This supports their social and economic development (De Haas, 2005b).

#### **2.4.5. Labour Market Institutions and Migration**

The imperfect labour markets are characterised by the presence of many labour institutions, i.e. legal systems and programs shaping workers' and employers' behaviours (Boeri & Van Ours, 2018). Institutions are a result of a political process aimed at increasing economic efficiency and achieving some redistributive goals that guide individual behaviour in the host society (Peters, 2019). Economic institutions are substantial for rational choice due to their impact on the actors' pursuit of goals (Odmalm, 2005).

Labour market institutions came to public attention in the mid-1970s by emphasising on the growing unemployment in the OECD countries. Subsequently, in the late-1980s, substantial literature developed and indicated that the differences in employment and unemployment rates between regions can be explained by the labour market institution (Odmalm, 2005).

Broadly, labour market institutions are defined as employment services, unemployment insurance, working hours conditions including minimum wages, benefits, retiring programs as well as employment protection legislation, unemployment benefits and union power in influencing wages and transition probabilities in the host country that substantially impact migration flows and job status in the host country (Solow, 1990; Betcherman, 2012; Cigagna & Sulis, 2015).

The research about labour institutions produced many influential articles in the 1980s on the relationship between migration and wages and employment and unemployment status (Borjas, 1989; Dustmann et al., 1991; Basso & Peri, 2015). Correspondingly, Harris and Todaro (1970) specified their technical specifications for the relationship between labour market institutions and unemployment rates. Conversely, migration studies have found a linear relationship between migration flows and employment status and wages (Borjas, 1989b; Hagen-Zanker, 2008). Moreover, Bauer and Zimmermann (1999) indicated that labour market institutions could influence migration flows and their status in the host country is affected by wage elasticity and labour supply shocks (Brücker, Glitz, Lerche & Romiti, 2018).

Williamson (2000) indicated that labour market institutions play an essential role in influencing the migrants in the host country. For example, free movement, labour market institutions establish the initial framework and occasions structure for both migrants workers and the employers who recruit them (Friberg, Arnholtz, Eldring, Hansen, & Thorarins, 2014). However, most host countries assume that migrants affect their wages and change their labour market structure. Nevertheless, as Cigagna & Sulis (2015) found, migration does not affect wages in the countries where labour market institutions are strict and legislation is strong. This is because labour market institutions legislations can be used to address the adverse effects of the job loss among natives, and the long run, they can minimise the negative employment consequences for natives. In other words, if migration reduces the employment number among natives, labour market institutions can exacerbate it by not working on strong legislations (Angrist & Kugler, 2003; Almosova, 2013). On the other hand, as labour market institutions also decrease the unemployment number and stabilise the effect of domestic demand – which increases unemployment rate – by securing their jobs (DaVanzo, 1978).

Briefly, labour market institutions play an active role in the host country's migration due to their influence over employment, unemployment and wages. Moreover, migration occurs due to a wage gap between countries and, as discussed earlier, people decide to relocate to an area with better income and employment opportunities. However, when migrants reach the host

countries' labour market, they change the wage structure for native workers due to wage adjustments restricted by the wage setting institutions.

Boeri and Ours (2008) shed light on the destination country benefitting due to migrants because it is opportunity for employers to hire migrants at low wages and it exceeds welfare loss for native workers who are earning lower wages. Additionally, they also stated that if migration flows in an area are huge, native workers tend to move to other regions. This re-equilibrates the national economy. Finally, the effects of migration on natives' wages depends the fact that open economies may adjust to migration by changing the assemblage of the output mix or production technologies to benefit from the improved labour supply rather than by regulating wages or employment to an increased labour supply (Boeri & Ours, 2008).

## **2.5. Hypotheses Development**

Based on the literature on international migration differences, presented in Chapter 2, several specific hypotheses for dependent and independent variables have developed and used in the models. The formulated hypothesis are about the interaction (positive and negative) in migration differences.

Becker (1962) and Plane (1993) highlight that regional differences of migration are influenced by demographic changes because of differences between the country of birth and origin and changes in the labour market status. Those differences also include migrants' educational qualification, background, gender, age and employment status (Van Hear, Bakewell & Long, 2018). On the other hand, Sjaastad (1962) pointed out that the migration stream between regions is positively correlated with the migrants' characteristics. Furthermore, Rabe and Taylor, (2012) emphasised on migrants' skills and unique features based on their regional background. The neo-classical economic theory and the human capital theory of migration emphasised that regional differences (wage, employment opportunities, etc.) play an essential role in shaping migrants' characteristics. These aspects of migration constitute the basis for Hypothesis 1, formulated as follows:

### ***H1: Migration characteristics differ based on migrants' regional background.***

- ***H1a: African migrants tend to be less educated, older, foreign-born and female than others.***
- ***H1b: Asian migrants tend to be less educated, older, foreign-born and female than others.***

- **H1c:** *South and Central American migrants tend to be less educated, older, foreign-born and female than others.*
- **H1d:** *North American migrants tend to be less educated, older, foreign-born and female than others.*
- **H1e:** *Migrants from Oceania tend to be less educated, older, foreign born and female than others.*

Previous studies have shown that migrants' labour market status changes based on their regional background, educational qualifications and gender and age differences. For instance, Chiswick, Cohen and Zach (1997) stated that strong educational qualification positively affects migrants' employment status in the host country. The human capital theory of migration also supports this approach. Educational background, language proficiency and job skills are essential features of employment in destination countries (Becker, 1965). Additionally, the labour market status is also affected by gender differences. OECD (2018) argues that migrant women are more unemployed than men.

Age is another component affecting the labour market outcomes for migrants. As acknowledged in the human capital theory, employment opportunities and wage-levels increase with age. Meanwhile, other factors also impact of labour market outcomes for migrants. For example, householder decisions, as indicated in the New Economics Theory of migration. Simultaneously, this research will further examine the determinants of labour force status by testing the following (sub) hypotheses:

***H2: Labour force status related to migration differences.***

- **H2a:** *Employed migrants are older than others.*
- **H2b:** *Employed migrants are more educated than others.*
- **H2c:** *Unemployed migrants are younger than others.*

In recent years, due to a considerable migration flows, this topic has become complicated. This has also caused several differences in migration and a gendered re-configuration of the migration process. On the other hand, demographic, cultural and even the increasing or decreasing population were components which influenced gender differences in migration (Tacoli & Mabala, 2010). Gender differences in migration mostly occurred in the labour market of the host country. For instance, Tacoli (1999) and Piper (2005) emphasised that female migrants mostly work in low-paid occupations with poor working conditions. The dual labour market theory implies that female migrants work in the secondary sector while men get the

opportunity to work in the primary sector. The gender differences in the migration do not just include the labour sector but also educational qualification. Beine and Salomone (2013) highlighted that educational attainment background is one of the most essential components causing the gender differences in migration because, in most developing countries, migrant women are less educated than men. Baker and Benjamin (1997) declared that this made employment opportunities diminutive in the host country. This study intends to specify the gendered differences between migrants by examining the following hypotheses:

***H3: Gender differences in migration are related to migration characteristics.***

- ***H3a: Female migrants are younger than men.***
- ***H3b: Male migrants tend to be more employed than women.***
- ***H3c: Female migrants are less educated than men.***
- ***H3d: Female migrants tend to be more inactive than men.***

The theories used to explain migration differences, such as neo-classical economic theory, New Economics of Labour Migration pointed out that educational qualification strongly influences the decision to migrate (Quinn & Rubb, 2005) because migration to other regions or countries increased with increasing educational qualifications (Cote, 1997). Educational qualification is just one of the migrants' characteristics affecting the differences. Regional background also shapes the effective educational qualification of migrants (Schneeweis, 2011). Additionally, as emphasised in the human capital theory, better educated people have better employment opportunities in the host country (Danzer & Dietz, 2008). On the other hand, age is also an important component related to educational qualification. Funkhouser and Trejo (1995) highlighted age as a determinant of educational attainment because educational qualification is increasing over time. Therefore, this study aimed to examine educational attainment difference of migration and it will be tested by following hypotheses.

***H4: Educational attainment background of migrants are associated with the migration differences.***

- ***H4a: Lesser educated migrants tend to be younger than others.***
- ***H4b: Migrants with medium education level tend to younger than others.***

It is well established that geographical migration tends to scale down with age because the expected benefits from working life are weighted higher than migration with age (Lundborg, 1991). Becker (1962) argued that individuals with a better educational background who find

migration to be beneficial move during their early years because it is more convenient to be employed at a young age in the host country. Later, Schwartz (1976) argued that as people age, they invest in family ties and job security more. These factors make older people stay in their country of birth instead of moving and starting a new life in an unknown country. Therefore, it is clear why young people tend to migrate more than older ones. As Stark and Taylor (1991) revealed, young people migrate more than elders due to their long-term career plans in the host country.

On the other hand, the human capital theory argues that the wage-level increases with age (Taylor, 1999; De Haas, 2010). Therefore, age differences in migration are related to regional differences, educational attainmen and the labour force status of migrants. Age differences will be tested based on the following hypotheses to demonstrate this:

***H5: Ageing is associated with migration differences.***

- ***H5a: Migrants, aged between 15-24 are less educated than others.***
- ***H5b: Migrants, aged between 25-64 are more employed than others.***

## **2.6. Concluding Remarks**

In this theoretical background, five different perspectives to migration were investigated. First, related theories with the topic of the dissertation were explained. Subsequently, regional differences in migration, educational qualifications, gender, labour market institutions and labour market status were examined.

The theories synthesised in the theoretical background section determined the complementarity between migration theories. Broadly, the theoretical background indicated that the migration decision was taken to maximise income benefits. It emphasised on the neo-classical economic theory of migration and it was exactly determined by taking the support of other theories. Along with that, in the dual labour market theory, how wage differences push urban-rural migration has also been explored.

This chapter aimed to demonstrate the theoretical background for international migration and how regional background, educational qualifications, labour market, gender differences and labour market institutions affect migration in the origin and host countries. To explain these differences, the neo-classical economic theory, the world system theory, the dual labour market theory, the new economics theory and the human capital theory were used. Therefore, the economic perspective was taken to understand the most powerful determinant of international

migration. Moreover, the literature review demonstrated that education, gender, age and household decisions impacted regional differences and labour market status of migrants. For instance, most of the destination countries required educated and skilled migrants. If a migrant's educational background was not strong enough, it would be tougher for him/her to get a job in the host country. Additionally, labour market institutions influence on migrants' wages, unemployed and employed status. Native populations also play a vital role in the regional integration and economic crisis (Goss & Lindquist, 1995, Brandsma, Kancs, & Persyn, 2014).

The theoretical background of migration shows that if migrants are more skilled and educated than natives, it makes some natives lose their employment status. However, in some host countries, they retain low-skilled natives due to their nationality and assign migrants to job where they cannot improve themselves. Subsequently, migrants lose their skills while working such jobs.

Moreover, gendered difference is an essential indicator of migration. Female migration has not been considered as an essential aspect of migration flows. However, with time, especially after researching the subject, studies showed that women have an active role in the migration process. However, according to migration studies literature, migrant women have fewer opportunities to migrate and a less impressive educational background than men. This affects the labour market selectivity in the host country.

Additionally, skilled workers leaving their countries negatively affects the countries of origin. However, the human capital theory for migration suggested that after acquiring skills, workers can return to their country of origin and support their country's economic growth. On the other hand, the NELM stated that when migrants enhance their income in the host country, they can send remittances to their country of origin which also supports the growth there.

### **3. MATERIALS AND METHODS**

This chapter details the research setting and design procedures. It aims to describe the data source, collection and methods of the dissertation and continues to explain the exact data. The final part discusses the description of statistical analyses, including regression models, to test the hypotheses.

#### **3.1. Source of International Migration Data**

Some primary obstacles caused a lack of consensus about the definition of a migrant. Such dimensions existed due to the considerable number of migrants, geographical and language barriers, etc. However, since the 1990s, an increasing number of international migration-based researchers and policymakers realised the significance of migration. By then, it became necessary to have a substantial database to measure the effects of international migration and it was also widely accepted that timely data on international migration was essential for future policies. However, the limited data source about migration made it challenging to create beneficial policies for policymakers around the world. Without reliable information, the management of international migration was relatively difficult (Laczko,2015).

OECD started to collect data about migration based on the population censuses of OECD countries for its 2000 census. Since then, remarkable efforts have been made to create databases of international migration flows. OECD and the World Bank have been working together to extend the Database on Immigrants in OECD and non-OECD host countries.

The Database on Immigration in OECD Countries (DIOC) was published in 2008. This database is an excellent tool for providing the socio-economic characteristics of foreign-born populations living in OECD countries. DIOC data, which has been updated every five years since 2000/01 using censuses and representative surveys, give an insight into the dynamics of migration between origin and host countries of migrants. These databases measure the number of foreign citizens who arrive and intend to be residents in the host countries, annually. It measures all foreign-born migrants who wish to settle down in the country, not for tourism, study or any business reasons (Mayda 2010).

This dissertation used the latest update of DIOC 2015/16 data. The OECD compiled estimates of annual migration flows from 34 OECD member states and more than 200 countries of origin. Moreover, the dataset included information about the migrant's gender, age, labour market status, educational attainment, place of birth, duration of stay and labour market outcomes.

The database on migrants in OECD and non-OECD countries (DIOC) was constructed to ensure a reliable and internationally comparable database on migrants according to their country of origin (Arslan et al. 2014). With these databases, it is possible to describe migration differences in OECD countries. Simultaneously, the extension of DIOC provides substantial insights into the geographical dispersion of migrants worldwide (Dumont, Spielvogel, and Widmaier 2010a) and comparing regional differences (Dumont, Spielvogel, and Widmaier 2010b). Table 3-1 presents the variables and their acronyms.

**Table 3- 1: Variables and Their Acronyms**

<b>Variable Name</b>	<b>Acronyms</b>
Educational Attainment	Edu-lfs
Age	-
Foreign Born	F.born
Gender	-
OECDb	-
Africa	AFRI
Asia	ASIA
Europe	EURO
North America	NOAM
Oceania	OCEA
South and Central America	SCAC
Labour Force Status	LFS

*Source: DIOC 2015/16 Database (DIOC, 2019)*

### **3.2. Data Collection and Sample**

The data collection contains information about migrants by destination country based on the registered population censuses. Subsequently, the databases extended the migrants' characteristics, i.e. region, gender, educational attainment, etc. Accurate and internationally comparable data about migration is a crucial step for better understanding the characteristics and scope of migration movements. In this regard, DIOC makes an essential contribution by supplying multidimensional data on bilateral migration for countries of destination and origin.

### 3.3. Definitions of Variables

The definitions of the variables are:

- **Country of birth** is defined as a country in which a person was born. However, because of obscurity and credibility, place of birth has been registered at a continental level instead of country-level (Artuç et al. 2014). For instance, Africa, Asia, Europe, Oceania, etc.
- **Country of residence** is defined as a country where a person has or will have lived more than twelve months. The person needs to have a domicile in the said country. Moreover, a person can have more than one country of residence.
- **The region** is defined as a geographical area or nation. In the OECD data, geographical differences are considered to facilitate meaningful comparison between regions belonging to the same regional taxonomy. For the analytical determination, the OECD classifies regions as the first administrative stage of sub-national government. The National Statistical Office (NSO) classified them to collect information and apply it to regional policies for many countries. In the databases, regions have been divided into the six categories: Africa, Asia, Europe, North America, Oceania and South/Central America and Caribbean (OECD, 2019).
- **The Age** is defined as the migrants' age, divided into three categories: These categories are, 1=15-24; 2= 25-64; 3=65+.

On the other hand, the DIOC database contains data on **labour market status**. For each country of origin, it identifies the proportions of employed, unemployed and inactive members. These groups represent the supply of labour for producing goods and services in the countries. Labour force participation depends on the reasons for the decision to migrate to the country of residence. For instance, work, family reunification, education, but also on the national regulations determining the access to the labour markets.

However, based on the latest international statistical standards, the population of working age in a country may be classified, according to their labour force status, into a short reference period with three mutually exclusive and exhaustive groups: employed people, unemployed people and people outside of the labour force – defined as inactive.

Following the International Labour Organization (ILO), **employment** is defined as people aged 15 years and above, engaged in some effective activity within the economic systems, gainfully employed for at least one hour in the previous week (OECD, 2009). It is measured through the

household labour force surveys. This status also includes people who live in private households and do any work for pay during the reference week. However, employers had a job from which they could be temporarily absent due to disease, vacation, industrial disagreement or education and training (Eurostat 2000). *Unemployed status* is defined as people without a job or who actively have been seeking occupation for four weeks, aged between 15-74 (OECD, 2019). The *inactive population* includes all the people who are neither employed nor unemployed.

On the other hand, the potential labour force is described as all persons of working age who, during the short reference period, were neither employed nor unemployed. They could be “seeking employment”, “currently unavailable” but would become available within a following short period, established in the light of national circumstances (i.e. unavailable job seekers) or did nothing to “seek employment”, but wanted to be employed (ILO, 2019). Besides, it provided detailed cataloguing by the degree of labour attachment, facilitating identification of the probable labour force. This classification was widely used by countries to produce their official labour market statistics, thereby promoting the global comparability of the statistics (ILO 2017).

*Foreign-born population* includes all the people who migrate from their country of birth to their country of residence. This population also represented the first generation of migrants and who held both foreign and national citizenship. Furthermore, the characteristics of the foreign-born population depended on the history of the migration stream, increasing the foreign population naturalisation numbers (OECD, 2019).

*Educational attainment* refers to the framework of International Standard Classification of Education (ISCED) levels completed by an individual. For operational purposes, educational attainment is usually measured using the highest education program completed, which is typically certified by a recognised qualification. Additionally, UNESCO (2012) emphasised that the ISCED’s definition of educational attainment should be distinguished from other perceptions related to an individual’s educational accomplishments. Individual achievements may include education levels that were attended but not completed, or an individual's actual knowledge, skills and competencies. The ISCED is a tool for assembling, compiling and analysing cross-nationally comparable statistics on education. The ISCED is a member of the United Nations International Family of Economic and Social Classifications and is the reference classification for organising educational programs and related qualifications according to levels and fields of education (UNESCO, 2012). In the DIOC 2015/6, this classification was used to measure educational differences between migrants. The ISCED’s

explanation is shown in Table 3-2. Different ISCED categories represent the same order in the various countries. The higher education level is also associated with higher skills. Moreover, skilled workers have primary educational level, medium-skilled workers have secondary educational level and highly skilled workers have tertiary education level (Massing & Schneider 2017).

**Table 3- 2: International Educational Attainment Classification**

1: ISCED 0/1/2 = Low
2: ISCED 3/4 = Medium
3: ISCED 5/6/7/8 = High

*Source: UNESCO (2010)*

*Notes: Low level represents primary education/ low secondary education and upper secondary education. The medium level represents upper secondary education and non-tertiary education. The high level represents short-cycle tertiary education, Bachelor`s, Master and Doctoral level.*

### **3.4. Methodology**

Current methodological improvements led to the first complete global estimates of bilateral migration data based on observed migrants' stocks, which are straightforward for directly measuring the enumerated flows. The data is primarily based on the place-of-birth responses to census questions, the details are composed from population registers and migrants' statistics (Abel & Sander 2014). To analyse the data and estimate the relationship between the dependent and independent variables, Binary Logistic (Logit) Regression model and Multinomial Logistic Regression is employed. Both methods are used to examine the correlation between the variables. Regression techniques within the framework of migration analysis have become progressively attractive. Many scholars believe that these techniques are being made more straightforward to estimate the factors influencing migration. Moreover, regression analysis provides a method for testing the hypothesis about which factors are associated with migration. On the other hand, regression techniques have been used to indicate the influences of each variable and to determine their significance (Willis, 1975).

#### **3.4.1. Descriptive Statistics and Cross-Tabulation**

Descriptive statistics was used to determine frequencies of the database. This included migration differences based on (Africa, Asia, Europe, North America, Oceania, South and

Central America) educational qualification, gender, age, foreign-born labour force status (employed and unemployed).

Crosstabs command is an SPSS procedure that cross-tabulates the association of two examined variables. Moreover, the crosstab analysis was used to demonstrate the relationship between two or more categorical variables. In the dissertation, it was used to indicate the association between regional, labour force, nativity status differences, gender differences, educational qualifications and age.

### **3.4.2. Independent-Sample Test**

In statistics, the Mann–Whitney (U) test (or Wilcoxon rank-sum test) is a non-parametric test of the null hypothesis that it is equally likely that a randomly selected value from one population will be less than or greater than a selected value from a second population. This test can be used to investigate two independent samples selected from populations with the same distribution. In the dissertation, the independent sample U-test was used to evaluate whether the rank means of two independent variables are significantly different from each other. To demonstrate gender differences, foreign-born status, employed and unemployed status differences were associated with educational attainment and age.

### **3.4.3. Binary (Binomial) and Multinomial Logistic Regression**

In the dissertation, binary and multinomial logit regressions demonstrate the relationship between migration differences. The Binary Logistic Regression model was developed by Cox (1958) and, like other regression analyses, the logistic regression is a predictive analysis. The goal of the regression model is exploring the best fitting and most parsimonious, reasonable model to define the relationship between an outcome (dependent) and independent variables (Hosmer & Lemeshow 2000). Logit and probit models are also appropriate for attempting to model a dichotomous dependent variable, for e.g. yes/no, like/dislike, etc. The logit model uses cumulative distribution function of the logistic distribution while the probit model uses standard normal distribution. Logistic regression is more popular among health sciences like epidemiology because coefficients can be interpreted in terms of odds ratios in this model. Probit models can be generalised to account for non-constant error variances in more advanced econometric settings. However, if these applications are irrelevant, it does not matter which method is chosen. In this dissertation, the Logistic Regression method was selected because it allows the predictors to be discrete, continuous and dichotomous or a mix which is suitable for this research (Morgan 2004). Moreover, these models are extensively used in research work to

assess the effect of numerous socio-economic and demographic characteristics to control the variables on the probability of the occurrence (Islam, Rahman & Hossain 2013).

The Multinomial Logistic (mlogit) Regression analysis also attempts to predict the outcome from a set of predictors which is the aim of this dissertation. In statistics, mlogit regression is a classification method that generalises logistic regression to multiclass problems, i.e. with more than two possible discrete outcomes (Willis, 1995). *The mlogit model is used to predict the probabilities of the different outcomes of categorically distributed, dependent variables, given a set of independent variables (real-, binary-, or categorical-valued, etc.).* Also, the use of these logistic regressions in being consistent with many other international migration studies. In the dissertation, a logit regression model was employed to explain the relationship between educational attainment and age as a dependent variable with other variables (gender, age, labour force status and foreign-born status).

Another statistical goodness measure, which fits the analyses of the dissertation, is the Hosmer-Lemeshow Goodness of Fit statistic when there are one or more continuous predictors in the model. A substantial value of Chi-squared (with significant p-values) demonstrated the fitness of logistic regression models. Each result is separately explained under the title of Result of Regression Analyses. Additionally, each table with the logit regression is proportioned with variance explained by the predictors (Nagelkerke's pseudo  $R^2$ ). On the other hand, the Omnibus (F-test) and HL-tests was used to explain the set of data that are importantly greater than the unexplained data fitting the model. To control and avoid dummy traps, Europe and inactive labour status dummies were chosen as control variables. Dummy trap is defined as a situation in which the independent variables are multi-collinear two or more variables are highly correlated. In simple terms, one variable can be predicted based on the others. To avoid this phenomenon, it is necessary to notify at least one dummy variable from the categorical values.

### **3.5. Model Specifications**

#### **3.5.1. Region of Birth**

The processes of first and second-generation unification have varied strongly based on the countries of origin of the migrants and the countries they have migrated to. Many factors are likely to affect the size, origin and destination of migration flows at each point in time and lead to variations in the data (Mayda 2010). Also, many other factors affect and differentiate between migration from a regional perspective, for instance, education, skills, age, gender and even the labour market status of the sending or receiving country (Greenwood, & Hunt, 1984).

This dissertation analyses whether the differences in the country of education, age, gender, birthplace and employment status are related to the regions by testing in the case of date [i] of 2015/2016.

$$\text{logit}(DAFRI_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DF.born_i + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \varepsilon_i \quad (1)$$

$$\text{logit}(DASIA_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DF.born_i + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \varepsilon_i \quad (2)$$

$$\text{logit}(DNOAM_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DF.born_i + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \varepsilon_i \quad (3)$$

$$\text{logit}(DOCEA_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DF.born_i + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \varepsilon_i \quad (4)$$

$$\text{logit}(DSCAC_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DF.born_i + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \varepsilon_i \quad (5)$$

In these models, in order to show that the educational status, gender, and employment status differently correlated to the country of birth, the countries Africa, Asia, Europe, North America, Oceania and South and Central America (SCAC) were created as dummy variables of the country of birth. Each of the regional dummies were selected as a dependent variable and educational status, age, gender birthplace, and employment and unemployment statuses were used as independent variables. In order to avoid a dummy variable trap, Europe was selected as the control variable of regional differences.

### 3.5.2. Country of Birth

As mentioned above, the country of birth is defined as the country in which a person is born. In the database, the OECDb variable represents the country of birth. According to the variable, 1 = the country of birth is an OECD member country, 0 = it is not. In order to demonstrate the differences between the countries of birth, the following model was employed:

$$\text{logit}(DOECDb_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DF.born_i + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \varepsilon_i \quad (6)$$

In the model, the dummy OECDb variable is the dependent variable. DAge, DGender, DEdu, DEmployed, DUnemployed and DForeign-born are the independent variables.

### 3.5.3. Labour Force Status Differences

Labour market status is changeable for migrants. Regional differences and differences in educational status play a substantial role in establishing the employment status in the source and host countries of the migrants (Rabe and Taylor 2012). Moreover, as established in the literature review, labour market status is affected by gender differences too. According to OECD (2018), female migrants experience a force to be unemployed rather than men.

Labour force status is categorised into three dummy variables. However, to avoid the problem of dummy variable trap, an inactive dummy variable is used as the control variable. For the binary (logit) regression analyses, the following equations were created:

$$\text{logit}(DEmployed_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 Df.born_i + \beta_5 DOECDB_i + \beta_6 DAfri_i + \beta_7 DAsia_i + \beta_8 DSCAC_i + \beta_9 DNoam_i + \beta_{10} DOcea_i + \epsilon_i \quad (7)$$

$$\text{logit}(DUnemployed_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DF.born_i + \beta_5 DOECDB_i + \beta_6 DAfri_i + \beta_7 DAsia_i + \beta_8 DSCAC_i + \beta_9 DNoam_i + \beta_{10} DOcea_i + \epsilon_i \quad (8)$$

$$\text{logit}(DInactive_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DF.born_i + \beta_5 DOECDB_i + \beta_6 DAfri_i + \beta_7 DAsia_i + \beta_8 DSCAC_i + \beta_9 DNoam_i + \beta_{10} DOcea_i + \epsilon_i \quad (9)$$

The employed, unemployed and inactive dummy variables are the dependent values. Age, educational qualification, gender, F.born, OECDb, Africa, Asia, South and Central America, North America and Oceania were used as the independent variables.

### 3.5.4. Nativity Status

In order to differentiate the nativity statuses of the migrants, models were shaped around the foreign-born status based on the databases. As mentioned previously, the foreign-born population represents a group of people who had migrated from their country of birth to their current country of residence. The foreign-born population shown in the databases contain people who were born abroad as nationals of their present country of residence. The country differentiates between the size of the foreign-born population depending on the procedures that govern the attainment of citizenship in each country (OECD, 2019). In order to analyse the foreign-born dummy variable in the model, which indicates that 0 = native-born and 1 = foreign-born, the following equation was used:

$$\text{logit}(DF.born_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DOECDB_i + \beta_5 DEmployed_i + \beta_6 DUnemplDoyed_i + \beta_7 DAfri_i + \beta_8 DAsia_i + \beta_9 SCAC_i + \beta_{10} DNoam_i + \beta_{11} DOcea_i + \epsilon_i \quad (10)$$

In model 10, foreign-born migrants was used as a dependent variable and age, gender, educational qualification, employment and unemployment status, OECDb, Africa, Asia, South and Central America, North America, Oceania and country of birth were used as independent variables.

### 3.5.5. Gender Differences

Many scholars emphasise the various significant effects of gender differences on migration. Leppel (2009) and Gathmann and Keller (2018) estimated that gender differences correlated with the labour market status. In many countries, male migrants have more opportunities than female migrants. This issue was also examined by Chattopadhyay (1997) and Fortin (2005). They estimated that differences in the educational qualifications of females and migrants existed in the destination country. Model 10 explores the gender differences in migration. In order to analyse it (where 1 is male and 2 is female), a gender dummy was used as a dependent variable and other control variables were added as independent variables:

$$\text{logit}(D\text{Gender}_i) = \beta_0 + \beta_1 D\text{Edu}_i + \beta_2 D\text{Age}_i + \beta_3 D\text{F.born}_i + \beta_4 D\text{Employed}_i + \beta_5 D\text{Unemployed}_i + \beta_6 D\text{OECDb}_i + \beta_7 D\text{Afri}_i + \beta_8 D\text{Asia}_i + \beta_9 D\text{SCAC}_i + \beta_{10} D\text{Noam}_i + \beta_{11} D\text{Ocea}_i + \epsilon_i \quad (11)$$

where gender is the dependent variable and educational qualification, employment, unemployment, foreign-born, OECDb, Africa, Asia, South and Central America, North America, Oceania and country of birth are the independent variables.

### 3.5.6. Educational Attainment and Migration Differences

Many theoretical models, such as those of Becker (1962), Borjas (1994) Massey et al., (1993), highlight the role of educational qualification in migration (Barro & Lee, 1993). They demonstrated in their research that differences in educational qualification play an essential role in the migratory progress as skilled and well-educated people improve economic prosperity. Additionally, as indicated, educational qualification has a strong influence on the labour market as well as on the income distribution (Barro, 2001).

Chiswick and DebBurman (2004) established that educational qualification differs based on the country of origin. Additionally, it differs between foreign and native-born migrants since the second generation of migrants generally exhibit more skills than the first generation. Werfhorst and Heath (2019) also estimated in their research that the country of destination and country of origin are differently related to the educational qualification. Migrants have a different educational background, and thus the country of birth affects the education of

migrants (Schneeweis 2011). Even changes in the labour market status is associated with educational qualification (Özden & Schiff, 2006; Hutchings & Unesco, 2017). On the other hand, in 2006 and 2009, OECD reported that differences in gender status is another component that is differently related to the educational qualification of migrants.

In model 12, the regression analyses aim to explore how the country of birth and residence, gender differences of migration, labour market statuses and ethnical differences, i.e., foreign-born and native-born are correlated with the educational attainment of migrants. For the regression analysis, the equation is as follows:

$$mlogit(DEdu_i) = \beta_0 + \beta_1 Dgender_i + \beta_2 Age_i + \beta_3 Df.born_i + \beta_4 DOECDb_i + \beta_5 Demployed_i + \beta_6 Dunemployed_i + \beta_7 DAfri_i + \beta_8 DAsia_i + \beta_9 DSCAC_i + \beta_{10} DNoam_i + \beta_{11} DOcea_i + \epsilon_i \quad (12)$$

where educational qualification is the categorical dependent variable and age, gender, employment, unemployment, foreign-born, OECDb, Africa, Asia, South and Central America, North America, Oceania and country of birth are independent variables.

### 3.5.7. Age Differences

A multinomial logistic (Mlogit) regression model was applied for examining the age status of migrants. For age differences, the following model was used:

$$mlogit(DAge_i) = \beta_0 + \beta_1 Edu_i + \beta_2 DGender_i + \beta_3 Df.born_i + \beta_4 DEmployed_i + \beta_5 DUnemployed_i + \beta_6 DOECDb_i + \beta_7 DAfri_i + \beta_8 DAsia_i + \beta_9 DSCAC_i + \beta_{10} DNoam_i + \beta_{11} DOcea_i + \epsilon_i \quad (13)$$

where age is a dependent variable and educational qualification, gender, labour force status (employed and unemployed), foreign-born status, Africa, Asia, South and Central America, North America, Oceania and country of birth are independent variables. The results of the data analyses are presented in the next chapter.

## 4. RESEARCH FINDINGS AND EVALUATIONS

Based on the materials and methods, this chapter presents the result of the models. This study used descriptive statistics, cross-tabulations, independent sample rank U-tests and binary (Logit) and multinomial (Mlogit) regressions. The analysis was conducted using SPSS software.

#### 4.1. Result of Descriptive Statistics

The mean, standard deviation and observation of variables are calculated. Table 4-1 shows the results of the descriptive statistics.

**Table 4- 1: Result of the Descriptive Statistics**

	OBS.	MIN.	MAX	MEAN	STD.D
<b>GENDER</b>	18208	1	2	1.50	.500
<b>EDU</b>	15491	1	3	2.00	.811
<b>AGE</b>	17725	1	3	1.94	.776
<b>F.BORN</b>	17534	0	1	.87	.331
<b>OECDDB</b>	18208	0	1	.51	.500
<b>AFRI</b>	18208	0	1	.09	.290
<b>ASIA</b>	18208	0	1	.18	.383
<b>EURO</b>	18208	0	1	.30	.460
<b>NOAM</b>	18208	0	1	.10	.295
<b>OCEA</b>	18208	0	1	.10	.306
<b>SCAC</b>	18208	0	1	.17	.373
<b>EMPLOYED</b>	18208	0	1	.33	.470
<b>UNEMPLOYED</b>	18208	0	1	.24	.427
<b>INACTIVE</b>	18208	0	1	.35	.477

*Source: Author's own calculation (2019)*

#### 4.2. Result of Cross Tab Analysis

Table 4-2 displays the results of the cross tabs based on differences in gender, educational qualification, age and place of birth. The first column shows the association between gender differences and OECDdb, Africa, Asia, Europe, North America, Oceania, South and Central America, as well as employment status differences. However, though there is no relationship between gender differences, the second column represents the relationship among educational qualification, regional variables and employment status. As indicated in the result, only employment status is associated with educational attainment ( $p < 0.05$ ). The third column demonstrates the result of age comparison. As shown, age has a significant association with the variables Europe ( $p < 0.01$ ), Oceania ( $p < 0.01$ ), South and Central America ( $p < 0.1$ ), employed ( $p < 0.05$ ) and unemployed ( $p < 0.01$ ) status. In the case of foreign-born migrants, it

is associated with the variables OECDb, Africa, Asia, Europe, North America, Oceania, South and Central America and unemployed status at  $p < 0.01$ , which is a significant level. Additionally, it is also significantly associated with employment status at  $p < 0.05$ .

**Table 4- 2: Result of Crosstabs: Relationship between Gender, Educational Attainment, Age and Foreign-Born status with OECDb, Africa, Asia, Europe, NOAM, Oceania, Employed, Unemployed and Inactive Status**

	<b>Gender</b>	<b>Edu</b>	<b>Age</b>	<b>F.born</b>
<b>OECDb</b>	.473	4.220	1237	2194.922***
<b>Afri</b>	1.330	.851	.318	266.305***
<b>Asia</b>	.003	.217	.006	324.827***
<b>Euro</b>	.523	.693	36.130***	2121.505***
<b>NOAM</b>	.243	.731	.677	66.867***
<b>Ocea</b>	.008	1.572	27.216***	37.024***
<b>SCAC</b>	.325	.430	4.889*	121.668***
<b>Employed</b>	.998	5.823**	6.988***	1.858*
<b>Unemployed</b>	.657	1.511	269.534***	22.393***
<b>Inactive</b>	3.668**	1.786	152.151***	14.64***

*Source: Author's own calculation (2019)*

*Notes: Pearson Chi-Square is reported in the table. \*\*\* Significance at 1% level, \*\* significance at 5% level, \* significance at 10% level.*

According to Table 4-3, the gender differences of migration are not associated to age, educational qualification and being foreign-born. However, as indicated in the second column, age is significantly related to educational qualification ( $p < 0.01$ ) and being foreign-born ( $p < 0.01$ ). In the case of educational attainment, only age is significant ( $p < 0.01$ ). Moreover, being foreign-born is also significantly associated to age ( $p < 0.01$ ).

**Table 4- 3: Result of Crosstabs: Relationship between Gender, Educational Attainment, Age and Foreign-Born Status**

	<b>Gender</b>	<b>Age</b>	<b>Edu</b>	<b>F.born</b>
<b>Gender</b>	-	0.156	0.159	0.169
<b>Age</b>	0.156	-	41.458***	24.684***
<b>Edu</b>	0.923	41.158***	-	0.508
<b>F.born</b>	0.169	24.684***	0.508	-

*Source: Author's own calculation (2019)*

*Notes: Pearson Chi-Square is reported in the table. \*\*\* Significance at 1% level, \*\* significance at 5% level, \* significance at 10% level.*

Table 4-4 presents the results of the cross tab analyses based on the employed, unemployed and inactive status. First, as indicated in the table, the variables age ( $p < 0.01$ ), educational attainment ( $p < 0.05$ ), foreign-born ( $p < 0.05$ ) and Oceania ( $p < 0.05$ ) are significantly associated with employment status. In the case of the unemployed, age ( $p < 0.05$ ), foreign-born status ( $p < 0.01$ ), OECDb ( $p < 0.1$ ), Africa ( $p < 0.1$ ), Europe ( $p < 0.01$ ) and Oceania ( $p < 0.01$ ) are associated with the unemployment status of migrants. On the other hand, gender ( $p < 0.05$ ), age ( $p < 0.01$ ), foreign-born status ( $p < 0.01$ ) and the region of Europe ( $p < 0.01$ ), Oceania ( $p < 0.01$ ) and South and Central America ( $p < 0.1$ ), are significantly related to the inactive status of the migrants.

**Table 4- 4: Result of Crosstabs: Relationship between Employed, Unemployed and Inactive Status with Gender, Age, Educational Attainment, Foreign-Born, OECDb, Africa, Asia, Europe, NOAM, Oceania and SCAC**

	<b>Employed</b>	<b>Unemployed</b>	<b>Inactive</b>
<b>Gender</b>	0.998	0.657	3.668**
<b>Age</b>	6.988***	269.554**	152.151***
<b>Edu</b>	5.823**	1.511	1.786
<b>F.born</b>	1.858**	22.393***	14.634***
<b>OECDb</b>	0.358	2.232*	0.381
<b>Afri</b>	0.09	1.917*	0.269
<b>Asia</b>	0.258	1.242	0.004
<b>Euro</b>	2.079***	32.673***	18.000***
<b>NOAM</b>	0.242	1.662	0.672
<b>Ocean</b>	2.390**	17.717***	7.892***
<b>SCAC</b>	0.13	0.514	2.154*

*Source: Author's own calculation (2019)*

*Notes: Pearson Chi-Square is reported in the table. \*\*\* Significance at 1% level, \*\* significance at 5% level, \* significance at 10% level.*

### **4.3. Independent Sample U-Test**

The independent sample U-test provided the estimated rank mean differences in migration based on the educational qualification and age. Table 4-5 explores the results based on the differences in educational qualifications in migrants. The gender status of migrants does not correlate to any differences in educational qualifications. Also, foreign-born status, unemployment status, Africa, Asia, Europe, North America, Oceania and South and Central America do not lead to any differences in educational qualification. However, the p-value of employed status is significant at 5%. According to this outcome, employed migrants are more educated than others are. Moreover, in the case of OECDb variable, it is also significant at (0.05) p-level. This outcome indicates that there are differences between migrants who came from OECD and non-OECD countries, which measures the role of country of birth. Migrants from OECD countries tend to be more educated than others.

**Table 4- 5: Independent Sample (U) Test Based on Educational Attainment Differences of Migration**

<b>Variables</b>	<b>Type</b>	<b>Sample</b>	<b>Mean Rank</b>	<b>U Test (p-value)</b>
<b>Gender</b>	Female	7703	7759.4	0.694
	Male	7788	7732.74	
<b>F.born</b>	Foreign-born	13127	7475,45	0.905
	Native borned	1820	7463.56	
<b>Employed</b>	Employed	5211	7860.8	<b>0.016*</b>
	Otherwise	10280	7687.8	
<b>Unemployed</b>	Unemployed	3876	7709.91	0.543
	Otherwise	11615	7758.04	
<b>Inactive</b>	Inactive	5504	7692.21	0.239
	Otherwise	9987	7775.65	
<b>OECDb</b>	OECD member	7964	7811.05	<b>0.048*</b>
	Otherwise	7527	7677.17	
<b>Africa</b>	African	1440	7661.01	0.417
	Otherwise	14051	7754.71	
<b>Asia</b>	Asian	2730	7769.74	0.748
	Otherwise	12761	7740.92	
<b>Europe</b>	European	4692	7746.54	0.993
	Otherwise	10799	7745.77	
<b>NOAM</b>	North American	1540	7832.94	0.395
	Otherwise	13951	7736.4	
<b>Oceania</b>	Oceanian	1633	7771.81	0.786
	Otherwise	13858	7742.96	
<b>SCAC</b>	South American	2613	7776.07	0.685
	Otherwise	12878	7739.9	

Source: Author`s Calculation (2019)

Notes: \*\*\* significant at 1% level, \*\* significant at 5% level, \* significant at 10% level. \*\*\*. Foreign-born, 0=Native born, 1=Foreign Born. Gender, 1=Male, 2=Female. For the labour force status Employed status, 1= If a migrant is employed, 0= if not. Unemployed status, 1=if migrant is unemployed, 0= if not. Africa, 1= If a migrant is from Africa, 0= Otherwise, Asia, 1= if a migrant is from Asia, 0= Otherwise, Europe, 1=if migrant is from Europe, 0= Otherwise, NOAM (North America) 1= if a migrant is from NOAM, 0= If other. Oceania, 1= if a migrant is from Oceania, 0= if not. SCAC (South and Central America) 1=if migrant is from SCAC, 0= if not.

**Table 4- 6: Independent Sample (U) Test Based on Age Differences of Migration**

<b>Variables</b>	<b>Type</b>	<b>Sample</b>	<b>Mean Rank</b>	<b>U-Test (p-value)</b>
<b>Gender</b>	Female	8800	8857.07	0.871
	Male	8925	8868.84	
<b>F.born</b>	Foreign borned	14951	8521.73	0.196
	Native borned	2126	8660.48	
<b>Employed</b>	Employed	5819	8999.05	<b>0.008***</b>
	Otherwise	11906	8796.51	
<b>Unemployed</b>	Unemployed	4243	8142.47	<b>0.001***</b>
	Otherwise	13482	9089.76	
<b>Inactive</b>	Inactive	6201	9245.47	<b>0.001***</b>
	Otherwise	11524	8657.19	
<b>OECDb</b>	OECD member	9142	8883.5	0.558
	Otherwise	8583	8841.16	
<b>Africa</b>	African	1633	8805.3	0.611
	Otherwise	16092	8868.85	
<b>Asia</b>	Asian	3165	8868.22	0.946
	Otherwise	14560	8861.86	
<b>Europe</b>	European	5380	8927.97	0.235
	Otherwise	12345	8834.69	
<b>NOAM</b>	North American	1720	8791.14	0.514
	Otherwise	16005	8870.72	
<b>Oceania</b>	Oceanian	1868	8754.94	0.304
	Otherwise	15857	8875.73	
<b>SCAC</b>	South American	2954	8858,25	0.953
	Otherwise	14771	8863,95	

Source: Author`s Calculation (2019)

Notes: \*\*\* significant at 1% level, \*\* significant at 5% level, \* significant at 10% level. \*\*\* Foreign-born, 0=Native born, 1=Foreign Born. Gender, 1=Male, 2=Female. For the labour force status Employed status, 1= If the migrant is employed, 0= if not. Unemployed status, 1=if migrant is unemployed, 0= if not. Africa, 1= If the migrant is from Africa, 0= Otherwise, Asia, 1= if the migrant is from Asia, 0= Otherwise, Europe, 1=if migrant is from Europe, 0= Otherwise, NOAM (North America) 1= if the migrant is from NOAM, 0= If other. Oceania, 1= if the migrant is from Oceania, 0= if not. SCAC (South and Central America) 1=if migrant is from SCAC, 0= if not.

In order to indicate age differences, Table 4-6 represents the results. From a gender perspective, the results demonstrate that there are no significant age differences between male and female migrants, and from a regional perspective, OECDb, Africa, Asia, Europe, NOAM, Oceania, SCAC do not have significant age differences either. However, from the point of labour force status and employment, inactive migrants are older than others at (0.01) p-level. In comparison, unemployed migrants are younger than others at (0.01) p-level.

#### 4.4. Result of the Regression Analyses

This section presents the results of the logistic regression analyses. Binary (Logit) regression and multinomial regression methods were also employed. Tables 4-7, 4-8, 4-9, 4-10, 4-11, 4-12, 4-13 and 4-14 display the results observed with logit regression models and each table is explained separately below. For model 4-15 and 4-16, Mlogit regression method was used and  $R^2$  of these models is also mentioned.

The specification of the equations was selected from a general way to a specific search with allowance for a variety of effects of regional migration (Davidson et al. 1978). In order to explain how the logit regression model examines the differences in the first region of birth in Africa and Asia, these models were shaped by Equation (14), (15) and Equation (16) with two dummy dependent variables and six independent variables. Explanatory (independent) variables were chosen DEdu, DAge, DGender, DForeign-Born, Demployed and Dunemployed where the response (dependent) variables were DAfrica and DAsia.

$$\text{logit} (DAFRI_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 Df.born + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \varepsilon_i \quad (14)$$

Due to the insignificant constant value of the equation 1 reshaped as follows:

$$\text{logit} (DAFRI_i) = \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 Df.born_i + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \varepsilon_i \quad (15)$$

The second equation of Asia was formulated as follows:

$$\text{logit}(DASIA_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 Df.born_i + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \varepsilon_i \quad (16)$$

Both models contain two dummies (DAfrica, DAsia) as dependent variables and six dummy independent variables, i.e., DEdu, DAge, DGender, DF.Born, DEmployed and DUnemployed. The results of the regions are presented in Table 4-7. The outcomes of the testing demonstrate

that, in the case of Africa, there is no significant relationship among educational attainment, age, gender, foreign-born status and employment and unemployment status. However, the results from Asia illustrate that the constant of the model is significant ( $p < 0.01$ ) and Asia has a significant and positive relationship with the foreign-born variable ( $p < 0.01$ ). This outcome shows that the migrants from Asia tend to be foreign-born.

**Table 4- 7: Result of the Logit Models by Region of Birth Based on Africa and Asia**

Dependent	Africa			Asia		
	Beta	Wald	Exp(B)	Beta	Wald	Exp(B)
Constant	-1.256	.000	.999	-3.129	306.881***	.044
Edu	-.015	.165	.985	.002	.008	1002
Age	-.007	.030	.862	.008	.076	1008
Gender	-.040	.442	.506	-.506	.011	.995
F.born	.002	.000	1.002	1.911	180.355***	6.762
Employed	-.004	.003	.996	.006	.014	1006
Unemployed	.040	280	.597	-.055	.957	.947
Observation	14536					
Cox and Snell R <sup>2</sup>	.147			.033		
Nagaike R <sup>2</sup>	.314			.053		
Omnibus-test	2308.832***			482.123***		
HL-test	.119			4.987		

Source: Author's own calculation (2019)

Note: The table presents the result of the model by using Binary (Logit) Regression. The date of the data is 2015/16. \*\*\*significance at 1% level, \*\* significance at 5% level, \* significance 10% level.

Other specifications were made for North America and Oceania. The following equations were estimated for both regions of birth:

$$\text{logit}(DNOAM_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 Df.born_i + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \varepsilon_i \quad (17)$$

$$\text{logit}(DOCEA_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 Df.born_i + \beta_5 DEmployed_i + \beta_6 Dunemployed_i + \varepsilon_i \quad (18)$$

Each model has one dummy dependent variable (NOAM and Oceania) and six independent variables, DEdu, DAge, DGender, DF.Born, Demployed and Dunemployed. The results of the models are shown in Table 4-8. The constants of the two models are significant ( $p < 0.01$ ).

Moreover, North America and Oceania have a positive and significant relationship with the foreign-born variable ( $p < 0.01$ ). Thus, the migrants who come from North America and Oceania tend to be foreign-born ones. Moreover, Oceania also has a significant and positive relationship with unemployment status. This outcome demonstrates that the migrants from Oceania are more likely to be unemployed ( $p < 0.01$ ).

**Table 4- 8: Result of the Logit Models by Region of Birth Based on NOAM and Oceania**

Dependent	NOAM			Oceania		
	Beta	Wald	Exp(B)	Beta	Wald	Exp(B)
Constant	-6.447	764.742***	.002	-3.301	383.470***	.037
Edu	.006	.024	1006	-.001	.001	.999
Age	-.032	.719	.369	-.045	1.964	.956
Gender	-.055	.919	.946	-.015	.082	.985
F.born	1.454	201.283***	4.289	.976	92.349***	2.655
Employed	.002	.001	1.002	-.026	.187	.974
Unemployed	.010	.020	1.011	-.241	11.586***	.786
Observation	14536					
Cox and Snell R <sup>2</sup>	.125			.020		
Nagaike R <sup>2</sup>	.257			.039		
Omnibus-test	1942.710***			289.078***		
HL-test	1.565			12.694		

Source: Author`s Calculation (2019)

Note: The table presents the result of the model by using Binary (Logit) Regression. The date of the data is 2015/16. \*\*\*significance at 1% level, \*\* significance at 5% level, \* significance 10% levels.

The last specification of region of birth is South and Central America (SCAC), which is represented in Table 4-9. This model is based on Equation 19, where

$$\text{logit}(DSCAC_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 Df.born_i + \beta_5 DEmployed_i + \beta_6 Dunemployed_i + \varepsilon_i \quad (19)$$

The model contains one dummy dependent variable and six independent variables. The dummy dependent variable is South and Central America. The independent variables are DEdu, DAge, DGender, DF.Born, Demployed and Dunemployed. According to the result, the constant of the model is significant and positive ( $p < 0.01$ ). SCAC has a positive and significant relationship only with the foreign-born variable ( $p < 0.01$ ). In other words, the migrants who come from

SCAC are likely to be foreign-born ones. However, it has no relationship with the other independent variables.

**Table 4- 9: Result of the Logit Models by Region of Birth based on SCAC**

Dependent	SCAC		
Independent	Beta	Wald	Exp(B)
Constant	-2.628	351.315***	0.072
Edu	0.01	0.137	1.01
Age	0.004	0.018	1.004
Gender	0.025	0.33	1.026
F.born	1.107	135.204***	3.025
Employed	0.005	0.01	1.005
Unemployed	-0.009	0.028	1.991
Observation	14536		
Cox and Snell R <sup>2</sup>	0.12		
Nagaike R <sup>2</sup>	0.2		
Omnibus-test	178.752***		
HL-test	0.873		

Source: Author`s Calculation (2019)

Note: The table presents the result of the model by using Binary (Logit) Regression. The date of the data is 2015/16. \*\*\*significance at 1% level, \*\* significance at 5% level, \* significance 10% levels.

In the current dissertation, the country of birth was also considered as another essential component that is affected by socio-demographic characteristics and differences of migration. The specification of the equation was selected for OECDb.

$$\text{logit}(\text{DOECD}b_i) = \beta_0 + \beta_1 \text{DEdu}_j + \beta_2 \text{DAge}_j + \beta_3 \text{DGender}_j + \beta_4 \text{DF.born}_j + \beta_5 \text{DEmployed}_i + \beta_6 \text{DUnemployed}_i + \epsilon_i \quad (20)$$

Due to insignificant constant result, equation (20) was reshaped as follows:

$$\text{logit}(\text{DOECD}b_i) = \beta_1 \text{DEdu}_j + \beta_2 \text{DAge}_j + \beta_3 \text{DGender}_j + \beta_4 \text{DF.born}_j + \beta_5 \text{DEmployed}_i + \beta_6 \text{DUnemployed}_i + \epsilon_i \quad (21)$$

The model contains one dummy dependent variable and six independent variables. The dummy dependent variable is OECDb. The dummy independent variables are DEdu, DAge, DGender, DForeign-born, DEmployed and DUnemployed. Based on the empirical testing result, which is indicated in Table 4-10, OECDb variable has a significant and positive relationship with educational qualification ( $p < 0.05$ ) and foreign-born status ( $p < 0.01$ ). The outcome shows that

migrants who come from one of the OECD member countries are more educated and tend to be foreign-born. Also, OECDb variable has a significant and negative correlation with unemployment status ( $p < 0.05$ ). Based on this outcome, migrants from non-OECD countries tend to be unemployed.

**Table 4- 10: Result of the Logit Model by Country of Birth**

<b>Dependent</b>	<b>DOECDB</b>		
<b>Independent</b>	<b>Beta</b>	<b>Wald</b>	<b>EXP(B)</b>
<b>Constant</b>	21.182	.000	158.205
<b>Edu</b>	.036	2.747*	1037
<b>Age</b>	-.008	.130	.992
<b>Gender</b>	.009	.062	1.009
<b>F.born</b>	-21.325	.000***	.000
<b>Employed</b>	-.018	.191	.982
<b>Unemployed</b>	-.143	9.891**	.867
<b>Observation</b>	18208		
<b>Cox and Snell R2</b>	.154		
<b>Nagaike R2</b>	.205		
<b>Omnibus-test</b>	2423.122***		
<b>HL-test</b>	1052		

Source: Author`s calculation (2019)

Note: The table presents the result of the model by using Binary (Logit) Regression. The date of the data is 2015/16. \*\*\*significance at 1% level, \*\* significance at 5% level, significance 10% level.

One of the main approaches of the dissertation is to observe the analyses clearly and demonstrates gaps in the labour force status, which have been affected by crucial socio-demographic characteristic differences and regional differences of migration. The empirical testing models were formalised in equation (22) for employment status and equation (23) for unemployment status.

$$\text{logit}(DEmployed_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DF.born_i + \beta_5 DOECDB_i + \beta_6 DAfri_i + \beta_7 DAsia_i + \beta_8 DSCAC_i + \beta_9 DNoam_i + \beta_{10} DOcea_i + \epsilon_i \quad (22)$$

$$\text{logit}(DUnemployed_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 Dgender_i + \beta_4 Df.born_i + \beta_5 DOECDB_i + \beta_6 DAfri_i + \beta_7 DAsia_i + \beta_8 DSCAC_i + \beta_9 DNoam_i + \beta_{10} DOcea_i + \epsilon_i \quad (23)$$

The constant of Equation 8 is not significant; hence, the following changes were made:

$$\text{logit}(DUnemployed_i) = \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DF.born_i + \beta_5 DOECDb_i + \beta_6 DAfri_i + \beta_7 DAsia_i + \beta_8 DSCAC_i + \beta_9 DNoam_i + \beta_{10} DOcea_i + \epsilon_i \quad (24).$$

Both models included two dummy dependent variables (DUnemployed and DEmployed) and ten independent variables (*DEdu*, *DAge*, *DGender*, *DForeign-born*, *DOECDb*, *DAfrica*, *DAsia*, *DNOAM*, *DOceania* and *DSCAC*).

Table 4-11 explores the outcome of the labour force status differences of migration based on employment and unemployment status. The outcome indicates that the constant of the model is negative and significant ( $p < 0.01$ ). Moreover, employment status has a positive and significant relationship with educational attainment ( $p < 0.01$ ) and age ( $p < 0.01$ ). According to the outcome of the result, unemployment status has a negative and significant relationship with age ( $p < 0.01$ ), foreign-born status ( $p < 0.01$ ), OECDb ( $p < 0.01$ ), Asia ( $p < 0.05$ ) Oceania ( $p < 0.01$ ) and SCAC ( $p < 0.1$ ). These results show that unemployed migrants tend to be younger than others are, and they tend to be native-born migrants. In the case of regional perspective, migrants who are from non-OECD member countries tend to be unemployed.

Moreover, migrants who are from Asia, Oceania and South/Central America tend to be unemployed. Since labour force status is related to migration differences, employed migrants are older and more educated. Finally, unemployed migrants are younger than employed ones. These results show that unemployed migrants tend to be younger than others, and they tend to be native-born. In the case of a regional perspective, migrants from non-OECD member countries tend to be unemployed. Moreover, migrants from Asia, Oceania and South/Central America tend to be unemployed. Lastly, unemployed migrants are younger than employed ones.

**Table 4- 11: Result of the Logit Models by Labor Status Differences in Migration**

Dependent	Employed			Unemployed		
Independent	Beta	Wald	Exp(B)	Beta	Wald	Exp(B)
<b>Constant</b>	-.1004	92.759****	.366	-.172	2.352	.842
<b>Edu</b>	.046	4.404***	1.047	-.001	.001	.999
<b>Age</b>	.071	9.882***	1.074	-.271	116.724***	.763
<b>Gender</b>	-.024	.474	.976	-.034	.782	.967
<b>F.born</b>	.095	2.370	1.100	-.236	13.184***	.789
<b>OECDb</b>	.028	.433	1.028	-.112	5.710***	.894
<b>Afri</b>	.016	.055	1.016	-.056	.568	.945
<b>Asia</b>	.055	1.048	1.056	-.143	5.948**	.867
<b>NOAM</b>	.035	.283	1.036	-.098	1.774	.907
<b>Oceania</b>	.085	1.885	1.088	-.299	17.598***	.742
<b>SCAC</b>	.042	.626	1.043	-.122	3.689*	.894
<b>Observation</b>	14536					
<b>Cox and Snell R<sup>2</sup></b>	.002			.011		
<b>Nagaike R<sup>2</sup></b>	.002			.017		
<b>Omnibus-test</b>	21.985**			105.277***		
<b>HL-test</b>	.369			99.423***		

Source: Author`s calculation (2019)

Note: The table presents the result of the model by using Binary (Logit) Regression. The date of the data is 2015/16. \*\*\*significance at 1% level, \*\* significance at 5% level, \* significance 10% level.

Last specification of labour force status was made for inactive status differences of migration. The model was established based on equation (25),where :

$$\text{logit}(D\text{Inactive}_i) = \beta_0 + \beta_1 D\text{Edu}_i + \beta_2 D\text{Age}_i + \beta_3 D\text{Gender}_i + \beta_4 D\text{F.born}_i + \beta_5 D\text{OECDb}_i + \beta_6 D\text{Afri}_i + \beta_7 D\text{Asia}_i + \beta_8 D\text{SCAC}_i + \beta_9 D\text{Noam}_i + \beta_{10} D\text{Ocea}_i + \epsilon_i \quad (25)$$

The model contains one dummy dependent variable and eleven independent variables. The dummy dependent variable is the inactive status. The independent variables are *DEdu*, *DAge*, *DGender*, *DForeign-born*, *DOECDb*, *DAfrica*, *DAsia*, *DNOAM*, *DOceania*, and *DSCAC*.

The model outcomes are shown in Table 4-12. Based on the result, age and inactive status have a significant and positive relationship at (0.01) p-level. This result demonstrates that inactive migrants are older than others. On the other hand, female migrants tend to be more inactive than male ones. Another outcome of the result shows that foreign-born status and inactive status

are significantly and positively related to each other at (0.01) p-level. Also, as a region, Oceania (0.01) and South and Central America (0.05) have a positive and significant relationship with nativity status. It can be indicated from these outcomes that migrants with an inactive labour status are mostly foreign-born. Additionally, migrants from Oceania and South/Central America tend to be more inactive than others.

**Table 4- 12: Result of the Logit Models by Labor Status Differences in Migration**

Dependent	Dinactive Status		
	Beta	Wald	Exp(B)
Constant	-1.234	141.302***	291
Edu	-0.031	2.098	0.969
Age	0.167	55.883***	1.182
Gender	0.057	2.643*	1.058
F.born	0.2	10.567***	1.222
OECDb	0.069	2.706	1.071
Afri	0.071	1.048	1.073
Asia	0.085	2.579	1.089
Oceania	0.194	9.973***	1.214
SCAC	0.117	4.845*	1.124
NOAM	0.059	0.805	1.061
Observation	18208		
Cox and Snell R <sup>2</sup>	0.006		
Nagaike R <sup>2</sup>	0.008		
Omnibus-Test	89.412***		
HL-Test	32.884***		

Source: Author`s calculation (2019)

Note: The table presents the result of the model by using Binary (Logit) Regression. The date of the data is 2015/16. \*\*\*significance at 1% level, \*\* significance at 5% level, \* significance 10% level.

Nativity status is another essential component that is examined in this dissertation on migration differences. The equation of the model that is evaluated here is as follows:

$$\begin{aligned} \text{logit}(DF.born_i) = & \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DOECDb_i + \beta_5 DEmployed_i \\ & + \beta_6 Dunemployed_i + \beta_7 DAfri_i + \beta_8 DAsia_i + \beta_9 DSCAC_i + \beta_{10} DNoam_i + \beta_{11} DOcea_i + \epsilon_i \end{aligned} \quad (26).$$

Due to insignificant value of the constant, the equation was reshaped as follows:

$$\text{logit}(DF.born_i) = \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 DGender_i + \beta_4 DOECDb_i + \beta_5 DEmployed_i + \beta_6 DUnemployed_i + \beta_7 DAfri_i + \beta_8 DAsia_i + \beta_9 DSCAC_i + \beta_{10} DNoam_i + \beta_{11} DOcea_i + \epsilon_i \quad (27).$$

The model contains one dummy dependent variable (foreign-born) and eleven independent variables. The independent variables are educational qualification, age, DGender, DOECDb, DAfrica, Dasia, DNOAM, DOceania and DSCAC. Deployed and Dunemployed variables are also dummy variables.

Based on the result, which is shown in Table 4-13, foreign-born status has a significant but negative relationship with unemployment status ( $p < 0.05$ ). This outcome indicates that unemployed migrants tend to be native-born. Moreover, the foreign-born status of migrants has a positive and significant relationship with the regions of Asia ( $p < 0.01$ ), NOAM ( $p < 0.01$ ), Oceania ( $p < 0.01$ ) and SCAC ( $P < 0.01$ ). According to this correlation, the migrants who come from Asia, Noam, Oceania and SCAC are mostly foreign-born ones.

**Table 4- 13: Result of the Examined Nativity Status Differences**

<b>Dependent</b>	<b>Foreign-Born</b>		
<b>Independent Variables</b>	<b>Beta</b>	<b>Wald</b>	<b>Exp(B)</b>
<b>Constant</b>	20.288	0.002	646.6
<b>Edu-Lfs</b>	0.011	0.086	1.011
<b>Age</b>	-0.038	0.992	0.993
<b>Gender</b>	0.002	0.002	1.002
<b>OECDb</b>	-20.003	0.002	0
<b>Employed</b>	0.023	0.108	1.023
<b>Unemployed</b>	-0.175	5.512**	0.839
<b>Africa</b>	1.005	0	2.731
<b>Asia</b>	2.774	369.410***	16.023
<b>SCAC</b>	1.857	334.190***	6.402
<b>NOAM</b>	2.295	477.537***	9.921
<b>Oceania</b>	1.906	336.287***	6.729
<b>Observation</b>	14536		
<b>Cox and Snell R<sup>2</sup></b>	0.223		
<b>Nagaike R<sup>2</sup></b>	0.447		
<b>Omnibus-test</b>	3864.728***		
<b>HL-test</b>	2.429		

Source: Author`s calculation (2019)

Note: The table presents the result of the model by using Binary (Logit) Regression. The date of the data is 2015/16. \*\*\*significance at 1% level, \*\* significance at 5% level, \* significance 10% level.

The gender differences of migration is another essential factor that plays an important role in determining one of the objectives of the current dissertation, and the results of the empirical analyses are shown in Table 4-14. The equation of gender differences is established as follows:

$$\text{logit}(D\text{Gender}_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 Df.born_i + \beta_4 DEmployed_i + \beta_5 Dunemployed_i + \beta_6 DOECDB_i + \beta_7 DAFri_i + \beta_8 DAsia_i + \beta_9 DSCAC_i + \beta_{10} DNOam_i + \beta_{11} DOcea_i + \epsilon_j \quad (28)$$

Due to the insignificant constant value, the equation was reshaped as follows:

$$\text{logit}(D\text{Gender}_i) = \beta_0 + \beta_1 DEdu_i + \beta_2 DAge_i + \beta_3 Df.born_i + \beta_4 DEmployed_i + \beta_5 Dunemployed_i + \beta_6 DOECDB_i + \beta_7 DAFri_i + \beta_8 DAsia_i + \beta_9 DSCAC_i + \beta_{10} DNOam_i + \beta_{11} DOcea_i + \epsilon_j \quad (29)$$

The model contains one dummy dependent variable (DGender) and eleven independent variables. The independent dummy variables are DEdu, DAge, DForeign-born, DEmployed, Dunemployed, DOECDB, DAFrica, DAsia, DSCAC, DNOAM and DOceania. Based on the outcomes of the model, no significant association was found between gender and the other independent variables.

**Table 4- 14: Result of the Examined Gender Differences of Migration**

Dependent	Gender		
	Beta	Wald	Exp (B)
Constant	.029	.109	1.029
Edu-Lfs	.005	.052	1.005
Age	-.006	.091	.994
F.born	.004	.005	1.004
Employed	-.044	1.330	.249
Unemployed	-.054	1.638	.947
OECDb	.015	.142	1.015
Africa	-.051	.606	.950
Asia	-.025	.251	.975
SCAC	.000	.000	1.000
NOAM	-.068	1.176	.934
Oceania	-.036	.361	.965
Observation	14536		
Cox and Snell R <sup>2</sup>	.000		
Nagaike R <sup>2</sup>	.000		
Omnibus-test	4.289		
HL-test	.615		

Source: Author`s calculation (2019)

Note: The table presents the result of the model by using Binary (Logit) Regression. The date of the data is 2015/16. \*\*\*significance at 1%, \*\* significance at 5%, \* significance 10% level.

Another approach focuses on analyses based on the educational qualification and age differences of migrants. In order to empirically test these variables, two-factor Mlogit regression model was applied. The first estimation regarding educational attainment was formulated in the following equation, and the result is shown in Table 4-15.

$$mlogit(Edu_i) = \beta_0 + \beta_1 DGender_i + \beta_2 Age_i + \beta_3 DFi.born + \beta_4 DEmployed_i + \beta_5 DUnemployed_i + \beta_6 DOECDB_i + \beta_7 DAFri_i + \beta_8 DAsia_i + \beta_9 DSCAC_i + \beta_{10} DNoam_i + \beta_{11} DOcea_i + \epsilon_j \quad (30)$$

The dependent variables are attainment categories (low and medium). The independent variables are Age (16–24 and 25–64), DGender, DForeign-born, DOECDB, DAfrica, DAsia, DNOAM, DOceania and DSCAC. Employed and Dunemployed are dummy variables. Control groups: if Age is 65+ and if Educational qualification is high.

**Table 4- 15: Result of the Educational Differences of Migration**

Dependent Independent Variables	Edu (Low)			Edu (Medium)		
	B	Wald	Exp(B)	B	Wald	Exp(B)
Constant	0.024	0.072		-0.077	0.779	
Gender	-0.009	0.048	0.991	0.001	0.001	1.001
Age (15-24)	0.270***	25.783	1.309	0.222***	17.641	1.248
Age (25-64)	0.019	0.131	1.019	0.033	0.413	1.033
F.born	-0.030	0.178	0.971	0.024	0.115	1.024
Employed	-0.105*	4.891	0.900	-0.038	0.646	0.963
Unemployed	-0.034	0.426	0.966	0.032	0.376	1.032
OECDb	-0.064	1.679	0.938	-0.006	0.016	0.994
Africa	0.020	0.062	1.020	0.016	0.037	1.016
Asia	-0.010	0.025	0.990	0.030	0.238	1.031
SCAC	-0.025	0.155	0.976	0.034	0.297	1.034
NOAM	-0.018	0.053	0.982	0.001	0.000	1.001
Oceania	0.002	0.001	1.002	0.083	1.317	1.086
Observation	18208					
Cox and Snell R <sup>2</sup>	0.01					
Nagaike R <sup>2</sup>	0.01					
Chi <sup>2</sup> -test	52.34***					

Source: Author`s calculation (2019)

Note: The table presents the result of the model by Mlogit Regression. The date of the data is 2015/16. \*\*\*significance at 1% level, \*\* significance at 5% level,\* significance 10% level.

The constant of the model is significant. However, the adjusted R<sup>2</sup> values are low due to the enormous numbers of observation, but significant chi-test statistics suggest that multinomial

logistic regression specification should be chosen for all the models. The results of the models (low and medium cases) demonstrate that educational qualification has a positive and significant relationship with age, in the case of age group 15–24 ( $P < 0.01$ ). This outcome shows that the migrants who are less educated tend to be younger than others. In this case, H4 and H4a are supported by the result. However, it has no significant relationship with the other independent variables. The only exception is *DEmployed*, which is negatively correlated with educational qualification in the age group (15–24). Where migrants with a lower level of migration tend to be unemployed. Thus, the H2b hypothesis can be supported.

Finally, another factor considered in this dissertation was the estimate age difference of migration. Based on the purpose, the following equation (31) was established, and the result is demonstrated in Table 4-16.

$$mlogit(DAge_i) = \beta_0 + \beta_1 Edu_i + \beta_2 Dgender_i + \beta_3 Df.born_i + \beta_4 Demployed_i + \beta_5 Dunemployed_i + \beta_6 DOECDB_i + \beta_7 DAFri_i + \beta_8 DAsia_i + \beta_9 DSCAC_i + \beta_{10} DNoam_i + \beta_{11} DOcea_i + \epsilon_j \quad (31).$$

The constant of the model is also significant ( $p < 0.01$ ). Moreover, the adjusted  $R^2$  is higher (.024) than before, and the Chi-test statistic is significant. The model contains two and eleven independent variables. The dependent variables are Age categories (15–24 and 25–64). The independent variables are educational attainment (low and medium), *DGender*, *DForeign-born*, *DOECDB*, *DAfrica*, *DAsia*, *DNOAM*, *DOceania*, and *DSCAC*. *Deployed* and *Dunemployed* variables are dummy variables. Control groups: if Age is 65+ and Edu is High.

Moreover, age 15–24 has a positive and significant relationship with (low and medium) educational qualification ( $p < 0.01$ ). Thus, age 25–64 has also a positive and significant relationship with employed status. H5b hypothesis can be supported. However, there is a positive and significant relationship with unemployment status at age 15–24 and 25–64. It is undeniable from this outcome that younger migrants tend to be unemployed.

Nevertheless, foreign-born migrants are correlated to elder migrants (age 25–64). In the case of regional dummy variables, i.e., Asia, South America and Oceania, these migrants tend to be older (age 25–64) than others.

**Table 4- 16: Result of the Age Differences of Migration**

Dependent	Age (15-24)			Age (25-64)		
	B	Wald	Exp(B)	B	Wald	Exp(B)
<b>Constant</b>	-0.274***	8.97		-0.322***	12.88	
<b>Gender</b>	0.014	0.102	1.014	0.02	0.24	1.021
<b>Edu (Low)</b>	0.27***	25.787	1.31	0.019	0.132	1.019
<b>Edu (Medium)</b>	0.222***	17.687	1.249	0.033	0.418	1.033
<b>F.born</b>	0.103	2	1.109	0.275***	14.422	1.316
<b>Employed</b>	0.073	2.224	1.075	0.174***	13.494	1.19
<b>Unemployed</b>	0.672***	134.815	1.958	0.857***	233.159	2.356
<b>OECDb</b>	-0.001	0	0.999	0.061	1.441	1.063
<b>Africa</b>	0.05	0.351	1.052	0.128	2.382	1.136
<b>Asia</b>	0.033	0.264	1.034	0.116*	3.392	1.123
<b>SCAC</b>	0.046	0.498	1.048	0.195***	9.389	1.215
<b>NOAM</b>	0.103	1.6	1.108	0.118	2.208	1.125
<b>Oceania</b>	0.158*	3.973	1.171	0.428***	32.387	1.535
<b>Observation</b>	18208					
<b>Cox and Snell R<sup>2</sup></b>	0.25					
<b>Nagaike R<sup>2</sup></b>	0.26					
<b>Chi<sup>2</sup>-test</b>	364.01***					

Source: Author`s calculation (2019)

Note: The table presents the result of the model by Mlogit Regression. The date of the data is 2015/16.

\*\*\*significance at 1% level, \*\* significance at 5% level,\* significance 10% level.

#### 4.5. Discussion and Comparison of the Results

The empirical results of international migration, with regressions estimated separately, presented explanations and identified the socio-demographic characteristic differences of migration and their interaction with each other.

The first empirical testing result of the dissertation provided a detailed picture of the socio-demographic characteristics of migrants and demonstrated the differences based on their region of birth. The neoclassic economic theory further supported this relationship and the human capital theory of migration backed up the evidence that regional differences play an essential role in shaping the migrants' characteristics.

However, the neoclassic economic theory is considered to be one dimensional due to the complexity of its migration factors, which is detailed in the literature review. In this study, additional variables were taken into the consideration that may interact with the migrants' differences where particular regions of birth were subjected to analysis too. For instance, nativity status is one of them, since previous studies have not provided direct evidence for it. However, foreign attitudes cannot be understood without the knowledge of the socio-demographic context. As is indicated in the empirical testing, nativity status also shows differences in the region of birth, country of birth and labour force status. For example, migrants from North America, Oceania, South and Central America tend to be foreign-born and those from OECD member countries tend to be unemployed.

First, as it has been reported in human capital theory by Sjaastad (1962), different skills, educational levels, genders and ages indicate some regional differences. This relationship was further supported in the dissertation, which showed that a migrant from an OECD member country tended to be more educated than the migrants who came from non-OECD countries. On the other hand, it was found that migrants from Asia, SCAC and Oceania tended to be younger than others.

Another empirical testing of the dissertation served results of differences in labour force status in migration. It found that employed migrants tended to be more educated. This result is supported by human capital theory. According to the theory, people with a higher level of education may have better employment opportunities in the destination country (Danzer & Dietz, 2008). A review of the literature undertaken also found that many studies consistently reported a close and robust association between educational attainment and labour force status as job opportunities increased based on educational level (Funkhouser & Trejo, 1995; Chiswick, Cohen, & Zach, 1997; De Haas, 2005b; Ferrer and Riddell, 2008). Hainmueller and Hiscox (2010) distinguished between the attitudes to high-skilled immigrants and attitudes to low-skilled immigrants because this is a critical feature of the theoretical explanation of how economic concerns affect attitude formation and policy preference in migration. These comparisons, which vary with the socio-demographic characteristics of respondent variables, allow to directly test the predictions of the theoretical models on how labour status is affected by migration differences.

Moreover, Becker (1965) indicated that older migrants are more employed than younger ones. The evidence from the result supported this finding since it was found that unemployed migrants tended to be younger. Along with this, it was mentioned by Greenwood (1985) that

unemployment rates are relatively higher for individuals in their early twenties who fall within this age. It has also been found that the empirically tested migrants between 15–24 and 25–64 tended to be more unemployed than others.

**Table 4- 17: Comparison with Previous Research Methodologies and Results**

<b>Author/Date</b>	<b>Data</b>	<b>Methodology</b>	<b>Findings</b>	<b>Relates and Differences in Current Dissertation</b>
Barry Chiswick Yinon Cohen Tzippi Zahn (1997)	The empirical analysis is based on a merging of data on the foreign-born from four separate Current Population Surveys (CPS's).	OLS Regression Model	The migrants had a lower employment ratio across than native-born.	In the current dissertation, it has been found that foreign-born migrant tends to more employed than natives by testing Logit Regression.
Alexander M. Danzer, Barbara Dietz (2008)	Data from Armenia, Belarus, Georgia, Moldova and Ukraine which were collected in a multi-stage sampling framework by the INTAS project.	Multivariate regression	Education of women, on the contrary, does not play a significant role.	In the current dissertation, it has found that too, there are no significant differences between male migrants and female migrants by testing Logit Regression.
Joseph Schaafsma Arthur Sweetman (2001)	1986, 1991, and 1996 Canadian census microdata.	Panel Regression and OLS Regression	Educational attainment is decreasing by age.	It is demonstrated that younger migrants are more educated then others by testing Mlogit Regression.

*Source: Author's construction (2020)*

Finally, on comparing the findings with the previous empirical results (Table 4-17), it has been highlighted that female migrants are more inactive than male migrants. The neoclassic economic theory and the dual labour market theory supported this result with the approach of segregation of labour based on age, where women who have a lower educational qualification take on a lesser role in the labour sector and the migration process than men (Chattopadhyay, 2000 & Williams, 2009).

Another empirical test of the dissertation was related to the educational qualification and age differences of migrants. Preston (1987) pointed out that educational qualification plays a crucial role in migration by increasing the level of education over time. Moreover, following Schaafsma and Sweetman (1999), the decomposition of age at migration captures the differing effects of migration over particular age ranges. However, in the current dissertation, it has been found that younger migrants (age 15–24) are more educated than others.

## 5. CONCLUSION

### 5.1. Findings of the Research

Migration represents mobility from one place to another, and it contains all kind of movements. Moreover, it encompasses economic, internal and international migrants as well as asylum seekers. Due to this complexity, it is tough to observe and measure the components and differences of migration (Docquier, Peri, et al., 2014).

In this dissertation, the first result was obtained by estimating the regional differences of migration. Regional migration is affected by the demographic changes between the country of origin and country of destination. For this study, the regional differences were divided into two categories: the first one represents the region of birth (Africa, Asia, North America, South/Central America and Oceania) and the second one introduced the country of birth (OECD and non-OECD member countries). The empirical tests intended to explore the regional background differences that were affected by the migration characteristics. Educational qualification, age, gender, place of nativity and employment and unemployment (labour force) status differences were examined. The results showed that African migrants did not have any differences based on educational qualification, age, gender etc. However, migrants from Asia, North America, South/Central America and Oceania seemed to be mostly foreign-born ones. Furthermore, in the case of labour force status, migrants tended to be more unemployed than migrants in other regions. In terms of country of birth, migrants from OECD-member countries were more educated and were mostly native-born. However, the migrants from non-OECD member countries tended to be unemployed in comparison to other migrants. ***The H1 hypothesis stated that the migration characteristics showed differences based on their regional background with five sub-hypotheses: H1a: African migrants were less likely to be educated, older, foreign-born and female than others, H1b :Asian migrants were less likely to be educated, older, foreign-born and female than others, H1c: South and Central American migrants were less likely to be educated, older, foreign-born and female than others, H1d : North American migrants were less likely to be educated, older, foreign-born and female than others, and H1e : migrants from Oceania were less likely to be employed than others.*** Thus, the results of the empirical testing shows that H1 is partially accepted.

The second result of the dissertation aimed to show labour force differences in migration. It is a well-known fact that labour market status is modifiable by migration. Diversity of educational qualification, age and gender, as well as the regional background of migrants, are essential

ingredients for shaping the employment and unemployment statuses of migrants, which is indicated in *H2: Labour force status is related to migration differences*. Educational qualification and employment status have a positive relationship. If the educational level is higher, it is easier for migrants to be employed (Chiswick, Cohen, & Zach, 1997). Even so, according to the findings, employed migrants are mostly educated and elder. *H2a of the study stated that employed migrants are older than others, and H2b stated that employed migrants are more educated than others*. In this case, H2a and H2b are confirmed.

*Conversely, unemployed migrants are younger, and it is confirmed by H2c that unemployed migrants are younger than others and are mostly native-born*. Overall, H2 has been supported by empirical analysis. In terms of the inactive status, older migrants tended to be mostly inactive, and migrants with this labour status tended to be foreign-born. In terms of regional perspective, migrants from non-OECD countries tended to be unemployed based on the country of birth. Migrants from Asia, Oceania and South and Central America were also more prone to being unemployed than those from other regions. On the other hand, migrants from Oceania and South and Central America tended to be more inactive than other regions. The nativity status of migrants is another essential factor that demonstrated diversity in the destination countries. The findings of the estimated results highlighted that there was no educational, age or gender gaps between the foreign-born and native-born migrants. However, it showed that native-born migrants tended to be unemployed. Moreover, the migrants from Asia, North America, Oceania and South and Central American tended to be foreign-born.

Sexual diversity was introduced as another determinant of migration differences. Differences in gender were an invisible topic in migration research for a long time; however, it has now become a unit in migration studies and analyses (Manalansan, 2006). The findings of the result demonstrated that there were no gender differences in the case of educational qualification. *This result does not support H3a: Female migrants are less educated than male migrants*. In the case of age differences, there were no gaps between the ages of female migrants and male migrant. *This outcome does not support H3b: Female migrants are younger than male migrants*. In terms of labour force status and gender diversity, our empirical result indicated that there were no differences in employment and unemployment status; thus, *H3c: Male migrants tended to be more employed than female migrants* was not confirmed. However, in terms of the inactive status, the outcome of the result showed that female migrants tended to be more inactive than males, which adheres to *H3d: Female migrants are more inactive than*

*male migrants*. In this case, **H3: Gender differences in migration are related to migration characteristics** is partially confirmed.

In the current study, educational qualification has been taken into consideration since it influences the migrants' lives in many ways. However, the research finding of the dissertation shows that educational qualification is not related to the gender, nativity status and regional background of the migrants. However, low educational level and employment status of migrants have a negative and significant relationship<sup>1</sup> as migrants with a low educational level tended to be less employed than those who have a higher educational level. Moreover, age and educational attainment had a significant and positive relationship with age (15-24). This result outcome demonstrated that migrants who had a low or medium level educational tended to be younger (15–24 age range). In this case, **H4: Educational attainment background of migrants are associated with the migration differences** can be partially confirmed. Furthermore, while considering *H4a: Low educated migrants tend to be younger than others, and H4b: Migrants with medium education level tend to be younger than others*, it can be confirmed that H4 is partially accepted.

On the other hand, it has been found from the empirical analyses on both level of education (low and medium) that older migrants tended to be employed more than younger ones. On the other hand, in the case of nativity status, foreign-born migrants were mostly older (between 25 and 64 years old). Finally, in terms of labour force status, the employed migrants tended to be older and unemployed migrants tended to be younger. The finding of this study highlights **H5: Ageing is associated with migration differences**, as well as *H5a: Migrants aged between 15 and 24 are more educated, and H5b: Migrants aged between 25-64 tend to be more employed*. Thus, H5a and H5b are accepted.

Differences have also been found in the comparison between DIOC (2010/11) and DIOC (2015/16) databases. First, DIOC 2010/11 indicated several variances based on the regional background (Máté, Sarihasan, Popp, & Oláh, 2018). For example, it was stated in the previous data that migrants from Africa, Asia and Europe were less educated than those from other regions though, in our new estimation, there are no educational differences in these regions. However, the migrants from OECD countries tended to be more educated.

Moreover, age differences were evident in DIOC 2010/11. For instance, it was estimated that African, Asian, Oceanian and South/Central American migrants were younger than migrants from OECD countries and those from North American were older than them. On the other

hand, foreign-born migrants were younger than the native-born ones. However, the findings of the current study addressed age differences only in the case of Asia, South and Central America and Oceania.

Additionally, the gender differences in the current study existed only for inactive labour status. However, it was shown in DIOC 2010/11 that African migrants were mostly male, and South and Central American migrants tended have more females; further, female migrants were less educated than the male migrants. However, both datasets estimated similar educational qualification and age relationship. This comparison displays that migration characteristics are changeable in the case of different censuses.

In conclusion, the characteristics of migration differences is evident. Migrants have different characteristics based on their regional backgrounds. These characteristics also influence their labour status differences in the destination countries. As it was estimated from the empirical testing, educated migrants tend to be more employed than others. On the other hand, other differences such as nativity status, gender and age differences also play an essential role in the migration journey.

## **5.2. Implications**

International migration is complicated and addresses issues that are not accessible. However, understanding the proportion and implications of alteration in migration behaviours is an essential component of the global international migration policy.

The findings of the study implies that more attention needs to be given to the socio-economic and regional differences of migration. Since every migrant is differentiated by at least nationality, age, gender, ethnicity, cultural and religious background, conventional migration policies will not work for the destination countries. Instead, the policies need to identify the migration characteristics more effectively based on their backgrounds to avoid conflicts in the receiving countries.

The finding of the dissertation also offers empirical evidence of labour status. Correspondingly, labour market status is correlated with educational attainment, age and gender diversity of migration. First, educated migrants tend to more employed in comparison with those who do not have a sufficient level of education (Oláh et al., 2017). For instance, the Canadian migration policy aims to demonstrate the migrant's language ability, education skills and experience. If the migrant fulfils all these criteria, then he/she is invited to apply for permanent residence and be a part of the labour force of the country. However, it is essential to focus on the unemployed

and inactive migrants in the receiving society since the unemployment differences appeared to be the essential economic determinants of international migration and are insensitive to immigration policies.

Mainly, it should be taken into consideration that differences in migration can enhance unemployment in the receiving society. Additionally, lack of official language in the destination country, insufficient educational qualifications and the problem of transferring their labour abilities to the novel work environment are the some of the main reasons for this consequence (H. Kim & Markus, 1999). From this point of view, integration programs can be an alternative solution to the migrants. If the migrant is already in the labour sector, under human capital development-oriented programs, they can be trained to better adapt to their workplaces.

The lack of linguistic skills is another severe problem. In the first place, due to insufficient language ability, it is tough to adapt to a new society and be part of their labour sector. In this case, the focus of the integration program should also be on teaching the native language of the destination countries to the migrants, which will make the adaptation process faster since knowing the official language will provide more opportunities to the migrants. However, it is worth mentioning that any effective integration program will be beneficial only if migrants play an essential role in the receiving societies. Another solution for reducing the unemployment rate of migrants is to authorise the labour market institutions to resolve the unexpressed characteristics of migration.

Along with that, a more lenient employment legislation and active labour market training can help to decrease the unemployment rates of migrants (Máté, Sarihasan, & Dajnoki, 2018). This is reflected in the migration policy of the USA, which believes that only a successful integration of migrants and family reunification in the labour market can contribute to the nation's economic vitality and its vibrant and ever-changing culture.

The finding of the study has a necessary implication on gender differences. Notably, female migrants face more discrimination than male migrants in the destination country. In particular, due to the concept of 'intersectionality', female migrants experience many identities at the same time. All these identities need to be stated in an integrated policy (UN, 2018). Additionally, in the labour sector, female migrants are more unemployed and inactive than male migrants. The most common reason for this is that male migrants tend to be more educated than the female migrants. In order to reduce the gender gap in the destination countries,

educational differences should be reduced to educate female migrants by providing free access to educational opportunities. In the long term, this would also support female migrants to take an active role in the destination countries' labour sector. Educated female migrants would help to abolish the distinction and job segregation based on gender.

The study also accounts for the implications of age differences on migration. Previously, young migrants had more disadvantages than older migrants did. Mainly, the first disadvantage was due to educational background. When children move to another country, they find it challenging to adapt to a new educational system. Moreover, if they face any sort of discrimination in class, the psychological pressure could affect their entire life, which may be the reason of the increasing number of unemployment rates among migrants due to lack of educational background. Regional and cultural backgrounds can influence the education of youth migrants. Due to educational differences, only active programs can support to reduce the gap between foreign-born and native children.

Lastly, it is essential to understand the real driving migration factors of origin countries and frame some policies to improve the deficient factors, especially economically. Consequently, if the origin country has a massive brain drain, it lead to an economic breakdown and will force more migrants to go to the destination countries. In order to avoid more inflow of migrants, the destination countries apply strict migration policies, which leads people to enter countries illegally. Eventually, this becomes a reason for a high level of modern slavery. If it is not taken into consideration, unfortunately, the number of people who are trapped by modern slavery will increase considerably.

Overall, it is important to be well informed about the migration differences since every migrant has different regional, educational, gender, age and nativity characteristics. Being oblivious to these differences will cause several problems to remain unsolved. In this case, policymakers should give enough attention to diversifying migration for the successful implementation of countries.

### **5.3. Limitations and Future Direction of the Study**

There were many limitations to the current dissertation. First, DIOC 2015/16 does not contain the information of the receiving country for migration. It only provides access to information on the origin countries and regions of birth in the database. In this case, it was not possible to make a comparison between the country of destination and the country of birth. In the future, information on the destination country can be added in the DIOC extension version. This will make it possible to compare the source and host countries. Another limitation is that the databases did not provide the other determinants that also influence migration differences, for example, the integration rate in the receiving countries. In the future, researchers can examine the integration diversity rate among migrants based on the regional background. This will contribute to forming the regional migration policies of the destination countries in the future.

Additionally, a massive gap still exists between migration theories and the results of the empirical analyses of databases. In fact, after the empirical tests, it was not indicated whether DIOC 2015/16 matched any significant gender differences in migration, which was another limitation of the empirical explanation of this difference. In this future, the findings of the result can be added as a part of the theoretical model for international migration as well. Another limitation of the study is related to educational qualification. This database divided educational level categories by only 3 ISCED code. In the future, migrants should be accurately categorised according to their ISCED educational level.

Another limitation is related to the missing data of financial crises. It has been mentioned that migration flows in other countries start to increase after financial crises. However, due to lack of census data, only cross-country analysis was available, and it was not possible to identify the direct influences of crises. In the future, the relationship between financial crises and migration differences should be distinguished in order to estimate its effect on migration flows.

Finally, future research can make an exciting contribution by exploring the relationship between the differences of nationalities and duration of stay for international migration. Since standard migration policies are ineffectual, it would be worth examining how migrants' nationalities are based on the duration of the stay to form effective adaptation policies.

#### **5.4. Main Conclusion and Novel Findings of the Study**

This dissertation intended to demonstrate the migration differences and their interactions by using specific statistical methods (cross tab, independent-sample test, binary and multinomial regressions). The empirical research supports the novel findings and proposals of the current dissertation by the deductive theoretical model.

- The scientific contribution of the research is the comparison of international migration characteristics, i.e., regional, educational, age, gender, nativity status and labour force status differences between OECD and non-OECD countries.
- The novelty of this study is that no previous research have empirically tested the migration differences using international comparison and such complex socio-economic perspectives on a representative database.
- Another scientific contribution is the different statistical methods (cross tabs, independents sample tests and different regression analysis) that were used to validate and emphasize international migration differences, which were not demonstrated before.
- The additional scientific contribution of the research is that two different census data, namely DIOC 2010/11 and DIOC 2015/16, were compared and they demonstrated many estimated differences. This comparison displays that migration characteristics can change in different censuses and periods.

Result of the hypotheses are presented in Table 5-11.

**Table 5-11: Result of Hypotheses**

<b>Number</b>	<b>Hypotheses</b>	<b>Acceptance</b>
<b>H1</b>	<b><i>Migration characteristics differ based on migrants' regional background.</i></b>	<b><i>Partially accepted</i></b>
	<i>H1a: African Migrants less likely to be educated, older, foreign born and female than others.</i>	<i>Rejected</i>
	<i>H1b: Asian Migrants less likely to be educated, older, foreign born and female than others.</i>	<i>Partially accepted</i>
	<i>H1c: South and Central American Migrants less likely to be educated, older, foreign born and female than others.</i>	<i>Partially accepted</i>
	<i>H1d: North American Migrants less likely to be educated, older, foreign born and female than others.</i>	<i>Partially accepted</i>
	<i>H1e: Migrants from Oceania less likely to be employed than others.</i>	<i>Partially accepted</i>
<b>H2</b>	<b><i>Labour force status related to migration differences.</i></b>	<b><i>Accepted</i></b>
	<i>H2a: Employed migrants elder than others.</i>	<i>Accepted</i>
	<i>H2b: Employed migrants are more educated than others.</i>	<i>Accepted</i>
	<i>H2c: Unemployed migrants are younger than others.</i>	<i>Accepted</i>
<b>H3</b>	<b><i>Gender differences in migration are related to migration characteristics.</i></b>	<b><i>Partially Accepted</i></b>
	<i>H3a: Female migrants are younger than male.</i>	<i>Rejected</i>
	<i>H3b: Male migrants tend to be more employed than female.</i>	<i>Rejected</i>
	<i>H3c: Female migrants are less educated than male.</i>	<i>Rejected</i>
	<i>H3d: Female migrants tend to be more inactive than male.</i>	<i>Accepted</i>
<b>H4</b>	<b><i>Educational attainment background of migrants are associated with the migration differences.</i></b>	<b><i>Partially Accepted</i></b>
	<i>H4a: Lesser-educated migrants tend to be younger than others.</i>	<i>Accepted</i>
	<i>H4b Migrants with medium education level tend to younger than others.</i>	<i>Rejected</i>
<b>H5</b>	<b><i>Ageing associated with migrational differences.</i></b>	<b><i>Accepted</i></b>
	<i>H5a: Migrants aged between 15-24 are more educated.</i>	<i>Accepted</i>
	<i>H5b: Migrants aged between 25-64 are more employed than others.</i>	<i>Accepted</i>

## 6. SUMMARY

*Chapter 1* explains the topics and objectives of the dissertation. The main objective of the current dissertation is to demonstrate migration differences. Hence, descriptive methods are employed and empirically tested to define how these differences also interact with each other.

*Chapter 2* ensures an overview of the theoretical background of international migration. This chapter formulates the basis for choosing the theories to be selected in the created hypothesis and empirical testing part of the dissertation.

*Chapter 3* clarifies the databases and methods applied to meet with the objectives of the dissertation and answer the research questions. The quantitative data for the dissertation was collected from OECD Databases on Migration (DIOC). The sample of the quantitative data comprised 34 countries of destination and more than 230 countries of origin. A statistical package analysed the results by SPSS to explore how migration differences interact with the country of birth and country of residence.

*Chapter 4* shows the research findings. At the beginning of the chapter, a comparison of the variables is presented. In order to test the assumed models and the research questions, cross tab functions are analysed, and an independent sample (Mann-Whitney rank) U-test is employed to indicate the relationship between the variables. Finally, binary (binomial) multinomial logistic regressions are used to test the hypotheses of the study.

*Chapter 5* discusses the concluding remarks of the study and, based on the implications, the limitations are specified. It also includes future direction for research and recommendations for the policymakers.

*Chapter 6* presents the main results and novel findings of the dissertation.

At the end of the dissertation, a list of tables, figures, publications and references are attached.

## REFERENCES

- Abel, G. J., & Sander, N. (2014). Quantifying Global International Migration Flows. *Science*, 343(6178), 1520–1522.
- Agesa, R. (2003). Gender Differences in the Urban to Rural Wage Gap and the Prevalence of the Male Migrant. *The Journal of Developing Areas*, 37(1), 13-34.
- Alecke, B., Mitze, T., & Untiedt, G. (2010). Internal migration, regional labour market dynamics and implications for German East-West disparities: Results from a Panel VAR. *Jahrbuch Für Regional wissenschaft*, 30(2), 159–189.
- Almosova, A. (2013). Labor market institutions and the effect of immigration on national employment, (9), 53–74.
- Angrist, J. D., & Kugler, A. D. (2003). Protective or counter-productive? labour market institutions and the effect of immigration on natives. *The Economic Journal*, 113(488), 302–331.
- Arango, J. (2000). Explaining migration: A critical view. *International Social Science Journal*, 52(165), 283–296.
- Arslan, C. et al. (2014). A New Profile of Migrants in the Aftermath of the Recent Economic Crisis. *OECD Social, Employment and Migration Working Papers*. No 16., OECD Publishing. Retrieved from [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2589086](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2589086)
- Artuç, E., Docquier, F., Özden, Ç., & Parsons, C. (2014). A Global Assessment of Human Capital Mobility: The Role of Non-OECD Destinations. The World Bank.
- Asis, M. M. B., & Piper, N. (2008). Researching International Labor Migration in Asia. *The Sociological Quarterly*, 49(3), 423–444.
- Assirelli, G., Barone, C., & Recchi, E. (2018). “You Better Move On”: Determinants and Labor Market Outcomes of Graduate Migration from Italy. *International Migration Review*, 1–22.
- Azam, J.P., Gubert, F., (2006). Migrants’ Remittances and the Household in Africa: A Review of Evidence. *Journal of African Economies*, 15(2), 426–462.
- Baker, M., & Benjamin, D. (1997.). The Role of the Family in Immigrants’ Labor-Market Activity: An Evaluation of Alternative Explanations. *American Economic Review*. 87 (4), 705-27
- Barot, R., Bradley, H., & Fenton, S. (Eds.). (1999). *Ethnicity, Gender and Social Change*. London: Palgrave Macmillan UK.
- Barro, R. J. (2001). International data on educational attainment: Updates and implications. *Oxford Economic Papers*, 53(3), 541–563.

- Barro, R. J., & Lee, J.W. (1993). International comparisons of educational attainment. *Journal of Monetary Economics*, 32(3), 363–394.
- Baryla, E. A., & Dotterweich, D. (2001). Student Migration: Do Significant Factors Vary by Region? *Education Economics*, 9(3), 269–280.
- Basso, G., & Peri, G. (2015). The Association between Immigration and Labor Market Outcomes in the United States. Retrieved from <https://www.iza.org/publications/dp/9436/the-association-between-immigration-and-labor-market-outcomes-in-the-united-states>
- Baudassé, T., & Bazillier, R. (2014). Gender inequality and emigration: Push factor or selection process? *International Economics*, 139, 19–47.
- Bauder, H. (2006). *Labor movement : how migration regulates labor markets*. Oxford University Press.
- Bauer, T. K., & Zimmermann, K. F. (1999). Assessment of Possible Migration Pressure and its Labour Market Impact Following EU Enlargement to Central and Eastern Europe. Retrieved from [http://legacy.iza.org/en/webcontent/publications/reports/report\\_pdfs/report\\_pdfs/iza\\_report\\_03.pdf](http://legacy.iza.org/en/webcontent/publications/reports/report_pdfs/report_pdfs/iza_report_03.pdf)
- Becker, G. S. (1962). Investment in Human Capital: A Theoretical Analysis. Source: *Journal of Political Economy*, 70(2), 9-49.
- Becker, G. S. (1965). A Theory of the Allocation of Time. *The Economic Journal*, 75(299), 493.
- Beine, M., & Salomone, S. (2013). Network Effects in International Migration: Education versus Gender. *The Scandinavian Journal of Economics*, 115(2), 354–380.
- Bernard, A., & Bell, M. (2018). Educational selectivity of internal migrants A global assessment. Source: *Demographic Research*, (39), 835–854.
- Bhandari, P. (2004). Relative deprivation and migration in an agricultural setting of Nepal. *Population and Environment*, 25(5), 475–499.
- Biswas, T., McHardy, J., & Nolan, M. A. (2005). *Inter-regional Migration: the UK Experience*. Sheffield Economic Research Paper Series, 1–32.
- Black, D., Kolesnikova, N., & Taylor, L. (2008). Working Paper Series Local Price Variation and Labor Supply Behavior. *Regional Economic Developmet*, 2-14.
- Blaug, M. (1976). The Empirical Status of Human Capital Theory: A Slightly Jaundiced Survey. *Journal of Economic Literature*, 14(3), 827–855.
- Bodenhöfer, H. J. (1967). The Mobility of Labor and the Theory of Human Capital, *International Journal of Human Resources*. (2), 431-448.
- Bodvarsson, Ö. B., & Van den Berg, H. (2013). *The economics of immigration*. New York, NY: Springer New York.

- Boeri, T., & Ours, J. C. V. (2013). *The economics of imperfect labor markets*. Princeton University Press.
- Borjas, & George. (1987). Self-Selection and the Earnings of Immigrants. *American Economic Review*, 77(4), 531–553.
- Borjas, G., Friedman, R. B., Katz, L.(1997). How Much Do Immigration and Trade Affect Labor Market Outcomes? *Brookings Papers on Economic Activity*, 28(1), 1–90.
- Borjas, G. J. (1989b). Economic Theory and International Migration. *International Migration Review*, 23(3), 457–485.
- Borodak, D., & Piracha, M. (2013). Who Moves and For How Long: Determinants of Different Forms of Migration. Retrieved from <http://ftp.iza.org/dp7388.pdf>
- Boswell, C. (2002). Addressing the causes of migratory and refugee movements: the role of the European Union. Working Paper. *New Issues in Refugee Research*, (73), 1–27.
- Boustan, L. P., Fishback, P. V., & Kantor, S. (2010). The Effect of Internal Migration on Local Labor Markets: American Cities during the Great Depression. *Journal of Labor Economics*, 28(4), 719–746.
- Brandsma, A., Kancs, d'Artis, & Persyn, D. (2014). Modelling Migration and Regional Labour Markets: an Application of the New Economic Geography Model RHOMOLO. *Journal of Economic Integration*, (29), 372–406.
- Brücker, H., Glitz, A., Lerche, A., & Romiti, A. (2018). Occupational Recognition and Immigrant Labor Market Outcomes. Retrieved from <https://www.iza.org/publications/dp/12030/occupational-recognition-and-immigrant-labor-market-outcomes>
- Buchmann, C., & Parrado, E. A. (2006). Educational achievement of immigrant-origin and native students: A comparative analysis informed by institutional theory. In *The impact of comparative education research on institutional theory* (pp. 335-366). Emerald Group Publishing Limited.
- Buzdugan, R., & Halli, S. S. (2009). Labor Market Experiences of Canadian Immigrants with Focus on Foreign Education and Experience . *International Migration Review*, 43(2), 366–386.
- Cangiano, A. (2014). Migration Policies and Migrant Employment Outcomes. *Comparative Migration Studies*, 2(4), 417–443.
- Capello, R., & Nijkamp, P. (2009). *Handbook of regional growth and development theories*. Edward Elgar.
- Carling, J. (2008). The determinants of migrant remittances. *Oxford Review of Economic Policy*, 24(3), 581–598.

- Carling, J. (2005). Gender dimensions of international migration. *Global migration perspectives*, (35), 1–26.
- Carling, J., & Collins, F. (2018). Aspiration, desire and drivers of migration. *Journal of Ethnic and Migration Studies*, 44(6), 909–926.
- Castelli, F. (2018). Drivers of migration: why do people move? *Journal of Travel Medicine*, 25(1).
- Castles, S. (2002). *Castles-2002-International\_Migration\_Review*, 36(4), 1143–1168.
- Castles, S. (2004). Why migration policies fail. *Ethnic and Racial Studies*, 27(2), 205–227.
- Castles, S. (2009). Migration and Development: What Comes First? Global Perspective and African Experiences. *Theoria*, 56(121), 1–31.
- Castles, S. (2010). Understanding Global Migration: A Social Transformation Perspective. *Journal of Ethnic and Migration Studies*, 36(10), 1565–1586.
- Castles, S., De Haas, H., & Miller, M. J. (2013). *The age of migration: International population movements in the modern world*. Macmillan International Higher Education.
- Chase-Dunn, C., & Hall, T. D. (1994). The Historical Evolution of World-Systems. *Sociological Inquiry*, 64(3), 257–280.
- Chattopadhyay, A. (1997). Family Migration and the Economic Status of Women in Malaysia . *International Migration Review*, 31(2), 338–352.
- Chattopadhyay, A. (2000). Gender differences in socioeconomic returns to family migration in Malaysia: The role of family decision making versus labor market stratification. *Gender Issues*, 18(2), 29–48.
- Chiswick, B.R., & DebBurman, N. (2004). Educational attainment: analysis by immigrant generation. *Economics of Education Review*, 23(4), 361–379.
- Chiswick, B.R. (1988). Differences in Education and Earnings Across Racial and Ethnic Groups: Tastes, Discrimination, and Investments in Child Quality. *The Quarterly Journal of Economics*, 103(3), 571.
- Chiswick, B.R., Cohen, Y., & Zach, T. (1997). The Labor Market Status of Immigrants: Effects of the Unemployment Rate at Arrival and Duration of Residence. *Industrial and Labor Relations Review*, 50(2), 289.
- Chiswick, B. R., & DebBurman, N. (2004). Educational attainment: Analysis by immigrant generation. *Economics of Education Review*, 23(4), 361–379.
- Cigagna, C., & Sulis, G. (2015). *On the Potential Interaction Between Labour Market Institutions and Immigration Policies*.

- Clark, G. L. (1982). Dynamics of Interstate Labor Migration. *Annals of the Association of American Geographers*, 72(3), 297–313.
- Clark, X., Hatton, T. J., & Williamson, J. G. (2007). Explaining U.S. Immigration, 1971–1998. *Review of Economics and Statistics*, 89(2), 359–373.
- Cohen, Y., Zach, T., & Chiswick, B. (1997). The Educational Attainment of Immigrants: Changes Over Time. *The Quarterly Review of Economics and Finance*, 37, 229–243.
- Constant, A., & Massey, D. S. (2002). Return Migration by German Guestworkers: Neoclassical versus New Economic Theories. *International Migration*, 40(4), 5–38.
- Coppel, J., Dumont, J.C., & Visco, I. (2001). Trends in Immigration and Economic Consequences. Economics Department Working Papers. No 284. Retrieved from <https://www.oecd-ilibrary.org/content/paper/553515678780>
- Cote, G. L. (1997). Socio-economic Attainment, Regional Disparities, and Internal Migration. *European Sociological Review*, 13(1), 55–77.
- Cox, D. R. (1958). The Regression Analysis of Binary Sequences. *Journal of the Royal Statistical Society: Series B (Methodological)*, 20(2), 215–232.
- Cox, R. W. (1981). Social Forces, States and World Orders: Beyond International Relations Theory Millennium: *Journal of International Studies*, 10(2), 126–155.
- Creswell, J. W., & Creswell, J. D. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Crystal, S., Shea, D., & Krishnaswami, S. (1992). Educational Attainment, Occupational History, and Stratification: Determinants of Later-life Economic Outcomes. *Journal of Gerontology*, 47(5), 213–221.
- Cubas, G., Ravikumar, B., & Ventura, G. (2016). Talent, labor quality, and economic development. *Review of Economic Dynamics*, 21, 160–181.
- Curran, S. R., & Saguy, A. C. (2001). Migration and cultural change: A role for gender and social networks. *Journal of International Women's Studies*, 2(3), 54–77.
- Danzer, A. M., & Dietz, B. (2008). A Comparison of Five Eastern European Countries. Retrieved from [https://www.econstor.eu/obitstream/10419/39903/1/AEL\\_2008\\_7\\_danzer.pdf](https://www.econstor.eu/obitstream/10419/39903/1/AEL_2008_7_danzer.pdf)
- DaVanzo, J. (1978). Does Unemployment Affect Migration? Evidence from Micro Data. *The Review of Economics and Statistics*, 60(4), 504.
- De Haas, H. (2010). Migration and Development: A Theoretical Perspective. *International Migration Review*, 44(1), 227–264.

- De Haas, H. (2005a). International migration, remittances and development: myths and facts. *Third World Quarterly*, 26(8), 1269–1284.
- De Haas, H. (2005b). International Migration, Remittances and Development: myths and facts. *Third World Quarterly*, 26(8), 1269–1284.
- De Haas, H. (2010a). Migration and development: A theoretical perspective. *International Migration Review*, 44(1), 227–264.
- De Haas, H. (2010b). The Internal Dynamics of Migration Processes: A Theoretical Inquiry. *Journal of Ethnic and Migration Studies*, 36(10), 1587–1617.
- De Haas, H., & van Rooij, A. (2010). Migration as emancipation? The impact of internal and international migration on the position of women left behind in rural morocco. *Oxford Development Studies*, 38(1), 43–62.
- Deller, S., Kures, M., & Conroy, T. (2019). Rural entrepreneurship and migration. *Journal of Rural Studies*, (66), 30–42.
- Desai, S., & Banerji, M. (2008). Negotiated identities: Male migration and left-behind wives in India. *Journal of Population Research*, 25(3), 337–355.
- Devillanova, C. (2001). Regional insurance and migration. *Scandinavian Journal of Economics*, 103(2), 333-349.
- Dickey, H. (2014). The Impact of Migration On Regional Wage Inequality: A semiparametric Approach. *Journal of Regional Science*, 54(5), 893–915.
- Docquier, F., Ozden, Ç., & Peri, G. (2014). The Labour Market Effects of Immigration and Emigration in OECD Countries. *The Economic Journal*, 124(579), 1106–1145.
- Docquier, F., Peri, G., & Ruysen, I. (2014). The Cross-country Determinants of Potential and Actual Migration. *International Migration Review*, 48(1), 37–99.
- Dumont, J.-C., Spielvogel, G., & Widmaier, S. (2010a). OECD Social, Employment and Migration Working Papers International Migrants in Developed, Emerging and Developing Countries: An Extended Profile Directorate for Employment, Labour and Social Affairs. Retrieved from <https://www.oecd.org/els/mig/46535333.pdf>
- Dustmann, C., Fabbri, F., Preston, I., Carlin, W., Ichimura, H., Lindley, J., Windmeijer, F. (1991). The Impact of Immigration on the British Labour Market. *The Economic Journal*, 115(507), 324–341.
- Dustmann, C., & Glitz, A. (2011). Migration and education. In *Handbook of the Economics of Education*, (4), 327-439. Elsevier.

- Dustmann, C., Glitz, A., & Frattini, T. (2008). The labour market impact of immigration. *Oxford Review of Economic Policy*, 24(3), 477–494.
- Domenech, C. Harzig, C.; Hoerder, D. & Gabaccia, D. (2009). *What is Migration History?* Cambridge & Malden, Polity Press, 2009. *Arbor*, 186(744), 779-781.
- Elsner, B. (2015). Does emigration increase the wages of non-emigrants in sending countries? *IZA World of Labor*. Retrieved from : <https://wol.iza.org/articles/does-emigration-increase-wages-of-non-emigrants-in-sending-countries/long>.
- Epifani, P., & Gancia, G. A. (2005). Trade, migration and regional unemployment. *Regional Science and Urban Economics*, 35(6), 625–644.
- Eurostat. (2000). Luxembourg: Office for Official Publications of the. European Communities.
- Fan, C. C. (2000). Migration and Gender in China. *China Review*, 423–454.
- Ferrer, A., & Riddell, W. C. (2008). Education, credentials, and immigrant earnings. *Canadian Journal of Economics/Revue Canadienne d'économique*, 41(1), 186–216.
- Folmer, H., & Oosterhaven, J. (1979). Spatial inequalities and regional development: A framework. In *Spatial inequalities and regional development*; 1-19. Springer, Dordrecht.
- Fortin, N. M. (2005). Gender Role Attitudes and the Labour-market Outcomes of Women across OECD Countries. *Oxford Review of Economic Policy*, 21(3), 416–438.
- Friberg, J. H., Arnholtz, J., Eldring, L., Hansen, N. W., & Thorarins, F. (2014). Nordic labour market institutions and new migrant workers: Polish migrants in Oslo, Copenhagen and Reykjavik. *European Journal of Industrial Relations*, 20(1), 37–53.
- Fuller, S., & Vosko, L. F. (2008). Temporary Employment and Social Inequality in Canada: Exploring Intersections of Gender, Race and Immigration Status. *Social Indicators Research*, 88(1), 31–50.
- Funkhouser, E., & Trejo, S. J. (1995). The Labor Market Skills of Recent Male Immigrants: Evidence from the Current Population Survey. *ILR Review*, 48(4), 792–811.
- Gabriel, S. A., Shack, M.J., & Wascher, W. L. (1993). Does migration arbitrage regional labor market differentials? *Regional Science and Urban Economics*, 23(2), 211–233.
- Gang, I. N., & Zimmermann, K. F. (2000). Is Child like Parent? Educational Attainment and Ethnic Origin. *The Journal of Human Resources*, 35(3), 550.
- Garcia, A. J., Pindolia, D. K., Lopiano, K. K., & Tatem, A. J. (2015). Modeling internal migration flows in sub-Saharan Africa using census microdata. *Migration Studies*, 3(1), 89–110.
- Gathmann, C., & Keller, N. (2018). Access to Citizenship and the Economic Assimilation of Immigrants. *The Economic Journal*, 128(616), 3141–3181.

- Geis, W., Uebelmesser, S., & Werding, M. (2013). How do Migrants Choose Their Destination Country? An Analysis of Institutional Determinants. *Review of International Economics*, 21(5), 825–840.
- Geist, C., & McManus, P. A. (2012). Different Reasons, Different Results: Implications of Migration by Gender and Family Status. *Demography*, 49(1), 197–217.
- Gerber, T. P. (2006). Regional economic performance and net migration rates in Russia, 1993–2002. *International Migration Review*, 40(3), 661–697.
- Gheasi, M., & Nijkamp, P. (2017). A Brief Overview of International Migration Motives and Impacts, with Specific Reference to FDI. *Economies*, 5(3), 1–11
- Ginsburg, C., Bocquier, P., Béguy, D., Afolabi, S., Augusto, O., Derra, K., Collinson, M. A. (2016.). Human capital on the move Education as a determinant of internal migration in selected In-depth surveillance populations in Africa. Source: *Demographic Research*, (34), 845–884.
- Giulietti, C. (2015). Do minimum wages induce immigration? *IZA World of Labor*. Retrieved from <https://wol.iza.org/articles/do-minimum-wages-induce-immigration/long>
- Gordon, I. (1995). Migration in a Segmented Labour Market. *Transactions of the Institute of British Geographers*, 20(2), 139.
- Goss, J., & Lindquist, B. (1995). Conceptualizing International Labor Migration: A Structuration Perspective. *International Migration Review*, 29(2), 317–351.
- Gottlieb, P. D., & Fogarty, M. (2003). Educational Attainment and Metropolitan Growth. *Economic Development Quarterly*, 17(4), 325–336.
- Greenwood, M. J. (1969). The determinants of labor migration in Egypt. *Journal of Regional Science*, 9(2), 283.
- Greenwood, M. J. (1985). Human migration: Theory, models, and empirical studies. *Journal of regional Science*, 25(4), 521–544.
- Greenwood, M. J., & Hunt, G. L. (2003). The Early History Of Migration Research. *International Regional Science Review*, 26(1), 3–37.
- Greenwood, M. J., Hunt, G. L., Greenwood, M. J., & Hunt, G. (1984). Migration and Interregional Employment Redistribution in the United States. *American Economic Review*, 74(5), 957–969.
- Greenwood, M. J., & Sweetland, D. (1972). The Determinants of Migration Between Standard Metropolitan Statistical Areas. Source: *Demography*, 9(4), 665–681.
- Grigg, D. B. (1977). E. G. Ravenstein and the “Laws of migration.” *Journal of Historical Geography*, 3(1), 41–54.

- Grossmann, V. (2016). How immigration affects investment and productivity in host and home countries Immigration may boost foreign direct investment, productivity, and housing investment. IZA World of Labor. Retrieved from <https://wol.iza.org/articles/how-immigration-affects-investment-and-productivity-in-host-and-home-countries/long>
- Gubhaju, B., & De Jong, G. F. (2009). Individual versus Household Migration Decision Rules: Gender and Marital Status Differences in Intentions to Migrate in South Africa. *International Migration*, 47(1), 31–61.
- Hagen-Zanker, J. (2008). Why Do People Migrate? A Review of the Theoretical Literature. SSRN Electronic Journal.
- Hair, J. F. (2011). Multivariate Data Analysis: An Overview. In *International Encyclopedia of Statistical Science* (pp. 904–907). Springer Berlin Heidelberg.
- Hansen, H. K., & Niedomysl, T. (2008). Migration of the creative class: evidence from Sweden. *Journal of Economic Geography*, 9(2), 191–206.
- Haug, S. (2008). Migration Networks and Migration Decision-Making. *Journal of Ethnic and Migration Studies*, 34(4), 585–605.
- Hondagneu, S.P., & Cranford, C. (2006). Gender and migration. In *Handbook of the Sociology of Gender* (pp. 105-126). Springer, Boston, MA.
- Hosmer, D. W., Lemeshow, S., & Sturdivant, R. X. (2000). Introduction to the logistic regression model. *Applied Logistic Regression*, (2), 1-30.
- Hou, F., Schellenberg, G., & Berry, J. (2018). Patterns and determinants of immigrants' sense of belonging to Canada and their source country. *Ethnic and Racial Studies*, 41(9), 1612–1631.
- Huinink, J., Vidal, S., & Kley, S. (2014). Individuals' openness to migrate and job mobility. *Social Science Research*, (44), 1–14.
- Hunt, J. (2006). Staunching emigration from East Germany: Age and the determinants of migration. *Journal of the European Economic Association*, 4(5), 1014–1037.
- Hutchings, J., & Unesco. (2017). Accountability in education : Meeting our commitments. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000259338>.
- ILO. (2017). ILO Global Estimates on International Migrant Workers. Retrieved from [https://www.ilo.org/global/publications/books/WCMS\\_652001/lang--en/index.htm](https://www.ilo.org/global/publications/books/WCMS_652001/lang--en/index.htm).
- IOM. (2017). Migration and migrants: A global overview, Chapter 2. Retrieved from <https://publications.iom.int/books/world-migration-report-2018-chapter-2-migration-and-migrants-global-overview>.

- Islam, R., Rahman, O., & Hossain, S. (2013). Factors Affecting on Migration to Chapai-Nawabganj City in Bangladesh: Multivariate Approach. *American Journal of Economics*, 2013(6), 273–277.
- J. Edward Taylor. (1999). The New Economics of Labour Migration and the Role of Remittances in the Migration Process. *International Migration*, 37(1), 63–88.
- Jackman, R., & Savouri, S. (1992). Regional Migration in Britain: An Analysis of Gross Flows Using NHS Central Register Data. *The Economic Journal*, 102(415), 1433.
- Jennissen, R. (2007a). Causality Chains in the International Migration Systems Approach. *Population Research and Policy Review*, 26(4), 411–436.
- Jennissen, R. (2007b). Causality Chains in the International Migration Systems Approach. *Population Research and Policy Review*, 26(4), 411–436.
- Jenssen, A. T., & Engesbak, H. (1994). The Many Faces of Education: why are people with lower education more hostile towards immigrants than people with higher education? *Scandinavian Journal of Educational Research*, 38(1), 33–50.
- Jones, H., & Findlay, A. (1998). Regional economic integration and the emergence of the East Asian international migration system. *Geoforum*, 29(1), 87–104.
- Jouke, V.J., & Hendrik, F. (2019). The Consequences of Interregional Labor Migration for the Regional Labor Market: Theory, Methodology and Dutch Experience. *Review of Economics and Statistics*, 68(1), 74–83.
- Kalinowska, B., & Knapinska, M. (2009). Review of chosen migration theories. *Economics and Competition Policy*, 5(14), 45-54.
- Kanas, A., & Tubergen, F. van. (2009). The Impact of Origin and Host Country Schooling on the Economic Performance of Immigrants. *Social Forces*. Oxford University Press.
- Kandemir, O. (2012). Human development and international migration, 62, 446–451.
- Kang, Y., & Kim, B.Y. (2018). Immigration and economic growth: do origin and destination matter? *Applied Economics*, 50(46), 4968–4984.
- Kevin J. A. Thomas. (2008). Return Migration in Africa and the Relationship between Educational Attainment and Labor Market Success: Evidence from Uganda. *The International Migration Review*, 42(3), 652-674.
- Kibele, E., & Janssen, F. (2013). Distortion of regional old-age mortality due to late-life migration in the Netherlands? *Demographic Research*, (29), 105–132.
- Kifleyesus, A. (2012). Women Who Migrate, Men Who Wait: Eritrean Labor Migration to the Arab Near East. *Northeast African Studies*, (12), 95–127.

- Kim, H., & Markus, H. R. (1999). Deviance or uniqueness, harmony or conformity? A cultural analysis. *Journal of Personality and Social Psychology*, 77(4), 785–800.
- Kim, K., & Cohen, J. E. (2010). Determinants of International Migration Flows to and from Industrialized Countries: A Panel Data Approach Beyond Gravity 1, 44(4), 899.
- Koser, K. (2010). Introduction: International Migration and Global Governance. Source: *Global Governance*, 16(3), 301–315.
- Koska, O. A., Saygin, P. Ö., Çağatay, S., & Artal, T.A. (2013). International migration, remittances, and the human capital formation of Egyptian children. *International Review of Economics & Finance*, 28, 38–50.
- Kreimer, M. (2004). Labour market segregation and the gender-based division of labour. *European Journal of Women's Studies*, 11(2), 223–246.
- Kristen, C., & Granato, N. (2007). The educational attainment of the second generation in Germany. *Ethnicities*, 7(3), 343–366.
- Kurekova, L. (2010). Explaining differences in labour mobility in Czech Republic and Slovakia. *Journal for Labour and Social Affairs in Eastern Europe*, 13(2), 193–206.
- Laczko, F. (2015). Factoring migration into the 'development data revolution'. *Journal of International Affairs*, 68(2), 1.
- Lara, J. (2015). International migration and human capital in Mexico: Networks or parental absence? *International Journal of Educational Development*, 41, 131–142.
- Lauer, C. (2003). Family background, cohort and education: A French–German comparison based on a multivariate ordered probit model of educational attainment. *Labour Economics*, 10(2), 231–251.
- Lee, E. S. (1966). A Theory of Migration. *Demography*, 3(1), 47.
- Leppel, K. (2009). Labour Force Status and Sexual Orientation. *Economica*, 76(301), 197–207.
- Levy, B. L., Mouw, T., & Daniel Perez, A. (2017). The U.S. Labor Market During and After the Great Recession. *Journal of the Social Sciences*, 3(3), 100–125.
- Llacer, A., Zunzunegui, M. V., del Amo, J., Mazarrasa, L., & Bolumar, F. (2007). The contribution of a gender perspective to the understanding of migrants' health. *Journal of Epidemiology & Community Health*, 61(2), 4–10.
- Lucas, R. E. B. (2007). Migration and Rural Development. *EJADE: Electronic Journal of Agricultural and Development Economics*, 4(1), 99–122.
- Lundborg, P. (1991). An Interpretation of the Effects of Age on Migration: Nordic Migrants' Choice of Settlement in Sweden. *Southern Economic Journal*, 58(2), 392.

- Lutz, H. (2017). Care as a fictitious commodity: Reflections on the intersections of migration, gender and care regimes. *Migration Studies*, 5(3), 356–368.
- Luy, M., & Caselli, G. (2007). The impact of a migration-caused selection effect on regional mortality differences in Italy and Germany. *Genus*, 33-64.
- Ma, Y., Hou, X., Huang, J., Wang, W., Li, Y., Zhou, X., & Du, X. (2018). Educational inequality and achievement disparity: An empirical study of migrant children in China. *Children and Youth Services Review*, 87, 145–153.
- Manalansan, M. F. (2006). Queer Intersections: Sexuality and Gender in Migration Studies. *International Migration Review*, 40(1), 224–249.
- Mansori, K. S. (2003). The Geographic Effects of Trade Liberalization with Increasing Returns in Transportation. *Journal of Regional Science*, 43(2), 249–268.
- Marshall, A., Marshall, & Alfred. (1890). *The Principles of Economics*. London MacMillan UK.
- Martin, P. (1998). Can regional policies affect growth and geography in Europe? *The world economy*, 21(6), 757–774.
- Martin, P. L. (1991). Labor Migration in Asia. *International Migration Review*, 25(1), 176.
- Martin, R., & Sunley, P. (1996). Paul Krugman's Geographical Economics and Its Implications for Regional Development Theory: A Critical Assessment. *Source: Economic Geography*, 72(3), 259–292.
- Martínez Veiga, U. (2007). Immigrants in the Spanish Labour Market. *South European Society and Politics*, 3(3), 105–128.
- Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1993). Theories of International Migration: A Review and Appraisal. *Population and Development Review*, 19(3), 431–466.
- Massing, N., & Schneider, S. L. (2017). Degrees of competency: the relationship between educational qualifications and adult skills across countries. *Large-Scale Assessments in Education*, 5(1), 6.
- Máté, D., Sarihasan, I., & Dajnoki, K. (2017). The relations between labour market institutions and employment of migrants. *Amfiteatru Economic*, 19(46), 806–820.
- Máté, D., Sarihasan, I., Popp, J., & Oláh, J. (2018). The Role of Regional Differences in Immigration: The Case of OECD Countries. *Economics & Sociology*, 11(3), 190–206.
- Mayda, A. M. (2010). International migration: a panel data analysis of the determinants of bilateral flows. *Journal of Population Economics*, 23(4), 1249–1274.
- McGovern, P. (2007). Immigration, Labour Markets and Employment Relations: Problems and Prospects. *British Journal of Industrial Relations*, 45(2), 217–235.

- McKenzie, D., & Rapoport, H. (2011). Can migration reduce educational attainment? Evidence from Mexico. *Journal of Population Economics*. Springer.
- McNabb, R. (1987). Labour Market Theories and Education. In *Economics of Education*, pp. 157–163. Elsevier.
- Milczarek, A., & Szkudlarek, P. (2015). Determinants of Polish international migration in the area of the European Union after 2004, 8(3), 62–78.
- Morgan, G. A. (2004). *SPSS for introductory statistics : Use and interpretation*. Lawrence Erlbaum.
- Nations, U. (2018). International Migration Report 2017. Retrieved from [https://www.un.org/en/development/desa/population/migration/publications/migrationreport/docs/MigrationReport2017\\_Highlights.pdf](https://www.un.org/en/development/desa/population/migration/publications/migrationreport/docs/MigrationReport2017_Highlights.pdf)
- Naude, W. (2010). The Determinants of Migration from Sub-Saharan African Countries. *Journal of African Economies*, 19(3), 330–356.
- Navratil, F. J., & Doyle, J. J. (1977). The Socioeconomic Determinants of Migration and the Level of Aggregation. *Southern Economic Journal*, 43(4), 1547.
- Nawyn, S. J. (2010). Gender and Migration: Integrating Feminist Theory into Migration Studies. *Sociology Compass*, 4(9), 749–765.
- Nivalainen, S. (1999). The effects of family life cycle, family ties and distance on migration: micro evidence from Finland in 1994. Retrieved from <http://www.sre.wu-wien.ac.at/ersa/ersaconfs/ersa99/Papers/a271.pdf>
- OECD (2019). *Society at a Glance 2019*. Retrieved from <https://www.oecd.org/els/society-at-a-glance-19991290.htm>
- OECD (Organization for Economic Co-operation and Development). (2019). *Database on Immigrants in OECD and Non-OECD Countries (DIOC-E)*. Retrieved from <https://www.oecd.org/els/mig/dioc.htm>
- O'Reilly, K. (2013). International migration and social theory. In *The Encyclopedia of Global Human Migration*. Oxford, UK: Blackwell Publishing Ltd.
- O'Rourke, K. H., & Sinnott, R. (2006). The determinants of individual attitudes towards immigration. *European Journal of Political Economy*, 22(4), 838–861.
- Odmalm, P. (2005). *Migration Policies and Political Participation*. London: Palgrave Macmillan UK.
- Oláh, J., Halasi, G., Szakály, Z., Popp, J., & Balogh, P. (2017). The impact of international migration on the labour market. A case study from Hungary. *The Amfiteatru Economic*, 19(46), 790-805
- Ortega, F., & Peri, G. (2013). The effect of income and immigration policies on international migration. *Migration Studies*, 1(1), 47–74.

- Ortega, J. And Verdugo, G. (2015). *The Impact of Immigration on the Local Labor Market Outcomes of Blue Collar Workers: Panel Data Evidence* (15/07). London, UK: Department of Economics, City University London. Retrieved from <http://openaccess.city.ac.uk/id/eprint/13838/>
- Özden, C., & Schiff, M. W. (2006). International Migration, Remittances, and the Brain Drain. World Bank. Retrieved from <https://openknowledge.worldbank.org/handle/10986/6929>.
- P, M. (2017). Environmental Disruption: Push/Pull Factors, Human Migration, and Homeland Security. *Journal of Political Sciences & Public Affairs*, 9(4), 831-848.
- Parasnis, J., & Swan, J. (2017). Differences in educational attainment by country of origin: Evidence from Australia (No.05-17). Monash University, Department of Economics. Retrieved from <https://www.monash.edu/business/economics/research/publications/publications2/0517differencesparasniswan.pdf>.
- Pedraza, S. (1991). Women and migration: The social consequences of gender. *Annual review of sociology*, 17(1), 303-325.
- Peters, B. G. (2019). *Institutional theory in political science: The new institutionalism*. Edward Elgar Publishing.
- Photios Tapinos, G. (2000). Globalisation, Regional Integration, International Migration. *International Social Science Journal*, 52(165), 297–306.
- Pietsch, J., & Clark, M. (2015). Chapter Title: Labour migration flows and regional integration in Southeast Asia Chapter Author(s): Marshall Clark Book Title: *Migration and Integration in Europe, Southeast Asia, and Australia* Book Subtitle: *A Comparative Perspective*. Amsterdam University Press.
- Piore, M. J. (1978). Dualism in the Labor Market : A Response to Uncertainty and Flux. The Case of France. *Revue Économique*, 29(1), 26–48.
- Piper, N. (2005). Gender and migration A paper prepared for the Policy Analysis and Research Programme of the Global Commission on International Migration and does not represent the views of the Global Commission on International Migration. Retrieved from <http://incedes.org.gt/Master/pipersentacuatro.pdf>.
- Pissarides, C. A., & McMaster, I. (1990). Regional migration, wages and unemployment: empirical evidence and implications for policy. *Oxford economic papers*, 42(4), 812–831.
- Pissarides, C. A., & Wadsworth, J. (1989). Unemployment and the inter-regional mobility of labour. *The Economic Journal*, 99(397), 739-755.
- Plane, D. A. (1993). Demographic Influences on Migration. *Regional Studies*, 27(4), 375–383.
- Portes, A. (2009). Migration and development: reconciling opposite views. *Ethnic and Racial Studies*, 32(1), 5–22.

- Portes, A., & Celaya, A. (2013). Modernization for Emigration: Determinants & Consequences of the Brain Drain. *Daedalus*, 142(3), 170–184.
- Portes, A., & Sensenbrenner, J. (1993). Embeddedness and Immigration: Notes on the Social Determinants of Economic Action. *American Journal of Sociology*, 98(6), 1320–1350.
- Preston, R. (1987). *Education and Migration in Highland Ecuador*. Comparative Education. Taylor & Francis, Ltd.
- Quinn, M. A., & Rubb, S. (2005). The importance of education-occupation matching in migration decisions. *Demography*, 42(1), 153–167.
- Rabe, B., & Taylor, M. P. (2012). Differences in Opportunities? Wage, Employment and House-Price Effects on Migration\*. *Oxford Bulletin of Economics and Statistics*, 74(6), 831–855.
- Rao, N. (2009). Gender differences in migration opportunities, educational choices and wellbeing outcomes. Sussex: Development Research Centre on Migration, Globalisation and Poverty. Retrieved from <https://www.gov.uk/dfid-research-outputs/gender-differences-in-migration-opportunities-educational-choices-and-wellbeing-outcomes>
- Reed, D. (2001). Immigration and males' earnings inequality in the regions of the United States. *Demography*, 38(3), 363–373.
- Reich, M., Gordon, D. M., & Edwards, R. C. (1973). Dual labor markets: A Theory of Labor Market Segmentation. *American Economic Review*, 63(2), 359–365.
- Reitz, J. G. (2001). Immigrant skill utilization in the Canadian labour market: Implications of human capital research. *Journal of International Migration and Integration / Revue de l'integration et de La Migration Internationale*, 2(3), 347–378.
- Remeikiene, R., & Gaspareniene, L. (2019). Assessment of the impact of emigration on the origin economy. *Business: Theory and Practice*, 20, 187–195.
- Rendall, M. S., & Parker, S. W. (2014). Two decades of negative educational selectivity of Mexican migrants to the United States. *Population and Development Review*, 40(3), 421–446.
- Reilly, K. (2015). Migration theories: A critical overview. In *Routledge handbook of immigration and refugee studies* (pp. 49-57). Routledge. Retrieved from [https://repository.lboro.ac.uk/articles/Migration\\_theories\\_a\\_critical\\_overview/9478736](https://repository.lboro.ac.uk/articles/Migration_theories_a_critical_overview/9478736)
- Rios-Avila, F., & Canavire-Bacarreza, G. (2016). Unemployed, Now What? The Effect of Immigration on Unemployment Transitions of Native-born Workers in the United States, 16–25 . Retrieved from <http://www.levyinstitute.org>
- Riphahn, R. T. (2003). Cohort effects in the educational attainment of second generation immigrants in Germany: An analysis of census data. *Journal of Population Economics*, 16(4), 711–737.

- Ritsilä, J., & Ovaskainen, M. (2001). Migration and regional centralization of human capital. *Applied Economics*, 33 (3), 317–325
- Robertson, R., & Lechner, F. (1985). Modernization, Globalization and the Problem of Culture in World-Systems Theory. *Theory, Culture & Society*, 2(3), 103–117.
- Rozelle, S., Taylor, J. E., & DeBrauw, A. (1999). Migration, remittances, and agricultural productivity in China. *American Economic Review*, 89(2), 287–291.
- Rubery, J. (2015). Structured Labour Markets, Worker Organisation, and Low Pay. *Classes, Power, and Conflict*, 2(1), 330–348.
- Ruhs, M., & Vargas, S. C. (2017). The Labour Market Effects of Immigration - Migration Observatory: The Migration Observatory. Migration Observatory University of Oxford, 1–7. Retrieved from <https://migrationobservatory.ox.ac.uk/wp-content/uploads/2016/04/181214-Briefing-Labour-Market-Effects-Immigration.pdf>.
- Salt, J., & Almeida, J. C. (2010). International Migration in Europe. *Revue Européenne Des Migrations Internationales*, 22(2), 155–175.
- Sarihasan, I. (2016). Immigration Growth Tendencies in Oecd Countries. *Sea Practical Application of Science*, (12), 547–553.
- Schneeweis, N. (2011). Educational institutions and the integration of migrants. *Journal of Population Economics*, 24(4), 1281–1308.
- Schwartz, A. (1976). Migration , Age , and Education Aba Schwartz. *Journal of Political Economy*, 84(4), 701–720.
- Simpson, N. (2017). Demographic and economic determinants of migration. *IZA World of Labor*, 1–11. Retrieved from : <https://wol.iza.org/articles/demographic-and-economic-determinants-of-migration/long>
- Simpson, N. B. (2017). Demographic and economic determinants of migration Push and pull factors drive the decision to stay or move. *IZA World of Labor*, 373. Retrieved from: <https://wol.iza.org/articles/demographic-and-economic-determinants-of-migration/long>.
- Sindi, K. (2006). A Test of the New Economics of Labor Migration Hypothesis : Evidence from Rural Kenya Lilian Kirimi. *Agricultural Economics*, 1–24. Retrieved from: <https://ageconsearch.umn.edu/record/21257/?ln=en>.
- Sjaastad, L. A. (1962a). The Costs and Returns of Human Migration. *Journal of Political Economy*, 70(5), 80–93.
- Skeldon, R. (2017). United Nations Expert Group Meeting On Sustainable Cities, Human Mobility and International Migration. Population Division Department of Economic and Social Affairs United

Nations Secretariat New York International Migration, Internal Migration, Mobility and Urbanization: Towards More Integrated Approaches. Retrieved from <https://www.un.org/en/development/desa/population/events/pdf/expert/27/papers/II/paper-Skeldon-final.pdf>

Smyth, E. (2005). Gender differentiation and early labour market integration across Europe. *European Societies*, 7(3), 451–479.

Soiferman, L. K. (2010). Compare and Contrast Inductive and Deductive Research Approaches. Retrieved from <https://files.eric.ed.gov/fulltext/ED542066.pdf>.

Solow, R. M. (1990). *The labor market as a social institution*. B. Blackwell.

Stamps, K., & Bohon, S. A. (2006). Educational Attainment in New and Established Latino Metropolitan Destinations. *Social Science Quarterly*, 87(s1), 1225–1240.

Stark, O., & Taylor, J. E. (1991). Migration Incentives, Migration Types: The Role of Relative Deprivation. *The Economic Journal*, 101(408), 1163.

Steckloy, G., Carletto, C., Azzarri, C., & Davis, B. (2010). Gender and migration from Albania. *Demography*, 47(4), 935–961.

Stuhler, J., Thomasen, H., & Zimmermann, K. F. (2008). Geographic Mobility in the European Union: Optimising its Economic and Social Benefits. Retrieved from : <https://www.iza.org/publications/r/111/geographic-mobility-in-the-european-union-optimising-its-economic-and-social-benefits>

Südekum, J. (2003). *Agglomeration and Regional Unemployment Disparities*. Peter Lang. Frankfurt

Sweetland, S. R. (1996). Human capital theory: Foundations of a field of inquiry. *Review of Educational Research*, 66(3), 341–359.

Tacoli, C. (1999). International Migration and the Restructuring of Gender Asymmetries: Continuity and Change among Filipino Labor Migrants in Rome . *International Migration Review*, 33(3), 658–682.

Tacoli, C., & Mabala, R. (2010). Exploring mobility and migration in the context of rural—urban linkages: why gender and generation matter. *Environment and Urbanization*, 22(2), 389–395.

Takenaka, A., & Pren, K. A. (2010). Determinants of emigration: Comparing migrants' selectivity from Peru and Mexico. *The Annals of the American Academy of Political and Social Science*, 630(1), 178–193.

Tani, M. (2017). Skilled Migration Policy and the Labour Market Performance of Immigrants. Retrieved from <https://www.lowyinstitute.org/publications/skilled-migration-policy-and-labour-market-performance-immigrants>

- Todaro, M. P. (1969). American Economic Association A Model of Labor Migration and Urban Unemployment in Less Developed Countries. *The American Economic Review*, 59(1), 138–148.
- Truong, T.D. (1996). Gender, International Migration and Social Reproduction: Implications for Theory, Policy, Research and Networking. *Asian and Pacific Migration Journal*, 5(1), 27–52.
- UNESCO. (2012). International standard classification of education: ISCED 2011. Retrieved from <https://www.voced.edu.au/content/ngv:54992>
- Valadez, J. M. (2012). Immigration, Self-Determination, and Global Justice: Towards a Holistic Normative Theory of Migration. *Journal of International Political Theory*, 8(1–2), 135–146.
- Valverde, J. R., & Vila, M. R. (2003). Internal migration and inequalities. The influence of migrant origin on educational attainment in Spain. *European sociological review*, 19(3), 299–317.
- Van de Werfhorst, H. G., & Heath, A. (2019). Selectivity of Migration and the Educational Disadvantages of Second-Generation Immigrants in Ten Host Societies. *European Journal of Population*, 35(2), 347–378.
- Van Hear, N., Bakewell, O., & Long, K. (2018). Push-pull plus: reconsidering the drivers of migration. *Journal of Ethnic and Migration Studies*, 44(6), 927–944.
- Venturini, A., & Villosio, C. (2006). Labour market effects of immigration into Italy: An empirical analysis 1. *International Labour Review*, 145(1-2), 91–118.
- Verwiebe, R. (2014). Why do Europeans Migrate to Berlin? Social-Structural Differences for Italian, British, French and Polish Nationals in the Period between 1980 and 2002\*. *International Migration*, 52(4), 209–230.
- Wachter, M. L., Gordon, R. A., Piore, M. J., & Hall, R. E. (1974). Primary and secondary labor markets: a critique of the dual approach. *Brookings Papers on Economic Activity*, 1974(3), 637–693.
- Wallerstein, I. (1974). The rise and future demise of the world capitalist system: Concepts for comparative analysis. *Comparative studies in society and history*, 16(4), 387–415.
- Wendorf, F. (1966). Early Man in the New World: Problems of Migration. *The American Naturalist*, 100(912), 253–270.
- Wesselbaum, D., & Aburn, A. (2019). Gone with the wind: International migration. *Global and Planetary Change*, 178, 96–109.
- Williams, A. M. (2009). International Migration, Uneven Regional Development and Polarization. *European Urban and Regional Studies*, 16(3), 309–322.
- Williams, N. (2009). Education, gender, and migration in the context of social change. *Social Science Research*, 38(4), 883–896.

- Williamson, O. E. (2000). The new institutional economics: taking stock, looking ahead. *Journal of economic literature*, 38(3), 595–613.
- Willis, K. G. (1975). Regression Models of Migration. An Econometric Reappraisal of Some Techniques. *Geografiska Annaler. Series B, Human Geography*, 57(1), 42.
- Wouterse, F., & Taylor, J. E. (2008). Migration and Income Diversification: Evidence from Burkina Faso. *World Development*, 36(4), 625–640.
- Yang, X., & Guo, F. (1999). Gender Differences in Determinants of Temporary Labor Migration in China: A Multilevel Analysis. *International Migration Review*, 33(4), 929.
- Yezer, A. M. J., & Thurston, L. (1976). Migration Patterns and Income Change: Implications for the Human Capital Approach to. Source: *Southern Economic Journal*, 42 (4), 693-702.
- Yorimitsu, M. (1985). A Review On The Determinants Of Migration. *Hitotsubashi Journal of Social Studies*, (17), 17–27.
- Zagorski, K. (1990). Regional differences in immigration and economic structure in Australia. *International Migration*, 28(3), 347–368.
- Zavadny, M. (1999). Determinants of Recent Immigrants' Locational Choices. *International Migration Review*, 33(4), 1014.
- Zelinsky, W. (1971). The Hypothesis of the Mobility Transition. *Geographical Review*, 61(2), 219.
- Zhang, H. (2009). Labor Migration, Gender, and the Rise of Neo-Local Marriages in the Economic Boomtown of Dongguan, South China. *Journal of Contemporary China*, 18(61), 639–656.
- Zimmer, C. (2007). *Smithsonian intimate guide to human origins*. Harper Collins.
- Zimmermann, K. F. (1995). Tackling the European migration problems. *Journal of Economic Perspectives*, 9(2), 45-62.

## LIST OF PUBLICATIONS



**UNIVERSITY of  
DEBRECEN**

**UNIVERSITY AND NATIONAL LIBRARY  
UNIVERSITY OF DEBRECEN**

H-4002 Egyetem tér 1, Debrecen  
Phone: +3652/410-443, email: [publikaciok@lib.unideb.hu](mailto:publikaciok@lib.unideb.hu)

Registry number: DEENK/50/2020.PL  
Subject: PhD Publikációs Lista

Candidate: Imran Sarihasan  
Neptun ID: Z2W3MC  
Doctoral School: Károly Ihrig Doctoral School of Management and Business  
MTMT ID: 10057156

### List of publications related to the dissertation

#### Articles, studies (3)

1. **Sarihasan, I., Máté, D.:** Modern slavery policies in a conceptual perspective.  
*International Journal of Engineering and Management Sciences = Műszaki és Menedzsment Tudományi Közlemények.* 3 (4), 30-35, 2018. ISSN: 2498-700X.  
DOI: <http://dx.doi.org/10.21791/IJEMS.2018.4.4>.
2. Máté, D., **Sarihasan, I.**, Popp, J., Oláh, J.: The role of regional differences in immigration: the case of OECD countries.  
*Economics & Sociology.* 11 (3), 190-206, 2018. ISSN: 2071-789X.  
DOI: <http://dx.doi.org/10.14254/2071-789X.2018/11-3/12>
3. Máté, D., **Sarihasan, I.**, Dajnoki, K.: The Relations between Labour Market Institutions and Employment of Migrants.  
*Amfiteatru Economic.* 19 (46), 806-820, 2017. ISSN: 1582-9146.  
IF: 0.664

#### Conference presentations (1)

4. Máté, D., **Sarihasan, I.:** The Labour Status and Demographic Characteristics of Migrants in a Regional Perspective.  
In: Management 2018 : management and the world in motion, challenges, opportunities and threats. Ed.: Miroslav Frankovsky, Ján Dobrovic, Richard Fedorko, Bookman s.r.o. for Faculty of Management, University of Presov, Presov, 323-327, 2018. ISBN: 9788081653018



Address: 1 Egyetem tér, Debrecen 4032, Hungary Postal address: Pf. 39. Debrecen 4010, Hungary  
Tel.: +36 52 410 443 Fax: +36 52 512 900/63847 E-mail: [publikaciok@lib.unideb.hu](mailto:publikaciok@lib.unideb.hu), Web: [www.lib.unideb.hu](http://www.lib.unideb.hu)



---

**List of other publications**

Articles, studies (2)

5. **Sarihasan, I.:** The gender differences of immigration in OECD countries.  
*Analele Universității din Oradea. Științe economice = Annals of University of Oradea.  
Economic science.* 26 (1), 697-706, 2017. ISSN: 1222-569X.
6. **Sarihasan, I.:** Immigration Growth Tendencies in OECD Countries.  
*SEA-Practical Application of Science.* 4 (3(12)), 547-553, 2016. ISSN: 2360-2554.

**Total IF of journals (all publications): 0,664**

**Total IF of journals (publications related to the dissertation): 0,664**

The Candidate's publication data submitted to the iDEa Tudóstér have been validated by DEENK on the basis of the Journal Citation Report (Impact Factor) database.

02 March, 2020



## LIST OF TABLES

Table 2- 5: Push and Pull Factors of Migration.....	17
Table 2- 6: Theories of Migration.....	19
Table 2- 7: Contributors of Theories and Their Assumptions with Limitations.....	30
Table 2- 8: Comparison of Migration Theories.....	31
Table 3- 3: Variables and Their Acronyms.....	52
Table 3- 4: International Educational Attainment Classification.....	55
Table 4- 18: Result of the Descriptive Statistics.....	62
Table 4- 19: Result of Crosstabs: Relationship between Gender, Educational Attainment, Age and Foreign-Born status with OECDb, Africa, Asia, Europe, NOAM, Oceania, Employed, Unemployed and Inactive Status.....	63
Table 4- 20: Result of Crosstabs: Relationship between Gender, Educational Attainment, Age and Foreign-Born Status.....	64
Table 4- 21: Result of Crosstabs: Relationship between Employed, Unemployed and Inactive Status with Gender, Age, Educational Attainment, Foreign-Born, OECDb, Africa, Asia, Europe, NOAM, Oceania and SCAC.....	65
Table 4-22: Independent Sample (U) Test Based on Educational Attainment Differences of Migration.....	66
Table 4- 23: Independent Sample (U) Test Based on Age Differences of Migration.....	67
Table 4- 24: Result of the Logit Models by Region of Birth Based on Africa and Asia.....	69
Table 4- 25: Result of the Logit Models by Region of Birth Based on NOAM and Oceania.....	70
Table 4- 26: Result of the Logit Models by Region of Birth based on SCAC.....	71
Table 4- 27: Result of the Logit Model by Country of Birth.....	72
Table 4- 28: Result of the Logit Models by Labor Status Differences in Migration.....	74
Table 4- 29: Result of the Logit Models by Labor Status Differences in Migration.....	75
Table 4- 30: Result of the Examined Nativity Status Differences .....	76
Table 4- 31: Result of the Examined Gender Differences of Migration.....	77
Table 4- 32: Result of the Educational Differences of Migration.....	78
Table 4- 33: Result of the Age Differences of Migration.....	80
Table 4- 34: Comparison with Previous Research Methodologies and Results.....	82
Table 5-1: Result of Hypotheses.....	91

## LIST OF FIGURES

FIGURE 0-1: SHARE OF THE MIGRANTS IN OECD BY COUNTRY OF BIRTH VERSUS THE NON-OECD COUNTRIES FROM 2000/11 TO 2015/2016.....	7
FIGURE 1- 1: THE SEQUENCING OF EACH SECTIONS OF THE DISSERTATION .....	11
FIGURE 1- 2: RESEARCH APPLIED MODEL IN THE DISSERTATION.....	12
FIGURE 2- 1: DRIVERS OF MIGRATION (MACRO AND MICRO-LEVEL).....	14
FIGURE 2- 2: THEORIES BASED ON EXPLANATION OF MIGRATION.....	19
FIGURE 2- 3: NEO-CLASSICAL ECONOMICS OF MIGRATION.....	21
FIGURE 2- 4: WORLD-SYSTEM THEORY OF MIGRATION .....	23
FIGURE 2- 5: DUAL LABOUR MARKET THEORY OF MIGRATION .....	25
FIGURE 2- 6: NEW ECONOMICS OF MIGRATION SYSTEM .....	26
FIGURE 2- 7: START POINT OF LABOUR MIGRATION .....	27
FIGURE 2- 8: HUMAN CAPITAL THEORY OF MIGRATION.....	29
FIGURE 2- 9: EDUCATIONAL ATTAINMENT AND MIGRATION.....	38
FIGURE 2- 10: GENDER INEQUALITY IN MIGRATION .....	41

## Acknowledgements

*First of all, I am grateful to **ALLAH Almighty** for giving me strength, knowledge and most importantly making me believe in myself to undertake this research study.*

*I would like to express my deep gratitude and respect to my supervisor **Dr. Máté Domicián** for his indefatigable help, support and kindness during my study.*

*My most special appreciate and gratitude goes to **Ms. Syeda Adila Afghan** for her amazing friendship, love, support, courage and making my life fabulous in Debrecen. I also would like to express my sincere and appreciate **Dr. Sehar Zulfiqar, Mr. Allam Yousuf, Mrs. Rabeea Sadaf, Dr. Bayan Sayed and Mr. Maen Dalahmeh and Miss.Maha Dalahmeh** for their courage and endless support.*

*I would like to pay my highest regards to my father **Mr. Osman Sarihasan**, my mother. **Mrs. Hatice Sarihasan** and my siblings, **Mr. Ali Sarihasan, Mrs. Nur Sarihasan Avcı and Mr. Mahmut Sarihasan** not just for their constant support of the dissertation but the support and care every step in my life for kept believing me even when I lost faith in me and felt disappointed. I am also grateful to my grandfather **Mr. Dursun Ali Sarihasan** and my grandmother **Mrs. Emine Sarihasan** for their generous support and care always. I also would like to gratitude my uncles **Mr. Kasim Temizel, Mr. Dursun Sarihasan and Mr. Muhammet Sarihasan** for their support and love. Words are not enough to describe how much I am thankful and lucky to have them.*

*Overall, several people have believed in me, supported and helped me in this dissertation; I would like to express my full gratitude for all. I always believe that, best gift in this world to have people who unconditionally believe in you, care and support you. Thank you for everything...*

*Last but not least, I would like to dedicate this dissertation to all migrants, who are seeking and hoping to have a better life in other countries... Who are trying to achieve their goals and trying to make their dreams come true in different lands... I hope one day, each part of the world can be a liveable place for all human beings...*

**Imran Sarihasan**