Hacettepe University Graduate School of Social Sciences

Department of Economics

# EVALUATION OF LABOUR MARKET INTEGRATION OF FOREIGN-BORN POPULATION IN TURKEY: A COHORT ANALYSIS

Egemen Can TOKER

Master's Thesis

Ankara, 2022

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## ACCEPTANCE AND APPROVAL

The jury finds that Egemen Can TOKER has, on the date of 25.05.2022, successfully passed the defence examination and approved his Master's Thesis titled "Evaluation of Labour Market Integration of Foreign-Born Population in Turkey: A Cohort Analysis".

_____

Prof. Dr. Dilek Başar Dikmen (Jury President)

_____

Assoc. Prof. Dr. Ali Murat Berker (Main Adviser)

_____

Prof. Dr. Aytekin Güven

I agree that the signatures above belong to the faculty members listed.

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# ABSTRACT

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This thesis examines foreign-born people's integration into the labour market of Turkey. With this aim, it tests the Immigrant Assimilation Hypothesis validation in Turkey. The main research question is, "Are immigrants in Turkey able to grow their labour market outcomes more rapid than natives?". Therefore, identifying the take-over point and the wage gap are related goals of this thesis. Another critical research question is, "Is assimilation ratio differentiated among immigrant cohorts by migration year?". In short, this study also analyses cohort effects on immigrants' labour market assimilation. For this purpose, Household Labour Force Surveys conducted by TurkStat are used between 2009-2020. Firstly, immigrants' assimilation is assessed by graphs in the descriptive analysis part. Then, regressions analyses are utilised to evaluate the differences in labour force participation and employment statuses for immigrants and natives by using the logistic regression method. Finally, it estimated regression models by using the ordinary least squares method to analyse the wage gap for immigrants and natives. The main results of the cross-sectional approach are that immigrants' earnings are equalised in 20-25 years after migration, which is also the take-over point, against natives. The wage gap for newly entered immigrants is equal to 20 per cent by this analysis. According to pooled cross-sectional studies, the recent cohort that arrived between 2012-2020 earns 30 per cent lower than natives. On the contrary, the best-earning cohort that arrived between 1980-1989 is 14 per cent higher than natives. In other words, the wage gap also differs among immigrant cohorts. Besides, earlier cohorts are more advantageous in terms of labour force participation and employment statuses. Consequently, the labour market integration of immigrants occurs with spending years in Turkey, and also cohort effect differentiates the economic integration of immigrants.

## Keywords

Economic Adaptation, Immigrant Workers, Immigrant Labour Market Integration, International Migration, Cohort Effect.

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| IAH | : Immigrant Assimilation Hypothesis |
| DGMM | : Directorate General of Migration Management |
| LFP | : Labour Force Participation |
| HLFS | : Household Labour Force Survey |
| TurkStat | : Turkish Statistical Institute |
| CPI | : Consumer Price Index |
| YSM | : Years Since Migration |

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# INTRODUCTION

The integration of immigrants into a new country is a dauntingly multidimensional and multidisciplined issue. In this respect, foreign-born people's labour market integration success in the destination country is one of the central dimensions in the overall adaptation process. Immigrants' economic well-being in the destination country might denote the economic integration success of immigrants. The labour market success of immigrants in the destination country is evaluated as the primary indicator of the integration process in economic domains. With this viewpoint, labour market outcomes are the main identifier of the immigrants' economic integration in the destination country.

Turkey has experienced different types of migration historically (Pusch, 2010). Nevertheless, until the 1990s, immigrants' economic integration in Turkey was not taken into account for two main reasons (Icduygu & Aksel, 2013). Firstly, Turkey's historic role as a source country for labour migration -especially to European countries- has caused the integration of immigrants in Turkey to be ignored. Secondly, the ethnic and religious kinship perspective of Turkey's immigration policy caused to be accepted immigrants' economic integration as a natural process that happens automatically. Nonetheless, immigrants who came after 1990 towards Turkey immensely originated from non-traditional origin countries and were labour immigrants. This situation partially contradicts the approach that Turkey is a source country for migration and Turkey's ethnic and religious kinship policy perspective for immigrants. This breakpoint has made the labour market integration of immigrants more crucial in the overall integration process for Turkey.

Currently, Turkey experiences many types of migration, such as regular, irregular, refugee, and asylum-seeker migrations. Approximately 3 per cent of Turkey’s population are foreign-born (OECD, 2021). Besides, more than half of the Syrian refugees worldwide live in Turkey. The Syrian refugee influxes made Turkey the top refugee-hosting country (UNHCR, 2021). These facts definitely indicate that immigration has become a critical issue for Turkey. As a result, analysing the labour market integration has immense importance to comprehend immigrants’ well-being in Turkey.

The interest area of this thesis is the labour market integration performance of the foreign-born population in Turkey. The focal point of the analysis is male immigrants who have entered Turkey after 1980. In this scope, the fundamental question of this thesis is whether male immigrants could successfully integrate into the labour market of Turkey. The primary way to estimate immigrants' economic integration success into the labour market is by comparing their labour market outcomes with natives' ones. With this comparison, this thesis aims to investigate the effect of being foreign-born on the labour market outcomes in Turkey. With this identification, this thesis also explores the effect of the number of years passed in the destination country on immigrants' integration. Furthermore, this thesis compares the immigrants each other as groups by the arriving year to the destination country. This study uses these ways together to answer the fundamental research question.

In attempts to answer main research question and consequently to analyse the foreign-born population's labour market integration process, I use datasets from the Household Labour Force Survey that the Turkish Statistical Institute collects. This survey is the most suitable available and commonly used data set to investigate labour market issues in Turkey because its content and structure are designed with this purpose. It has been conducted since 1988, whereas it has started differentiation of foreign-born and native-born people by the 2009 survey. Due to this limitation, I only use the data sets collected between 2009-2020 in this thesis.

Typical approaches evaluate economic integration in two methods. The first method assesses the degree to which immigrants achieve parity with the native population based on the labour market outcomes (Chiswick, 1978). The second method also evaluates the recent immigrants' labour market outcomes by comparison to the earlier immigrants in addition to the first method (Borjas, 1985). This study investigates the labour market outcomes difference between natives and immigrants by using both approaches to assess the immigrants' integration process in Turkey. For comprehending the labour market integration process holistically, this thesis estimates three different labour market outcomes for both natives and immigrants. These are labour force participation status, employment status and wages. Evaluating all labour market outcomes in both methods will allow unpacking immigrants' labour market integration process in a broader sense.

I use both the descriptive analysis and the regression methods to examine the labour market integration of immigrants. In the descriptive analysis method, this thesis utilises various graphs and tables to comprehend the economic integration of immigrants in Turkey. In addition to descriptive methodology, I employ the regression analysis to estimate the three main labour market outcomes. I estimate different estimation models with different variables and methodologies to reveal immigrants' relative levels against natives and other immigrants in the labour market outcomes. I use logistic regression model for labour force participation and employment statuses and the ordinary least squares methodology for wages.

This thesis also provides new empirical perspectives on the economic integration of foreign-born. This new perspective mainly originates from our focus country Turkey. Economic adaptation studies are mainly conducted for developed countries like the US, UK, and Germany, but this research supplies new insight from a developing country. Besides, this research serves a broad view of the labour market integration. Few studies in the literature examine the labour market outcomes together with all aspects and present a holistic labour market integration analysis. In this respect, this study contributes to the literature by also assessing labour force participation and employment statuses, and wages together for both natives and immigrants.

The results of this study primarily show that there is a gap in terms of labour market outcomes between natives and immigrants in favour of natives in Turkey. This means that immigrants encounter obstacles in the labour market. Besides, the duration of residence in terms of years in Turkey for the immigrant people is useful to economic adaptation into the labour market. In other words, years passed in Turkey helped close the labour market outcomes gap for immigrants. Moreover, the cohort effect is valid for immigrants in Turkey. The earlier immigrant cohorts in Turkey are in a better situation in general lines than the recent immigrant cohorts in terms of labour market outcomes. Also, there is human capital variation among immigrant cohorts. It means that immigrant cohorts' human capital quality is not constant, changing within years. This variation also alters the economic adaptation of immigrants. In Turkey, recent immigrant cohorts are less educated than former ones. It might be one of the reasons for labour market integration problems.

This thesis analyses the labour market gaps between immigrants for Turkey and natives and the adaptation of immigrants in Turkey into five chapters. The first chapter summarises the theoretical background of labour market integration for immigrants by using labour market theories. This chapter provides comprehensive insights into components of the labour market outcomes mentioned in the literature. Although explained components include other main features - such as labour demand, macroeconomic effects-, they cover mostly within the framework of the human capital approach. Then, the research continues with an empirical literature review about the labour market integration process of immigrants in Chapter 2. This section summarises the empirical background of economic adaptation, focusing on the methodological approach differences and debates in the literature. I elaborate historical immigration experience of Turkey with the destination country role for foreign-born in Chapter 3. This chapter only focuses on the history of international immigration towards Turkey. It will also provide significant information about the immigration policy approach of Turkey and its changing over the years.

In Chapter 4, I explain the data set, variables, and methodological approach of this thesis. In this chapter, I also mention the study's limitations arising from the data structure of the Household Labour Force Survey. In addition, this chapter displays summary statistics about natives, immigrants, and different cohorts of immigrants. Chapter 5 presents the estimation results of the regression analyses. The marginal effects of variables on the labour market outcomes for immigrants and natives are examined in this chapter. I reveal the impact of being foreign-born and the relative differences in labour market outcomes among immigrants and natives. In this chapter, I also use descriptive analyses for the labour market outcomes gap. Finally, I conclude this research with the conclusion section. In the conclusion section, I discuss the labour market integration process of immigrants in Turkey from abroad perspective by using the empirical results of this thesis.

Lastly, different terms are utilised interchangeably in this intimidatingly complex and multi-disciplined literature. In addition, some terms are used frequently in the economics of immigration than other disciplines perspectives towards the immigration phenomenon. In this thesis, the term source country is generally used to indicate an immigrant-sending country, and the destination country defines an immigrant-receiving country. On the other

hand, foreign-born and immigrant words are utilised interchangeably in this thesis, likewise native-born and native. Lastly, economic adaptation, labour market integration and labour market assimilation terms mean the same process in this study. I use these terms interchangeably throughout this study.

# CHAPTER 1

# THEORETICAL FRAMEWORK

Literature on immigration covers an intimidatingly large, scattered and heterogeneous set of topics. In addition, researchers approach this topic from several disciplinary perspectives including economics. Comprehending the theoretical framework becomes complicated with this interdisciplinary approach, however it is necessary to grasp the problematics of immigration broadly. I summarise this daunting theoretical literature from the point of economic assimilation view in this thesis. I examine the elements that ensure success in the labour market outcomes in a neoclassical theoretical framework for immigrants in this chapter. This approach allows analysing immigrants assimilation process in the destination country only from the economic viewpoint.

The surge in international immigration sourced extensive literature examining what happens to labour markets in both source and destination countries due to immigration-induced labour supply shifts (Borjas, 2014:63). This section focuses the theoretical background on mechanisms that ensure economic assimilation in terms of the labour market outcomes in the destination country. This perspective focuses on immigrants' labour market success in the destination country against natives and other immigrants. Two different dimensions are to analyse the labour market integration process. These are differences in labour force participation and employment statuses, which are closely connected, and the wage gap among natives and immigrants. Mechanisms that influence labour market outcomes, thus the elements of the economic assimilation of immigrants, could be divided into four main parts. These are labour supply, labour demand, labour market matching process and policies. Each principal component of immigrants' economic assimilation is explained in separate sections in this order.

## 1.1. LABOUR SUPPLY

The focal point of this section is the human capital quality differences among natives and immigrants. Human capital and skills are accepted as the main determinants of labour market outcomes. Each country, sector and even company would necessitate a specific set of skills to employ a worker. Typically, a country educates and trains citizens according to human capital necessities. This need could also be sector-specific or firm-specific. An immigrant might not have acquired these required skills in the source country. These differences in human capital elements cause differences in the labour supply conditions. The primary means of growing in labour market outcomes could be to invest in human capital and to become a more skilled worker (Borjas, 2019).

Human capital elements could be summarised as education, experience, vocational training and certificate, and destination country's language knowledge. The labour market integration process of immigrants in the destination country is the summary of the value of all the individual skills that the new immigrant brings and can transfer to the destination country, like education, work experience, vocational education and destination country language fluency (Borjas, 2016). There can be said a consensus emerged among labour economists that schooling years, job market experience, professional and vocational background, and language knowledge are significant factors that can explain a considerable part of the existing wage differentials across individuals (Bhattarai, 2017). However, there is much disagreement on the relative importance of each of these variables for earnings (Mincer, 1974; Spence & Stiglitz, 1975; Heckman & Sedlacek, 1985; Shultz, 1998). The skill acquisition in the destination country is also a crucial labour supply element for labour market integration (Bacolod & Rangel, 2017).

There are multiple dimensions for human capital like schooling years, experience years, and destination country language knowledge. First of all, the positive relationship between an individual's schooling and subsequent earnings might reflect productivity augmenting education effects (Mincer, 1975). In addition, the impact of educational attainment on economic assimilation could be different depending on where it is acquired. Educational acquirements from the source country could be less valued in the destination country. There is a significantly lower return for source country schooling than destination country schooling (Friedberg, 2000; Bratsberg & Ragan, 2002; Ci et al.,

2020). An immigrant that has taken destination country schooling earns higher wages than a foreign-born without destination country schooling (Friedberg, 2000; Bratsberg & Ragan, 2002; Hou & Lu, 2017; Ci et al., 2020). As a result, this situation also causes a negative impact on the integration process of a foreign-born person against natives. Eventually, when a foreign-born person has a destination country education, it could integrate into the labour market with ease, lessening the difference with a native-born person and widening the disparity with other immigrants without destination country education. This result also applies to vocational education. A foreign-born person with provable vocational training is in a better position about the labour market integration than an immigrant who does not have it (Burkert & Seibert, 2007).

In keeping with the human capital approach, ample evidence suggests that the typical worker's age-earnings profile —wages throughout the worker's life cycle— has a predictable path (Murphy & Welch, 1990; Borjas, 1996). The age-earning profile is often used to describe earnings change over the life cycle (Thornton et al., 1997). This profile suggests that earnings increase in the early years, a peak around middle age, and a decline thereafter. (Luong & Hebert, 2009). The decline in earnings at older ages reflects a decrease in productivity due to deterioration in human capital (Mincer 1974).

Relative positions of age-earnings profiles of immigrants and natives are used to assess the economic assimilation of foreign-born people (Chiswick, 1978; Lemos, 2013). Ageing is a crucial element of the labour market integration of immigrants, and it is positively related to immigrants' economic assimilation (Borjas, 2015). Besides, age at arrival to the destination country is another element of labour market integration (Schaafsma & Sweetman, 2001; Gill & Ahmad, 2018). Economic integration of younger immigrants into the labour market is more likely (Villareal & Tamborini, 2018; Alexander & Ward, 2018). Age at arrival is negatively related to labour market outcomes like labour force participation because new skills and knowledge acquisition get slower with ageing, affecting the assimilation rate of immigrants (Friedberg, 1992).

In addition to these, Mincer (1974:65) defends work experience as one of the most critical parts of determining wage. Nielsen et al. (2004) stated that the only way to achieve labour market integration is for immigrants to find a job and to accumulate work experience in the destination country. Work experience has a country-specific nature; hence, equal

years of experience from source and destination countries have no similar effect on wages. Destination country experience has a more significant impact on wages than source country experience (Chiswick, 1978:902).

Another essential dimension of the integration process is fluency in the destination country language. Language abilities are among the most fundamental factors affecting labour market performance (Rivera-Batiz, 1992; Takenaka et al., 2016). Among immigrants, proficiency in the destination country's language is an important skill, and countries with similar languages tend to have similar cultures and institutions (Chiswick & Miller, 2012). The wage gap may mean the fluency gap in the destination country's language for immigrants (Himmler & Jackle, 2017). The labour market integration for foreign-born people happens quickly with the destination country language knowledge. (Dustmann, 1994; David, 1999; Cobb-Clark, 2002; Aydemir & Skuterud, 2005; Budría & Swedberg, 2012; Borjas, 2015; Beyer, 2018).

Another theoretical debate of economic assimilation is on the effects of ethnic enclaves and the social network of foreign-born. Living in an ethnic or a linguistic enclave creates complicated outcomes for foreign-born about labour market integration (Xie & Gough, 2011). Enclaves may theoretically positively or negatively affect those groups' economic performance (Damm, 2009). Nevertheless, foreign-born people from the same origin who are located in the same neighbourhood are less tend to assimilate into the labour market (Lazear, 1999). The wage earnings of foreign-born people who live in an ethnic/linguistic community may differ from foreign-born wage earnings who live outside these enclaves. Foreign-born people in enclaves are limited to work in unwanted and low wage jobs (Sanders and Nee, 1987).

Labour market integration is also related to acquiring destination-specific skills, language fluency. When a foreign-born person resides in an ethnic or linguistic enclave at the destination country, a person develops the destination country's language fluency less possibly (Borjas, 1995; Lazear, 1999; Chiswick & Miller, 2002). Living in a large ethnic enclave and a solid ethnic or social network is a potential source for a "language trap" (Bauer, Epstein & Gang, 2004). Living in an ethnic enclave could be an obstacle for the labour market integration due to a slowdown in the rate of acquisition of destination-specific skills (Chiswick, 1991; Lazear, 1999). Because strong ethnic enclaves and large

networks decrease the return rate of investment to country-specific human capital and hinder improvement in language fluency. (Borjas, 2007; Borjas, 2015). Besides, the origin country could affect the working principle of the other assimilation mechanisms (Lehmer & Ludsteck, 2015). For example, improving firm-specific skills and mobility to better-paying industries could be of varying importance for different immigrant origins. As a result, failure in the labour market integration of the destination country for an immigrant who lives in a large ethnic or linguistic enclave is highly possible.

Another important element of the economic assimilation for immigrants is the transferability of their human capital accumulation from the source country to the destination country. Theoretical considerations also include transferring foreign-born skills to the destination country's labour market (Duleep, 2015:108). Skill transferability detects the influence of pre-immigration skills over the labour market outcomes in the destination country (Lessen & Sanders, 2014). With this framework, greater skill transferability causes a higher integration possibility for foreign-born people (Chiswick & Miller, 2012). High skill transferability could lead to high entry earnings (Chiswick & Miller, 2011). On the other hand, when skills transfer imperfectly, the labour market integration of immigrants is harmed (Aldashev, Gernandt & Thomsen, 2013). The economic assimilation of immigration to the destination country ultimately depends on the skill mix of the immigrant population (Borjas, 2015). From this point of view, an immigrant who easily transfers the skill set can be expected to integrate into the labour market more quickly and smoothly than those who cannot. Besides, skill transferability is vital to find an employment opportunity if these skills match the labour demand.

Moreover, accumulating destination country-specific and firm-specific human capital is also essential to labour market integration (Beenstock, Chiswick & Paltiel, 2009; Lehmer & Ludsteck, 2015). Additional vocational training in the destination country is a part of human capital acquisition. The acquisition of destination-specific skills is one of the primary sources of growth in foreign-born people's earnings (Duleep, 2015:110). After immigration, it is expected that the foreign-born begins to acquire destination country-specific human capital. If immigrants develop this capital more rapidly than similar native workers, foreign-born earnings will converge to native-born wages (Chiswick, 1978).

Eventually, the rises in wages with a duration passing at the destination country is attributable to skill and information acquisition.

Finally, there is an additional mechanism, which is closely related to both skill transferability and human capital acquiring in the destination country. It detected by empirical studies is the trade-off between immigrants' initial labour market outcomes and growth of labour market outcomes in the destination country. There is an inverse relationship between these two in the destination country (Duleep & Dowhan, 2002; Chiswick & Miller, 2011; Villareal & Tamborini, 2018). Immigrants might not invest in new skills and human capital when they can transfer former skills perfectly because this causes higher entry earning. Less investing in country-specific and firm-specific human capital slow down growth in labour market outcomes after the immigration, vice versa (Chiswick & Miller, 2011).

### 1.2. LABOUR DEMAND

In addition to the strong emphasis on the individual human capital in studies (Livingston & Kahn, 2002), many studies have also highlighted other factors for integrating foreign-born individuals into the destination country's labour market (Gathmann & Keller, 2018). Labour demand is the leading one of the other factors. However, in comparison to the labour supply research, there are surprisingly few studies on labour demand and immigrants' economic assimilation relation (Ross & Zimmermann, 1993). Macroeconomic conditions and sectoral structure of the destination country are the pioneer elements of labour demand on immigrants' labour market integration.

The labour demand is affected by the destination country's macroeconomic conditions (McKenzie, Theoharides, & Yang, 2014). It is also called the period effect. Measuring the rate of economic assimilation for foreign-born also requires identifying how macroeconomic conditions change the relative wages of foreign-born and natives over time (Borjas, 2014:213). However, the macroeconomic conditions on the labour market integration of foreign-born have also received surprisingly little attention in the literature (McDonald & Worswick, 1998). Nevertheless, earlier papers assumed that the macroeconomic condition does not affect foreign-born and native-born wage earnings

differently or macroeconomic conditions are stable. This assumption is inevitable when working with cross-sectional data sets.

On the contrary, this assumption is less critical in studies with other types of datasets. The labour market integration process happens slower in recession times. Labour market integration could taper in recessions along with a slowdown in aggregate wage growth (Bils, 1985). In short, economic assimilation accelerates in expansionary periods and slows down in recessionary periods (McDonald & Worswick, 1998; 1999). Immigrants who arrive in the destination country in periods of high unemployment may suffer permanent suffering that negatively impacts later labour market outcomes. In short, the current situation of labour demand of the destination country alters the economic assimilation of immigrants.

On the other hand, the sectoral structure of the destination country identifies the labour demand formation (Elrick & Lewandowska, 2008). Besides, the size of the informal sector is also essential while determining labour demand (Lucas, 2015). These elements are named sectoral segmentation or dual sector. In the dual-sector model, the primary sector is characterised by high wage jobs, stable conditions, and demand for high qualifications. In contrast, the secondary sector is defined by low-wage jobs, an unqualified labour force, and a high degree of job insecurity (Gollin, 2014). According to dual-sector theory, labour immigrants take up jobs in sectors where the native labour force did not realise the demand. These sectors are secondaries. Therefore, they compete with the native employees in a restricted manner (Heinz & Ward-Warmedinger, 2006). In line with this theory, labour demand towards immigrants takes form following the magnitude of the informal sector.

### 1.3. LABOUR MARKET MATCHING PROCESS

Labour supply and demand are closely tied with the labour market matching or mismatching processes. The matching of labour supply and demand is the critical factor for the labour market integration (Borjas, 2016:282). When skills and capabilities provided by immigrant workers match the expectations of the labour demand side, labour market matching may happen. Otherwise, immigrants may not manage to find a job, and

the labour market assimilation process could cease. If the given level of socio-economic characteristics of an immigrant person fits with the expectation of the destination country, an immigrant has a greater chance of reaping a return to his labour and human capital than another foreign-born person (Bodvarsson & Van den Berg, 2009:41).

A mismatch between the supply and demand for worker skills is a fundamental cause of not integrating into the labour market for foreign-born people (Borjas, 2016:503). There are different skill mismatches, like over/under-education or over/under-qualified (McGuinness & Sloane 2011; Chiswick & Miller, 2010). Skill mismatching might cause unemployment in the destination country for immigrants. Lack of finding neat employment opportunities is an essential dimension of unsuccessful integration of the labour market.

The characteristics of regions where immigrants are settled, and the labour market structure of this region are essential for labour market matching (Reitz, 2001). Social networks and ethnic enclaves are also vital elements of immigrant's labour market matching (Borjas, 2000; Beaman, 2010; Postepska & Vella, 2013). Residential area in the destination country affects immigrants' economic assimilation pace (Fernandez & Ortega, 2007). Immigrants who reside in rural regions assimilate slower than reside in urban areas in general (Chiswick, 1978). On the contrary, some pieces of evidence show that living in a place where labour supply is scarce helps the immigrants' integration to the labour market with ease because of excess labour demand (Zahl-Thanem, & Haugen, 2019).

### 1.4. IMMIGRATION POLICY

The policy side of immigration also has essential impacts on labour market integration. Policies that are ruled before immigration -selection policy- alter who migrate to the destination country. This policy means the rules and procedures governing the selection and admission of foreign-born. The immigration policy choices not only affect the characteristics and the overall human capital quality of immigrants but also locals' perception towards them. Policy choice also means that immigration policy indirectly determines who gains and losses from immigration. (Zimmermann, Bauer & Lofstrom,

2000). Also, policies that are applied after immigration could create a two-folded impact on the economic assimilation process. Post-immigration policy means the conditions provided and regulations applied to still resident foreign-born people (Meyers, 2000). It could encourage or discourage the integration process. In short, policy applications can be divided into two parts that are the immigrant selection policies before immigration and post-migration policies which affect immigrants' assimilation process. Immigration policies differ widely between countries, both historically and now, and are often at the centre of public debate (Bauer et al., 2000). Both parts of the policy have consequences on the immigrants' economic assimilation.[1]

Authorities design an immigration selection policy to prefer certain groups. Preferred immigrants generally are chosen among those that will be able smoothly to integrate potentially. If the immigrant selection policy successfully selects more adaptable immigrant candidates, it helps economic assimilation (David,1999). For example, U.S. immigration laws give priority to those whose family members already reside there. Besides, Canada implements a point system to meet the demand of the labour market and to pick an individual who could be easily integrated (Aydemir& Skuterud, 2005; Bauer et al., 2020).

The origin of the immigrants is another critical issue for economic assimilation in the policy framework. The immigrant selection policy sometimes prefers some ethnic origin than others. The national origin of a preferred group of foreign-born becomes an essential labour market integration element within this framework. The initial wage gap, the growth rate of labour market outcomes, and other economic assimilation indicators vary depending on the ethnic background (Borjas, 1987; Aydemir & Skuterud, 2005; Borjas, 2007; Lehmer & Ludsteck; 2015; Villareal & Tamborini, 2018). An immigrant from non-traditional source countries for a destination country may face deterioration in entry wages and a slowing down in relative growth of the labour market outcomes (Aydemir & Skuterud, 2005).

To exemplify, in this respect, Turkey has ethnically and linguistically reservations for foreign-born people in 1934 dated Resettlement Law. Moreover, Turkey still keeps

[1] I do not elaborate on policy-making theories in this study. For detailed information see; Natter, 2018

geographical limitations against refugees in 1951 dated Geneva Convention. Turkey generally selects ethnically relative immigrants and expects basic Turkish knowledge. In other respect, immigration policies like Canada's point system aim to meet labour demand with immigration and pick adaptable foreign-born.

In addition, these policy differences also cause different immigration motives and different skill transferability rates as a consequence. On the one hand, when an immigrant selection policy that concentrates on meeting labour market demands is applied, it is also quite likely that the immigrants will perform relatively well in the labour market and thereby integrate pretty rapidly. A foreign-born person who migrates for economic reasons could plan their movement and might invest in the transferability of their human capital stock and the country-specific human capital of the destination country in advance.

On the other hand, when humanitarian criteria are preferred as the principal determinant to entry into the country, economic assimilation may be challenging for these immigrants since their skills may be less transferable, and their immigration motives could be different. A foreign-born person who migrates with non-economic reasons does not typically plan the immigration and therefore does not invest in the transferability of their stock of human capital or the country-specific human capital of the destination country in advance (Chiswick & Miller, 2007:438). Immigrants who migrate with an economic motive managed to integrate faster and easier than non-economic ones (Bauer et al., 2020).

Labour market integration is also affected by policies applied after immigration. These could be encouraged or discouraged to economic assimilation. Targeting the groups truly is the most crucial part of economic assimilation (Green & Worswick, 2012). Easy access for the target group to courses to learn the language of the destination country or vocational training to acquire destination-specific skills are helpful to economic assimilation. From this perspective, citizenship has become increasingly critical concerning immigration and economic assimilation policy in several European countries in recent years (Mühleisen et al., 2012). Granting citizenship or naturalisation is the vital element of the labour market assimilation process (Aldashev, Gernandt & Thomsen, 2012; Lehmer & Ludsteck, 2015: Bratsberg et al., 2002; Akbari, 2008; Kayaoglu & Kaya, 2011; Bevelander & Pendakur, 2012).

As a result, immigrants' assimilation is an issue that many different disciplines explore it with different dimensions. The economic assimilation of immigrants is the main research area of this thesis. In this respect, this chapter has elaborated on which features theoretically affect foreign-born people's economic assimilation in the destination country. Firstly, the human capital aspects of economic assimilation are wrapped up. All features related to labour market integration, such as schooling and experience -both before and after immigration-, language fluency, skills transferability and post-migration human capital investment are mentioned. The effects of these elements are explained with theoretical reasons. Also, in this subsection, I have mentioned the trade-off between the initial labour market outcomes gap and labour market outcomes growth.

Moreover, the labour market -labour demand and labour market matching process- and policy effects have been discussed. On the labour market demand side, the discussion focuses on the effects of macroeconomic conditions and sectoral structure. Then, the labour market matching process section focuses on mismatching issues like qualification disparity and residential area of immigrants. In the end, the impacts of immigration policies are summarised on the economic assimilation of immigrants. Immigrant selection policies may prefer the different motives to immigrate to the destination country and the different skilled immigrants to meet labour market needs. Post-immigration policies might affect the human capital accumulation process in the destination country and enhance the economic assimilation process. Briefly, the extent of immigrants' labour market assimilation depends on the individual's skills, language fluency, post-migration human capital investment, labour market demand, structure and institutional settings of the labour market, the immigration motive of immigrants, and policy approach of the destination country (Bauer et al., 2000).

Consequently, there are common mechanisms that generally work the same way. Investing in destination-specific, firm-specific human capital and fluency in the destination country language must increase the growth pace of immigrants' labour market outcomes (Chiswick, 1978; Borjas, 1985; Beenstock et al., 2009; Aldashev, Gernandt & Thomsen, 2012; Ci et al., 2020). After arriving at the destination country as a proxy of acquiring specific human capital features, the duration passed must assist economic assimilation (Chiswick, 1978; Lehmer & Ludsteck; 2015; Gill & Ahmad, 2018; Amin &

Uyar, 2020). Immigrant selection and post-migration policies can help the labour market integration (David, 1999; Lehmer & Ludsteck, 2015; Antecol, Kuhn & Trejo, 2006; Green & Worswick, 2012; Amin & Uyar, 2020).

# CHAPTER 2

# LITERATURE REVIEW

This chapter focuses empirical literature on immigrants' economic assimilation within this complicated theoretical background—this literature leans on developed countries with a few exceptions primarily. This chapter explains methodological debates in detail with its empirical results about economic assimilation. After discussing these different research approaches, the economic assimilation mechanisms presented in the theoretical framework section are reviewed once again on the empirical level per approaches.

There are certain three methodological approaches to analyse immigrants' labour market assimilation that are closely interrelated to each other in the literature that also do not deny each other. The first-generation approach uses cross-sectional data sets to analyse the labour market integration of foreign-born people. They provide a snapshot view of immigrants' economic assimilation. The second-generation studies employ pooled cross-sectional data (synthetic panel data) to comprehend the success of foreign-born people. The second-generation criticises directly to the first-generation about the biasedness of the estimation method. Longitudinal data sets (panel data sets) are utilised in third-generation research. There is criticism against both cross-sectional and pooled cross-sectional analyses about that these analyses cooperate with the immigrant assimilation hypothesis. This section discusses these estimation approaches with this order.

## 2.1. THE FIRST-GENERATION STUDIES

Studies that analyse labour market integration for the foreign-born population using cross-sectional data can be named first-generation papers. The main contribution of first-generation is to reveal the effect of duration passed in the destination country. They mainly focus on the "years since migration" variable to analyse the impact of naturalisation (with or without any citizenship grant) on the labour market integration. While investigating this effect, this generation studies are based on Immigrant

Assimilation Hypothesis (IAH). Time passed at the destination has played an essential role since the beginning of the research on the Immigrant Assimilation Hypothesis (IAH) regarding the economic adjustment of foreign-born in the destination country. From this point of view, the first-generation studies analyse IAH with the years since migration variable.

Chiswick (1978), who published one of the first papers about economic assimilation, named this effect "Americanisation" for U.S. immigrants. He aimed to measure the impact of the duration of residing in the U.S. on the wage earnings of male immigrants with cross-sectional data in that paper. Chiswick (1978) additionally investigated the effect of being foreign-born on wage earnings. He deduces immigrant white men earn 1 per cent lower than the equivalent native-born. There was a strong emphasises that pre-immigration labour market experience and schooling are less valued than destination country experience and education. He ascertained that the post-immigration experience helps to narrow the wage gap. Moreover, he calculated the takeover point, which is the point at which immigrants' earnings exceed those of natives, as around 10-15 years for the U.S. Lastly, this paper has revealed a strong positive relationship between Americanisation and lessening the wage-earning gap.

The importance of time spent in the destination country on immigrants' economic assimilation is also explored in other first-generation studies. Beyer (2018) for Germany, Accetturo and Infante (2010) for Italy and Abdulla (2020) for the U.S. find a small impact of duration passed at the destination country on labour market integration. Shumacher (2011) estimated a similar relation for immigrant nurses in the U.S.

On the other hand, there are also some controversial pieces of evidence about this relationship. Gathmann and Keller (2018) provide opposing results against IAH with time passed in the destination country. In addition, Takenaka et al. (2016) found a slightly negative relation between years passed in Japan and earnings of foreign-born.

## 2.2. THE SECOND-GENERATION STUDIES

Borjas (1985) has questioned the accuracy of the cross-sectional estimations on economic assimilation. He stated that these estimations are befouled for two main reasons. First of

all, the cross-sectional studies cannot trace unsuccessful immigrants from earlier immigrants because they primarily emigrate back to the source country. On the contrary, this method analyses recent foreign-born people together with the potential future unsuccessful immigrants. This sampling problem could cause to seem earlier immigrants are more successful than recent ones. Secondly, this estimation implicitly assumes that immigrants' overall human capital quality does not change over time. When this assumption fails, the estimation becomes biased upwardly or downwardly, following the direction of changing immigrant quality. These circumstances of the cross-sectional approach contaminate the accuracy of immigrant assimilation analyses.

The second-generation approach suggests a different estimation path known as a pooled cross-sectional method (PCM). Borjas (1985) used two different census data to explore wage earnings assimilation with PCM. The wages of immigrants are estimated into groups named cohorts in this approach. This methodology allows comparing the same immigrant cohorts within two different years. Even if two various censuses sampled nonidentical immigrants, the feature of cohorts is identical overall. Besides, this approach gives a chance to compare different cohorts, which are at the same point of their destination country life cycle, from various censuses. This estimation method has overcome the biases that occurred due to the returning immigrants and the implicit assumption of steady human capital quality to some extent.

One of the significant findings of the second-generation research is the overestimation of relative wage growth of immigrants in the first-generation studies (Borjas, 1985; Aydemir & Skuterud, 2005; Antecol, Kuhn & Trejo, 2006). This estimation inaccuracy of the first-generation also relates to the biasedness of cross-sectional sampling. Return emigration and change in overall human capital quality in time may have exaggerated the immigrants' labour market integration success for earlier immigrants.

The second main result of these studies is the slowdown in relative growth of labour market outcomes for immigrants (Borjas, 1995; Borjas, 2015; Aydemir & Skuteruud, 2005; Green & Worswick, 2012). This means that recent immigrants do not manage to grow their own labour market outcomes as fast as the earlier immigrants. On the other hand, there are some opposing findings of slowdown. Mexican and Central American

immigrants that reside in the US still seem to improve in the growth of labour market outcomes (Rudledge & Peri, 2020).

### 2.3. THE THIRD-GENERATION STUDIES

The results of the second-generation studies started to be questioned with findings obtained by the third-generation studies, which used longitudinal data (panel data). The primary objection of the third generation is that the second-generation research does not compare the same immigrants because of re-migration, death, or sampling issues despite controlling the cohort effect (Chiswick, Lee & Miller, 2005a). Besides, the second generation uses the year of immigration to define cohorts, but immigrants sometimes migrate more than once towards the same country (Beenstock, Chiswick & Paltiel, 2010). As a result of these issues, second-generation studies may estimate the Immigrant Assimilation Hypothesis upwardly biased.

Most empirical findings of the third generation are compatible with this projection. Longitudinal data analyses found that the economic assimilation effect weakens and sometimes disappears (Hu, 2000; Duleep & Dowhan, 2002; Hum & Simpson, 2004; Fertig & Schurer, 2007; Beenstock, Chiswick & Paltiel, 2010). In line with these results, cross-sectional and pooled cross-sectional methodologies might be cooperating with Immigrant Assimilation Hypothesis (Lubotsky, 2007).

On the other hand, longitudinal methodologies also have weaknesses. Firstly, panel data sets are scarce, and collecting panel data is too costly. It is generally collected for a short period, and sample attrition is a critical data issue (Beenstock, Chiswick & Paltiel, 2010). In addition, longitudinal analysis can observe only human capital effects, and there are no period effects (Chiswick, Lee & Miller, 2005b). These may cause the appearance of the rejection of the IAH.

As a result, there are three various empirical approaches towards the immigrant assimilation hypothesis. The first-generation studies primarily focus on years since migration. These accept years as a proxy of every aspect of economic assimilation. Second-generation research often explores the effects of cohorts and ethnic networks, and enclaves. The main opposition of these studies is that the first-generation papers estimate

economic assimilation happen sooner than actual. The third-generation approach generally tries to analyse the all-around economic assimilation phenomenon. They defend that the pace of economic assimilation is much slower than estimated from the first two generations. I summarised these approaches with debates in the literature. Each method may cause different possible side effects due to several deficiencies. It is difficult to say that any of these approaches has a clear advantage over the other. For this reason, it is also important to explain and discuss the economic assimilation mechanisms assigned in the empirical Immigrant Assimilation Hypothesis literature.

# CHAPTER 3

# BRIEF ACCOUNT OF IMMIGRATION HISTORY OF TURKEY AS DESTINATION COUNTRY

This chapter briefly summarises Turkey's history of immigration from a destination country perspective. It only covers international immigration flows toward Turkey. Although the data used in this study does not contain the immigrants' volume and origin, this historical brief enables us to comment on the intensity of the origins of the immigrants in those years from a historical perspective. This chapter elaborates on immigration towards modern Turkey before the 1980s in the first subsection. In the next section, immigration towards Turkey after the 1980s is discussed from every aspect.

## 3.1. TURKEY'S INTERNATIONAL MIGRATION EXPERIENCE IN THE 20TH CENTURY

Turkey is located at a crossroads between Europe, Africa, and Asia. Historically, it has been a country of origin, transit, and destination for immigrants (Icduygu, 2015. Immigration has always been one of the main elements in the history of Anatolia and in establishing Turkey as a modern nation-state. In this respect, the Ottoman Empire ordered Turkmen and Muslim subjects to settle in recently acquired lands populated predominantly by Christians at the Classical age (Tekeli, 1994: 204-6). Immigration with this order has been named as "Surgun (Exile)". Turkmen and Muslim communities had to immigrate from Anatolia to the Balkans. Immigrants who migrated from the Balkans to Anatolia at the era of the dissolution were children of "Surgun" immigrants. Tekeli (2003:448) names immigration as a "Balkanisation" of Anatolia. These immigrations have been like turning back to Motherland for immigrants. The modern nation-state Turkey has been shaped by immigration immediately after its establishment like every nation-state in the 20th century. As a result, one of the creators of today's Anatolia and

Turkey is immigration. From this point of view, this section enlightens the immigration history of Turkey starting from 1923 as a destination country role before the 1980s.

Immigration is an important political issue between states during the interwar period (Weitz, 2008). According to Skran (1995:31), this period could be named the refugees' era. At those times, many Muslim and Turkish origin people from Balkan countries immigrated to Turkey. One of the main events of immigration for these times was the Population exchange agreement between Turkey and Greece. Turkey accepted immigrants from every Balkan countries the interwar period with arrival criteria and reservations.

Population exchange between Turkey and Greece was decided with the 1923 Peace Treaty of Lausanne and was implemented in 1924. The total number of exchanged people is still controversial, but the approximate figures are close, and those figures give an idea about the magnitude. The total number of exchanged people is about 395 thousand as an estimation. The History of Settlement Report (1932:18) gives a detailed table about exchanged people. According to Ladas (1932:705), the total number of exchanged people is about 388 thousand and McCarthy (1983:93) states about 354 thousand. Turkey received nearly 400,000 Muslim Turks from Greece, whereas Greece accepted more than one million Greek Orthodox Christians, including those who escaped to Greece from Turkey during the Greek-Turkish war (Hirschon, 2003).

Lewis (2001:355) stated that both countries' governments name this population movement as an exchange, but this was actually forced immigration. The main target of this forced immigration for either party was to get rid of the ethnic and religious minorities and set up a nation-state. (Yıldırım, 2006). Another motive behind the exchange for the Turkish side was to create a national economy by removing non-Muslim minorities (Aktar, 2003; Keyder, 2003). The forced immigration changed the rural-urban population distribution and occupational amplitude of Turkey's labour market because the Greek Orthodox people who had to immigrate were mostly artisan urban residents. On the contrary, many newcomers were villagers from the rural areas of Greece (Arı 2015).

Table 1: Numbers of People Who Migrated to Turkey by Regions, 1923-97

| Source Country | 1923-1939 | 1940-1945 | 1946-1997 | Total |
|---|---|---|---|---|
| Bulgaria | 198,688 | 15,744 | 603,726 | 818,158 |
| Greece | 384,000 | - | 25,889 | 409,889 |
| Romania | 117,095 | 4201 | 1266 | 122,562 |
| Yugoslavia | 115,427 | 1671 | 188,600 | 428,260 |
| Others | 7998 | 1005 | 11,509 | 20,512 |
| Total | 823,208 | 21,621 | 830,990 | 1,686,163 |

Sources: Kirisci, 2000; İçduygu & Kirişçi 2009.

Moreover, Turkey negotiated bilateral agreements in the 1930s with Romania and Bulgaria to create an opportunity for immigration to Turkey for their Turkish and Muslim population (Baldwin-Edwards et al., 2015). With these agreements, Turkey gave some opportunities to potential immigrants like exemption from compulsory military service, exemption from tax. Within this framework, immigrants from these two countries can be considered as voluntary immigrants. The total number of immigrated people from Bulgaria to Turkey was about 200 thousand between 1923 and 1939 (Kirisci, 2000). Also, slightly less than 120 thousand people immigrated from Romania to Turkey during the interwar period (Kirisci 2000). The government of Turkey tried to close the deficit of human power with these bilateral immigration treaties.

As a result of economic, political, social and cultural circumstances, there were Turkish and Albanian immigration from Yugoslavia during the interwar period to Turkey (Özgür-Baklacıoğlu, 2015). The Great Depression of 1929 and the 1931 Agricultural Reform Act applied by Yugoslavia affected the Turks and Albanians as the community that owns the most extensive farming lands and whose income depends on agricultural production (Öksüz & Köksal, 2004). Besides, Yugoslav Turks faced social, cultural and political pressures. Thus, more than 115 thousand people migrated to Turkey from Yugoslavia (Öksüz & Köksal, 2004).

The main policy document of Turkey was the 1934 Turkish Resettlement Law during the interwar period. This code defined two different immigrant types, namely resettled and free immigrants. Resettled immigrants were brought from abroad by special laws and are

settled by giving immovable property according to the provisions of this Law. They had to live where the government ordered. Free immigrants are those who come to Turkey alone or collectively to settle. They are admitted to the country provided that they do not want them to be resettled by the government. These immigrants cannot take advantage of a right of property grant. In addition to these two types, Turkey takes into account the ethnic and religious identities of immigrants.[2]

The migration policy of the interwar period consists of the issue of creating a homogeneous national identity. The Anatolian population was ethnically and culturally very diverse until the first years of Modern Turkey. Creating a unified national identity was seemed impossible in the ethnically and culturally diverse country. Therefore, in this period, immigration policy encouraged and accepted immigrants who can speak the Turkish language and their affinity to Turkishness (İçduygu & Kirişçi, 2009). In addition, Sunni-Hanafi religious background was a reason for prioritising (Kirişçi, 1996; 2000). Turkey applied an open-door policy during the interwar period within these criteria and reservations.

World War II years were calm for immigration movements. The total number of immigrants in these years was relatively low against the interwar period and post-war period. After World War II, the first mass immigration wave towards Turkey was originated from Yugoslavia. The main reason for this immigration wave was the internal policies of the newly established socialist regime (İçduygu & Kirişçi, 2009). The New Yugoslavia government tried to repress all ethnic and religious differences, regardless of religion and ethnic identity. Another excuse for immigration was the prohibition of private property and sustained expropriation. These situations encouraged immigration to Turkey for Muslim Albanians and Bosnian originated people.

The total number of refugees is still controversial. According to Geray (1962), total immigrants figures post-war period was about 172 thousand from Yugoslavia. This total was estimated as 175 thousand by the Ministry of Rural Affairs. Ozgur Baklacıoglu (2015) stated that the total numbers of immigrants from Yugoslavia were equal to 450

[2] *Official Gazette of the Republic of Turkey*, 21.06.1934. Issue: 2733. Page, 1. Law Number: 2510 https://www.resmigazete.gov.tr/arsiv/2733.pdf Retrieved:26.10.2021

thousand. Considering Kirisci (2000), the total number of refugees from Yugoslavia after World War II was equal to 188 thousand.

The immigration from Bulgaria to Turkey after World War II can be divided into three main episodes. The first immigration flows were in the 1950–1953 period. This immigration flood resulted from the policies of the newly-formed communist state, which decided to unify the education system, restrict religious practices, and centralise agricultural production. Reasons for this first wave were similar to the immigration from Yugoslavia. The second happened with the 1968 Agreement. This agreement foresaw the reunification of separated families due to the former immigration movement. The third immigrant wave entered Turkey in 1989. This wave explained in the following chapter.

This part summarises migration issues of Turkey that occurred in the pre-1980 period. The general attitude of this era was based on creating a homogenous nation and eliminating cultural and religious diversity. In short, the migration policy of this era was mainly shaped by the nation-building process, and the immigrant selection suited this perspective. After this period, migration issues have been shaped by the globalisation phenomenon. This period and the policy approach of the government dwell in the following section.

## 3.2. INTERNATIONAL MIGRATION TOWARDS TURKEY AFTER 1980

Globalisation has brought the transition of many Southern and Central European countries as well as Turkey from countries of emigration to countries of transit and immigration (Castles, 2014:112). Turkey has experienced the integration process of globalisation and the global networks since the 1980s (Keyman & Icduygu, 2010). Globalisation changed the role of Turkey in the international migration routes. Until the 1980s, Turkey mostly was a labour-power source for European countries. However, especially in the last 20 years, Turkey’s destination country role has become more important part of Turkey’s immigration issues (İçduygu & Aksel, 2013).

Now, Turkey is located at the crossroads of international migration routes in the globalisation era. Transit migrants from Asia and Africa use Turkey as a transition towards European countries. Besides, Turkey is one of the destination countries for immigrants, refugees and asylum seekers from the Middle East, Central and South Asia countries. In this situation, Turkey has faced every type of immigrant in the last thirty years- like regular immigrants, irregular immigrants, transit immigrants, refugees, asylum-seekers. Turkey has experienced an influx of refugees and immigrants from different source countries within these 30 years.

This section discusses types of international migration flows towards Turkey during globalisation. Regular immigration flows, which contain work permits, residence and student permits, are the first type. Then, this chapter discusses the irregular immigration, including transit migration. Lastly, refugees and asylum-seekers in Turkey are examined. While analysing immigration towards Turkey by type, this chapter also aims to explore the origin of all immigrants. This origin exploration for immigrants in Turkey ensures a more comprehensive viewpoint towards economic assimilation.

As a country with a long history of migration, the regular immigrant population in Turkey is relatively small. The primary cause is that immigrants come to Turkey generally for humanitarian reasons, and they pass borders typically without any documents. Another important explanation is the policy approach of Turkey that is based on kinship and religion. Moreover, available data about current regular immigrants also are scarce. The number of work permits can be seen only annually since 2004. Origin differentiation on work permits data started in 2011. Besides, resident permits and student permits figures are also scarce. Regular immigration towards Turkey is summarised with these limitations.

Table 2 summarises the total given work permits in Turkey, with the top ten origin countries granted a work permit between 2011 and 2019. This table reveals a massive increase in given work permits to Syrians. The number of granted work permits to Syrians has grown more than fifteen times in five years, and now it consists nearly half of the total work permits. Besides, there is a general increasing trend in the number of granted work permits. Geographically -Georgia, Iran- or ethnically -Azerbaijan, Uzbekistan- close countries, which are traditional source countries, are the main source countries for

Turkey throughout the period. The percentage of traditional source countries in the total given work permits has risen in this period. There are not any developed countries like the US and England in the top ten countries for Turkey. As a result, the percentage of given work permits for immigrants from developing and underdeveloped countries in total constitutes the majority and the percentage of people from these countries in total work permits increases. In short, this table reveals that Turkey allures immigrants from geographically near countries like Georgia, Syria, Ukraine and ethnically close countries like Azerbaijan, Turkmenistan, Uzbekistan. All top ten countries are geographically and/or ethnically close countries for regular immigrants.

Table 2: Number of work permits given to foreigners by nationalities, top ten countries, 2011-2019

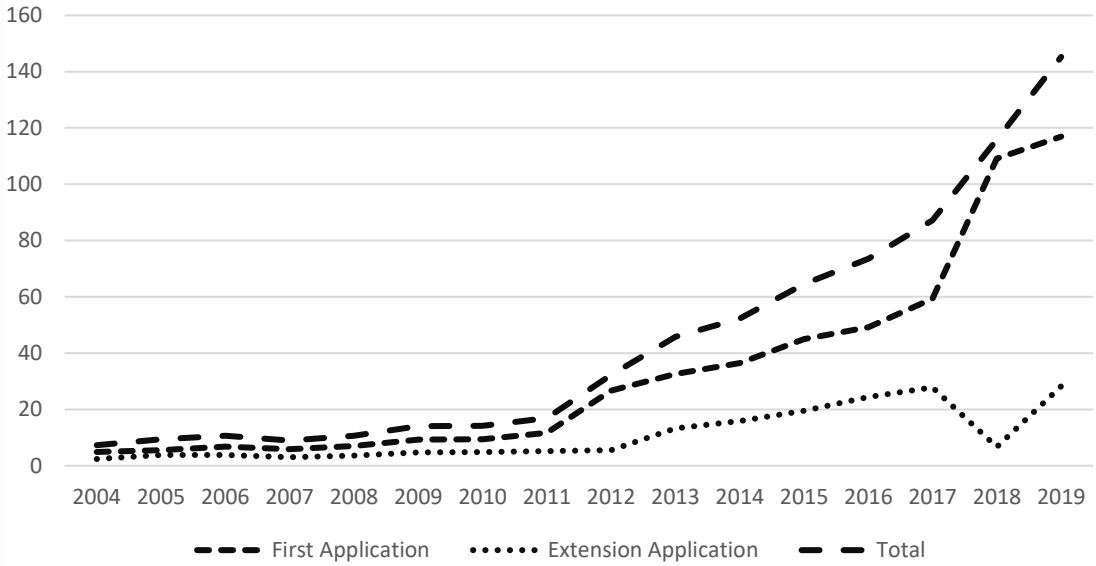
| Countries | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|
| Azerbaijan | 459 | 755 | 1227 | 1382 | 1461 | 1880 | 2449 | 2997 | 2977 |
| Georgia | 402 | 6434 | 8437 | 7680 | 8524 | 7629 | 7317 | 7321 | 5220 |
| Iran | 410 | 716 | 1155 | 1284 | 1522 | 1785 | 1930 | 2689 | 3935 |
| Kazakhstan | 230 | 567 | 899 | 1163 | 1349 | 998 | 1352 | 1799 | 2860 |
| Kyrgyzstan | 242 | 610 | 1160 | 2283 | 4274 | 3048 | 6359 | 13452 | 11003 |
| Russia | 1435 | 2160 | 2455 | 2562 | 2936 | 1966 | 2390 | 2944 | 3922 |
| Syria | 118 | 220 | 794 | 2541 | 4109 | 13290 | 20966 | 34573 | 63789 |
| Turkmenistan | 143 | 1422 | 2714 | 2635 | 3323 | 3741 | 3847 | 5547 | 6128 |
| Ukraine | 1278 | 2601 | 3610 | 4334 | 6023 | 5592 | 5760 | 6394 | 6197 |
| Uzbekistan | 229 | 829 | 1708 | 1993 | 2319 | 2436 | 2465 | 3969 | 4480 |
| Others | 11944 | 15958 | 21675 | 24447 | 28707 | 31195 | 32347 | 34152 | 34721 |
| Total | 16890 | 32272 | 45834 | 52304 | 64547 | 73560 | 87182 | 115837 | 145232 |
| Percentage | 29,284 | 50,552 | 52,71 | 53,26 | 55,525 | 57,592 | 62,897 | 70,517 | 76,093 |

Source: The Republic of Turkey, Ministry of Family, Labour and Social Services (in Turkish), https://www.csgb.gov.tr/istatistikler/calisma-hayati-istatistikleri/resmi-istatistik-programi/yabancilarin-calisma-izinleri/

Figure 1 reveals the total given work permits and differentiates these work permits according to the first application and extension application. This graph proves that the total granted work permits increase every year, but the primary source of growth in work permits is the first time applicants. The number of new applicants is doubled from 2017 to 2019. The first application may not directly mean these people start to work in Turkey with this permission because the informal labour market is so broad in Turkey. Still, work permits are an essential milestone for the labour market integration process. The

increasing trend in the first application shows that immigrants in the labour market of Turkey are primarily newcomers, and the process of integration has begun recently. Besides, the increasing trend in the renewal of work permits also implies that more people have started to work in Turkey for more extended periods. These extension applications are helpful for labour market integration even if there is no information about the origins of the people who made these extension applications.

Figure 1: Number of work permits given to foreigners by type of application, 2004-2019, in Thousand




Source: The Republic of Turkey, Ministry of Family, Labour and Social Services (in Turkish), https://www.csgb.gov.tr/istatistikler/calisma-hayati-istatistikleri/resmi-istatistik-programi/yabancilarin-calisma-izinleri/

Turkey also grants residence permits for several reasons.[3] The number of granted residence permits by some types are listed in Table 3. The most populated origin countries are Iraq, Turkmenistan, Iran and Azerbaijan. These countries are again geographically and/or ethnically adjacent countries to Turkey. Within the top ten countries, there are not any geographically and/or ethnically distant countries. The number of given short-term residence permits are more than 70 per cent of total residence permits. This permit type cannot be issued for more than two years. When considering this time constraint, it can be said that they are not generally part of the labour market in Turkey. The most populated

[3] For Residence Permit Types of Turkey see: https://en.goc.gov.tr/residence-permit-types

origin countries in this type of residence permit are the same as the numbers of total permits.

The total number of given student residence permits is equal to approximately ten per cent of all residence permits. There is an exception about the origin countries for student residence permits. Somalia generally does not take place in the top ten immigrant origin countries. However, Somalian students are the sixth most crowded group in student residence permits. The main origin countries of family residence permits are traditional origin countries for Turkey. Morocco is one of the top ten origin countries for family residence permits as an exception. In short, regular immigrants in Turkey generally comes from the traditional origin countries, which are close to Turkey in terms of geographical or ethnic.

Table 3: Number of Residence Permits for Total and by Types in 2021, Top Ten Countries

| Total Residence Permit | | Short Term | | Student | | Family | |
|---|---|---|---|---|---|---|---|
| Iraq | 130398 | Iraq | 120327 | Turkmenistan | 12753 | Azerbaijan | 11702 |
| Turkmenistan | 127004 | Turkmenistan | 100031 | Azerbaijan | 10420 | Russia | 6587 |
| Syria | 95866 | Syria | 82374 | Iran | 6693 | Ukraine | 6264 |
| Iran | 64765 | Iran | 50633 | Iraq | 5642 | Uzbekistan | 5720 |
| Azerbaijan | 562042 | Uzbekistan | 41559 | Syria | 5259 | Turkmenistan | 4475 |
| Uzbekistan | 54544 | Russia | 37881 | Somalia | 5067 | Morocco | 4053 |
| Russia | 51284 | Afghanistan | 36874 | Afghanistan | 4588 | Iran | 3453 |
| Afghanistan | 48764 | Azerbaijan | 26502 | Jordan | 3394 | Kyrgyzstan | 3356 |
| Kazakhstan | 29454 | Egypt | 21198 | Yemen | 3338 | Kazakhstan | 2907 |
| Egypt | 27705 | Libya | 19850 | Egypt | 2761 | Georgia | 2625 |
| Others | 405226 | Others | 242823 | Others | 34639 | Others | 33375 |
| Total | 1091052 | Total | 780052 | Total | 94554 | Total | 84517 |
| Percentage | 62.8 | Percentage | 68.8 | Percentage | 63.3 | Percentage | 60.5 |

Source: The Republic of Turkey, Ministry of Interior, The Directorate General of Migration Management https://en.goc.gov.tr/residence-permits

The second leading immigrant group is irregular immigrants. They are undocumented immigrants and generally immigrate with economic motives. Turkey has also been an attractive country for irregular immigrants within the globalisation period. Irregular immigration towards Turkey with economic motives has become complicated with the end of the cold war because there are many different origin groups, targets and

Table 4: Captured Irregular Immigrants, 1995-2008

| Origin | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Afghanistan | 24 | 68 | 81 | 921 | 2476 | 8746 | 9701 | 4246 | 2178 | 3442 | 2363 | 3665 | 6614 | 10839 | 55364 |
| Azerbaijan | 21 | 3 | 3 | 10 | 620 | 2262 | 2426 | 2349 | 1608 | 1591 | 1410 | 937 | 1227 | 1681 | 16148 |
| Bangladesh | 113 | 322 | 301 | 2408 | 1193 | 3228 | 1497 | 1810 | 1722 | 3271 | 1524 | 2313 | 981 | 802 | 21485 |
| Bulgaria | 21 | 22 | 39 | 103 | 1005 | 1699 | 1923 | 3132 | 989 | 550 | 363 | 376 | 1224 | 885 | 12331 |
| Georgia | 37 | 9 | 9 | 5 | 809 | 3300 | 2693 | 3115 | 1826 | 2294 | 2348 | 1989 | 2439 | 2702 | 23575 |
| Iran | 252 | 362 | 364 | 1116 | 5281 | 6825 | 3514 | 2508 | 1620 | 1265 | 1141 | 972 | 1107 | 1288 | 27615 |
| Iraq | 2128 | 3319 | 5689 | 14237 | 11546 | 17280 | 18846 | 20926 | 3757 | 6393 | 3591 | 6412 | 9384 | 4818 | 128326 |
| Mauritania | | | | 4 | 6 | 6 | 11 | 27 | 277 | 1462 | 4805 | 3984 | 3830 | 1169 | 15581 |
| Moldova | 19 | | 17 | 5 | 5098 | 8312 | 11454 | 9611 | 7728 | 5728 | 3462 | 1575 | 1095 | 600 | 54704 |
| Pakistan | 708 | 435 | 307 | 1798 | 2650 | 5027 | 4829 | 4813 | 6258 | 9396 | 11001 | 3508 | 6970 | 9186 | 66886 |
| Palestine | 2 | 3 | 4 | 63 | | | 13 | 934 | 648 | 264 | 1295 | 1525 | 8313 | 6941 | 20005 |
| Russia | 5 | 4 | 52 | 2 | 1695 | 4554 | 3893 | 2139 | 2130 | 1266 | 1152 | 730 | 817 | 1232 | 19671 |
| Romania | 68 | 12 | 107 | 36 | 3395 | 4500 | 4883 | 2674 | 2785 | 1785 | 1274 | 1013 | 803 | 495 | 23830 |
| Syria | 78 | 86 | 144 | 476 | 776 | 1399 | 782 | 462 | 623 | 1097 | 983 | 1238 | 1383 | 907 | 10434 |
| Somalia | 1 | 6 | 7 | 19 | 14 | 58 | 136 | 591 | 1806 | 2756 | 3118 | 3468 | 3921 | 2248 | 18149 |
| Ukraine | 9 | 4 | 17 | 4 | 1715 | 4527 | 3451 | 2874 | 1947 | 1341 | 1335 | 1004 | 798 | 737 | 19763 |
| Total | 11362 | 18804 | 28439 | 29426 | 47529 | 94514 | 92365 | 82825 | 56219 | 61228 | 57428 | 51983 | 64290 | 65737 | 762149 |
| Others | 7876 | 14149 | 21298 | 8219 | 9250 | 22791 | 22313 | 20614 | 18317 | 17327 | 16263 | 17274 | 13384 | 19207 | 228282 |
| % of TOT* | 30,68 | 24,75 | 25,11 | 72,06 | 80,53 | 75,88 | 75,84 | 75,11 | 67,41 | 71,70 | 71,68 | 66,77 | 79,18 | 70,78 | 70,04 |

Source: Turkey. Bureau for Foreigners, Borders, and Asylum at the Directorate of General Security of the Ministry of Interior (2001) Documents and Views on Foreigners, Borders, and Asylum, Ankara, Ministry of Interior (in Turkish); İçduygu, 2008
* represents the percentage of the total of eleven countries to the total of all countries

expectations. Some immigrants aim to migrate to the third party country again, and some others target to earn some money in Turkey and turn back to their home country. Another group want to stay in Turkey to work and live there. Turkey's irregular migration issue becomes more complex when this complicated target set is evaluated with different immigrant origins. The only thing clear in all this confusion is that most immigrants migrating to Turkey are irregular immigrants.

Irregular immigrants after the end of the Cold War generally came from two different primary sources. One of them is Eastern European countries like Moldova and Romania. The others are Middle Eastern (Iraq, Iran and Syria), Asian (Afghanistan, Pakistan and Bangladesh) and African (Somalia and Congo) countries (İçduygu, 2003). Eastern European Immigrants often came to Turkey to look for a job, but the others generally looked to Turkey as a transit country. Table 4 reveals the source countries of irregular immigrants between 1995-2008. This table shows only captured irregular immigrants. The number of irregular immigrants from the countries listed in Table 4 represents 70 per cent of irregular immigrants (İçduygu & Aksel, 2013). These capturing figures are a useful proxy to understand the volume of irregular migration.

Iraqis and Pakistanis are the most crowded irregular immigrant groups who migrated towards Turkey in the 1990s (IOM, 1995, as cited in İçduygu & Aksel, 2012). Afghanistan, Iran, Romania and Moldova also became important origin countries at the end of the 1990s and the beginning of the 2000s. These countries have maintained relative importance over other source countries until today.

Turkic Republics among the former Soviet Republics became another migration source for Turkey after the dissolution. Turkic People living in the former Soviet Union started to live in states defined as a nation-state after the dissolution. These states tried to find harmony with the free-market economy and targeted liberal order in the first years. This new approach made these people related to the global connection and transportation network. Besides these new relations, Turkey was an alluring country for Turkic people because of geographic and ethnic proximity. These people who live in a country that re-established the whole economic and social order endorsed migrating to Turkey to utilise economic possibilities and targeted to get rid of the economic problems (İçduygu & Aksel, 2012:12).

On the other hand, after the dissolution of the USSR, Turkic people from former Soviet republics in Central Asia do not migrate as irregular immigrants because they have ample opportunities as regular immigrants (İçduygu & Aksel, 2012). They generally were accepted as regular immigrants with documents. While Table 2, which shows the top ten source countries for regular immigrants, contains many Turkic former Soviet Republics, Table 4, which reveals captured irregular immigrants, includes only Azerbaijan. As a result, Turkic people from the former Soviet Republics migrate mostly as regular immigrants with permits.

Table 5: Top 5 Countries of Origin for Irregular Immigrants, Transit Immigrants and Irregular Labor Immigrants in Turkey, 2000-2010

| Irregular Immigrants | | Transit Immigrants | | Irregular Labour Immigrants | |
|---|---|---|---|---|---|
| Country | Total | Country | Total | Country | Total |
| Iraq | 93862 | Iraq | 93862 | Moldova | 50288 |
| Pakistan | 65604 | Pakistan | 65604 | Georgia | 25310 |
| Afghanistan | 58436 | Afghanistan | 58436 | Romania | 20814 |
| Moldova | 50288 | Iran | 22132 | Russian Fed. | 19943 |
| Georgia | 25310 | Bangladesh | 17409 | Ukraine | 19487 |
| % total * | 42% | % total * | 54% | % total * | 60% |
| Others | 404868 | Others | 215393 | Others | 87953 |
| Total | 369368 | Total | 472836 | Total | 225802 |

Source: Compiled from data obtained from Bureau for Foreigners, Borders, and Asylum at the Directorate of General Security of the Ministry of Interior, (2000-2010) as cited by İçduygu (2012);

* represents the percentage of the total of five countries to the total of all countries

Table 5 differentiates irregular immigrants as transit and labour immigrants for 2000-2010. Irregular immigrants from Iraq, Pakistan, Afghanistan, and other similar countries enter Turkey to migrate again, probably towards Europe. However, this does not mean that transit immigrants never work in Turkey. They aim to migrate again and are temporary in Turkey's labour market. Irregular labour immigrants generally come from Moldova, Georgia, Romania and similar countries. All of the top five irregular labour immigrant sources are from the Eastern Bloc countries. Irregular labour immigrants come to Turkey with an economic motive. Table 5 reveals a pattern for irregular migration to

Turkey. Immigrants from Middle Eastern countries are classified as transit immigrants. On the other hand, immigrants from the former socialist bloc countries are assessed as labour immigrants.

Table 6 demonstrates the number of irregular immigrants by origin country for the 2014-2020 interval. Afghanistan and Syria are the primary origin countries among irregular immigrants for this period. They constitute more than half of the total irregular immigrants. Besides, Pakistan and Iraq are the other important source countries. For the last thirty years, these countries' ongoing social and political unrest has made these countries an immigration source. (Icduygu, 2014). Even if Turkey was overwhelmed by the massive refugee influx with one source last decade, immigrants from various origins still migrate to Turkey.

Table 6: Irregular immigrants by origin, 2014-2020

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|---|---|
| Iraq | 1728 | 7247 | 30.947 | 18.488 | 17.629 | 12.097 | 3836 | 91.972 |
| Afghanistan | 12.248 | 35.921 | 31.360 | 45.259 | 100.841 | 201.437 | 50.161 | 477.227 |
| Pakistan | 2350 | 3792 | 19.317 | 30.337 | 50.438 | 71.645 | 13.487 | 191.366 |
| Syria | 24.984 | 73.422 | 69.755 | 50.217 | 34.053 | 55.236 | 17.562 | 325.229 |
| Moldova | 101 | 261 | 256 | 308 | 269 | 204 | 126 | 1525 |
| Palestine | 508 | 615 | 365 | 832 | 10.545 | 12.210 | 2059 | 27.134 |
| Myanmar | 6425 | 5464 | 1169 | 374 | 378 | 296 | 104 | 14.210 |
| Georgia | 1519 | 2857 | 2679 | 2954 | 3153 | 2171 | 1070 | 16.403 |
| Iran | 626 | 1978 | 1817 | 2707 | 4066 | 8753 | 3562 | 23.509 |
| Others | 8158 | 14.928 | 16.801 | 24.276 | 46.631 | 90.613 | 30.335 | 231.742 |
| Total | 58.647 | 146.485 | 174.466 | 175.752 | 268.003 | 454.662 | 122.302 | 1.400.317 |

Source: Republic of Turkey, Ministry of Interior, Directorate General of Migration Management. https://en.goc.gov.tr/irregular-migration

The third type of immigration is refugees and asylum-seekers. This migration type is the most controversial because they migrate as crowded waves and directly affect countries and people. They are forced to leave their home country for humanitarian reasons (Bartram, 2015). Political reasons such as civil war, oppressive regimes and political conflict could cause the refugee and asylum-seeker movements (Robinson & Segrott, 2002). The other possible reason is natural disasters which demolish economic and social life completely (Crawley, 2010).

Turkey has been exposed three major different refugee crises in the last thirty years. The first one occurred in 1989 from Bulgaria, the second one was from Iraq in 1991, and the last one started in 2011 from Syria. Turkey's response to these refugee crises was different. The refugee crises of 1989 and 1991 finished in the same year. However, the Syrian refugee crisis has been continuing for more than ten years. The refugee and asylum seeker crises are explained that faced Turkey in chronological order with also mentioning minor influxes.

This flow occurred due to political causes. The government of Bulgaria applied suppressive assimilation policies on ethnicities. As a result of these policies, the last massive wave of immigrants passed throught the Bulgaria-Turkey border. The total immigrant figures of this flow are again controversial. In accordance with the estimations, the total number of people who entered Turkey with these influxes fluctuated among 53 thousand (Beltan, 2006), 95 thousand (Parla, 2003; 2006) and 350 thousand (Kirişçi 1995). This immigration flow is elaborated in the following section.

More than 300 thousand people were forced to migrate from Bulgaria in 1989 because of their own ethnic and religious identity (Kirisci, 1996). The target country of this refugee influx was Turkey. They are ethnically Turkish or Pomak; Muslim in point of religious belief. They were accepted as cognate in Turkey by natives. The government of Turkey has established policies immediately for the integration of immigrants. It was operated the 1934 Settlement Law for these immigrants with additional regulation.[4] In this code, "being a member of Turkish society ethnically and culturally" is accepted as a reason for encouraging to migrate, and this code supports harmonisation amply.

Turkey applied dynamic and generous policies to integrate refugees from Bulgaria in line with the code (Kirisci & Karaca, 2015). Even the rapid granting of citizenship is a solely vital step towards harmonisation (Özgür-Baklacıoğlu, 2006: 321). Moreover, the government supplied cheap credit to purchase their own houses in Turkey to refugees and provided exemption from customs duty for automobiles and personal belongings (Çetin, 2009). With these significant contributions and kin perspective, easy integration of refugees who came from Bulgaria was an expectation and, according to the popular idea,

[4] For the legal support of this easiness, see: *Official Gazette of the Republic of Turkey*, 29.06.1989. Issue: 20210. Page, 2. Law Number: 3583 https://www.resmigazete.gov.tr/arsiv/20210.pdf

it was realised. Along with the regime change in Bulgaria, some refugees back-forth to Bulgaria. The number of turning refugees were equal to more than a hundred thousand people (Poultan, 1993). At the end of 1989, the government granted more than 245 thousand refugees Turkish Citizenship (Simsir 1986).

Table 7: Asylum applications in Turkey, 1997-2010

| Years | Iranian | Iraqis | Others | Total |
|---|---|---|---|---|
| 1997 | 1392 | 2939 | 117 | 4448 |
| 1998 | 1979 | 4672 | 187 | 6838 |
| 1999 | 3843 | 2472 | 290 | 6605 |
| 2000 | 3926 | 1671 | 180 | 5777 |
| 2001 | 3485 | 998 | 709 | 5177 |
| 2002 | 2505 | 974 | 315 | 3794 |
| 2003 | 3092 | 342 | 514 | 3948 |
| 2004 | 2030 | 956 | 922 | 3908 |
| 2005 | 1716 | 1047 | 1151 | 3914 |
| 2006 | 2297 | 724 | 1527 | 4548 |
| 2007 | 1668 | 3470 | 2502 | 7604 |
| 2008 | 2217 | 6904 | 3270 | 12981 |
| 2009 | 1981 | 3763 | 1140 | 7834 |
| 2010 | 2881 | 3656 | 2689 | 9226 |
| Total | 35013 | 34588 | 15513 | 86602 |

Source: Compiled from data obtained from the UNHCR Ankara Office and Bureau for Foreigners, Borders, and Asylum at the Directorate of General Security of the Ministry of Interior, as cited by İçduygu & Aksel (2012)

Another mass refugee influx came from Iraq in 1991. The effects of this mass migration on the labour market were limited because of the applied policy. The solution of the government of Turkey was different from the response of two years ago. These refugees were not accepted as a part of the Turkish cultural sphere by the government. Instead of generous contributions similar to two years ago, the government tried to close borders to refugees from Northern Iraq in accordance with the Settlement Law of 1934. Turkey also used the geographical limitation reservation from the 1951 Geneva Refugee Convention against these refugee waves. Turkey still maintains geographical limitations from the 1951 dated Convention and Protocol Relating to the Status of Refugees signed in Geneva. This reservation applies against immigrants, except of European origin. This policy is a reflection of the traditional attitude of the public authorities in Turkey against Kurds.

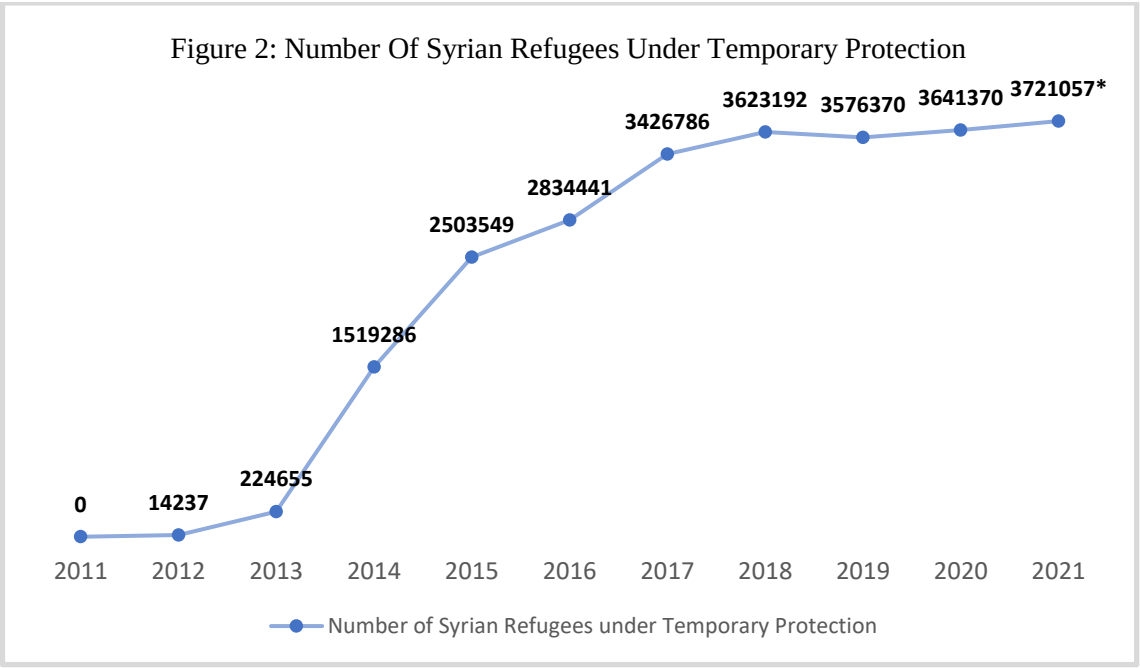
Despite all efforts, the border closure failed. After this failure, this humanitarian crisis became a global issue. With the support of the US, a massive part of 460 thousand refugees turned back to their own homes in Iraq. Fourteen thousand refugees could not return to their own homes and have settled in third-party countries (Kaynak, 1992). In short, the effect of Iraqi Kurds refugees on the labour market of Turkey can be ignored.

After the dissolution of the Warsaw Pact, Muslim people who live in these countries flowed to Turkey with humanitarian worries. More than 20 thousand Bosnian Muslims entered Turkey between 1992-1995 because of ethnic and religious hostilities and persecution (Kirişçi, 1995). Many of them turned back after the Dayton Peace Agreement (İçduygu & Sert, 2009). Similarly, 18 thousand Kosovans entered Turkey in 1998, and most of them turned back to Kosova with the lessening ethnic strife (Kirişçi, 2000). Besides, Muslim Albanians migrated to Turkey throughout the 1990s (İçduygu & Aksel, 2012). These waves were purposed to take the family to safety and ensure normal living conditions.

Table 7 shows the number of asylum applications from 1997 until 2010. Iranian and Iraqi applicants are the majority throughout this interval. 2002 is the lowest year of the total number of applications. After that, it grew slowly, and 2008 was the highest year in the number of applications. The number of other applicants increases every year. The others mostly come from Afghanistan and various African countries (İçduygu & Aksel, 2012:27; İçduygu, Erder & Kaya, 2014:224).

Lastly, the civil conflict broke out in the spring of 2011 in Syria. Turkey-Syria border was crossed by Syrians one month after the Syrian Civil War broke out. The first group of Syrians that crossed the border was only 252 people (Erdoğan, 2015), but this was a signal flare of the massive refugee influx for Turkey. Figure 2 summarise the historical process of the Syrian refugees under temporary protection. Antonio Guterres, who High Commissioner for Refugees by the United Nations, indicated at the UN Security Council in 2015 with this civil war, Turkey became the top refugee-hosting country by early 2015. At that time, more than 1.5 million Syrian were living in Turkey under the temporary protection status. Syrian under temporary protection hit the top in 2018 with more than 3.6 million people.

Figure 2: Number Of Syrian Refugees Under Temporary Protection




Source: Directorate General of Migration, Number of Temporary Protection https://en.goc.gov.tr/temporary-protection27

*The latest under temporary protection figures were reported at 14.10.2021.

This refugee influx has created different consequences from the former refugee and migration cases. 1989 refugee crisis ended up in six months. The refugee flow, which happened in 1991, finished in a year, and there were not any cohabiting experiences. Other long-standing and low-volume migration floods like immigrants from the former Soviet republics did not notice by people because the number of immigrants was never at that volume. In short, this migration process is different because of the volume of immigration, the length of the migration process and cohabiting experience.

Turkey assumed that the Syrian refugees were temporary. From this point of view, Turkey initially established a policy based on the "guest" definition. Authorities in Turkey used this definition at first because of the emergency management requirement. On the other hand, despite all these "guest" based policies, the Turkish government stuck to the non-refoulment principle. The government of Turkey constituted the "Directorate General of Migration Management (DGMM)" in 2013 to handle problems that occurred by this refugee influx. With this establishment, the Government of Turkey targeted to formulate an institutional approach for migration. This directorate has defined the status of

temporary protection. These regulations helped Turkey to stick to United Nations regulations.

Ten years after the first “guest”, the legal status of Syrian refugees in Turkey and the local integration situation is still an important issue. The most crucial way of economic integration for immigrants is employment, mainly formal employment. Formal employment for people under temporary protection was arranged on “Regulation on Work Permits of Foreigners under Temporary Protection”, issued in January 2016. This regulation contains some restrictions and opportunities for people under temporary protection. These restrictions may create though obstacles to attaining formal employment for Syrians. These conditions could affect the integration of the Syrian people. On the other hand, without legal regulations, Syrians’ employment conditions and status were unclear. Syrians can be employed in legal ways by local businesses with this regulation. From this point of view, this regulation can be an opportunity for the labour market integration for Syrian refugees.

According to İçduygu & Diker (2017), the informal job market still captivates both Syrian and employers. According to up-to-date DGMM figures, there are more than 2 million Syrian origins in the working-age population in Turkey. This amount corresponds to more than 50 per cent of all Syria origined refugees in Turkey. Authorities of Turkey granted only around 65 thousand of these 2 million people work permits until the end of 2016 (İçduygu & Diker, 2017). Unfortunately, work permits figures are available until 2019 because the Turkey Ministry of Family, Labour and Social Servies does not announce this data set. Total granted work permits to Syrian refugees were more than 140 thousand at the end of 2019.

Consequently, Turkey is a historical migration country. While modern Turkey was constituted, authorities utilised migration policy to create a nation-state. They aimed to attract ethnically and culturally relatives. With this perspective, people who are not Muslim and ethnically related to Turks were forced to migrate towards a potential third-party destination country. This political perspective was a dominant opinion until the end of the 80s.

Moreover, Turkey has been one of the junction countries of transit migration from the Middle East and South Asia towards Europe for the last thirty years. Besides, Turkey is

also a charming destination country for immigrants for several reasons. Some of them come to Turkey for humanitarian causes and with ethnic kinship, which they are generally refugees, asylum-seekers or irregular migrants. Turkey generally welcomely accepted these immigrant waves with some bits of exceptions.

In addition to this aspect, some other immigrants want to earn more money and live in better living standards. They are generally named labour immigrants. The primary source countries for labour immigrants are the former Soviet republics for Turkey.

In short, Turkey experience very different types of migration. Comprehensive migration history creates some challenges in the analyses. There cannot be an exact origin determination for immigrants. Besides, immigrants' origins vary. I can only use this historical background to make some inferences about labour market integration. In the last decade, migration flows have been mainly dominated by Syrian refugees. Before 2011, Central Asia, South Asia, the Middle East, North Africa and former Eastern Bloc countries equally dominated migration flows towards Turkey. Central Asia countries mostly migrate towards Turkey as regular immigrants by utilising ethnic kinship. Others, except for immigrants from the former Socialist countries, migrate to Turkey as irregular immigrants, and some aim to migrate to Europe again. However, Turkey is a destination country for irregular immigrants who came from the former Socialist countries. They mainly do not seek to relocate to a third-party country again.

# CHAPTER 4

# RESEARCH METHOD

This chapter clarifies the data structure, variables, and regression method of this study in two distinct sections. Firstly, I explain the data structure and variables in the following section. While explaining these, I also elaborate on data limitations and summary statistics because this additional information provides different perspectives about data structure and variables. Secondly, I outline the structure of the regression method performed in this study in two subsections.

## 4.1. DATA AND VARIABLES

One of the primary purposes of this thesis is to explore the labour market integration process of foreign-born men in Turkey. For this purpose, I utilise the Household Labour Force Survey (HLFS) conducted by the Turkish Statistical Institute (TURKSTAT) in this study. This survey covers all members of private households who are living in the territory of the Republic of Turkey and working age. The institutional population, who are the residents of dormitories of universities, orphanages, rest homes for elderly persons, special hospitals, prisons and military barracks etc., and children, who are under 15, are not included in the scope of the survey. Although the data set of the survey contains elder respondents over 64 years old who are part of a private household, I only use respondents between 15 and 64, which are independent populations, in this study. The main objective of this survey is to reveal the structure of the Turkish labour market and the labour force in Turkey. This survey contains information about economic activity, occupation, status in employment and hours worked for employed persons and data about the duration of unemployment and occupation status for unemployed persons.

TURKSTAT has conducted HLFS since 1988. The HLFS questionnaire has been re-examined many times to catch the latest standards, but the questionnaire was subjected to make some significant changes with the 2009 revision, which is vital for this study. The

answer of "I was born abroad" was added as an option to the question of "where were you born?" with the revision made in 2009. This question gives a chance to identify the differences in labour market cases between native-born and foreign-born peoples. In this respect, this study uses the cross-sectional data sets of this survey from 2009 to 2020 to compare the labour market outcomes of natives and immigrants.

This section describes the data structure in separate subsections, which are variables, their limitations and summary statistics. Firstly, I explain dependent variables and independent variables in two subsections. The following subsection discusses the dependent variables, which are labour market outcomes. Then, independent variables, which are separated into two categories as critical and control variables, are demonstrated in the next subsection. I elaborated on variables with all features in these two subsections, such as weaknesses, strengths, and potential effects. Besides, there are some limitations while arranging the data set. These and how to overcome them are explained in the limitations subsection. Then, I reveal the summary statistics of variables by differentiating the natives, immigrants and immigrant cohorts in the last subsection.

### 4.1.1. Dependent Variables

I use three different main labour market outcomes indicators to assess immigrants' economic adaptation. These variables are labour force participation status, employment status and the natural logarithm of real monthly wages. Table 8 provides definitions of the dependent variables. All of these are derived from the household members' responses in the HLFS. Comparing the wage gap between natives and immigrants or cohorts of immigrants is the most fundamental way to debate immigrants' labour market integration in the literature (Llull, 2018). This thesis uses these three dependent variables to comprehend labour market integration holistically. These dependent variables should be evaluated and estimated in the order mentioned because participating in the workforce is the first step in economic adaptation (Chin & Cortes, 2015). Then, finding an employment opportunity is the second step of integration, and wage assimilation is the final stage of the labour market assimilation. This broader viewpoint to the economic adaptation of immigrants can allow apprehending the actual situation. These dependent variables also

**Table 8: Definitions of Dependent Variables**

| Variables | Definitions |
|---|---|
| Dependent Variables | |
| Labour Force Participation | If the respondent participates in the Labour Force, it takes the value of 1, 0 otherwise. |
| Employed | If the respondent is employed, it takes the value of 1, 0 otherwise. |
| Natural Logarithm of the Real Monthly Wage | It is a natural logarithm of the monthly wage that is adjusted by inflation for each observation. |

raise some inevitable weaknesses along with these opportunities. These should be evaluated separately for each dependent variable.

Participating in the labour force can be accepted as the first step to integrating into the labour market (Bellemare, 2007). Looking for a job is vital for immigrants' economic adaptation because it is the first stage of integrating the labour market. An immigrant who does not participate labour force cannot find employment opportunity. Therefore, they do not acquire working experience in the destination country. Immigrants cannot integrate without the destination country's labour market experience. It is evident that the economic assimilation process of an immigrant who does not participate in the labour force will not progress (Gorodzeisky & Semyonov, 2017). In this context, analysing the labour force participation differences between natives and immigrants is a significant milestone for unpacking the integration of immigrants into the labour market in Turkey.

The labour force participation (LFP) variable is generated by using the HLFS for this purpose. While defining labour force participation status, I use the "Status" indicator created by TURKSTAT. This status variable indicates household members in three categories which as employed, unemployed, and not in the labour force. Employed and unemployed respondents are in the labour force within this definition. LFP Status is a dummy variable that takes the value of 1 when the respondent participates in the labour market, otherwise 0. This variable has been defined for all working-age populations aged 15-64.

The following step of the labour market integration is finding a job, that is, being employed. It is crucial for economic adaptation because it is one of the most effective ways to accumulate destination country-specific experience and learn about the labour

market structure (Husted et al., 2001). Without employment, and therefore without gaining local workforce experience, economic adaptation is not an option for immigrants. In this framework, employment is another fundamental element of the analysis of labour market integration. The employment status variable is created by using the status indicator of the household labour force questionnaire. This dependent variable is a dummy variable that takes the value of 1 when the respondent is employed, otherwise 0. This variable includes only working-age population aged between 15 and 64

At the last stage, I utilise natural logarithm of monthly real wages —wages further on this study— as a dependent variable in the immigrants' economic adaptation analysis. It is the final outcome of the labour market assimilation of immigrants. In this respect, comparative wage differences between immigrants and natives or immigrant cohorts are vital understanding wage assimilation accurately. I define this variable by using nominal monthly wages responses of household members from HLFS. Besides, the natural logarithm of wages is preferred in this study because coefficients on the natural-logarithm scale can be directly interpreted as approximate percentage differences (Gelman & Hill, 2017: 60). In this study, I use the HLFS, which was conducted for twelve consecutive years. Because of this circumstance, each year's nominal wages contaminate estimation accuracy. Wages are required to be adjusted in accordance with Consumer Price Index (CPI). I solved this problem for this estimation by adjusting the nominal incomes for all years by the CPI, which is listed by TurkStat, by 2020 prices.

These three main labour market outcomes allow potential explanations for the difference in labour market outcomes between natives and immigrants or immigrant cohorts. In addition, I can explain possible reasons for the failure in integration to the labour market of Turkey for immigrants. Also, I utilise these variables in a descriptive analysis of labour market outcomes rate differences between immigrants and natives or cohorts. Descriptive analysis is a fundamental analysis to comprehend labour market integration. I also employ these variables as a dependent variable when estimating the factors affecting the labour market outcomes for natives and immigrants. Additionally, these dependent variables provide to evaluate labour market integration success of immigrants and immigrant cohorts. I also use the wages variable in a regression estimation as a dependent variable when exploring the wage level differences and wage gap calculation for natives, immigrants and immigrant cohorts. With this respect, these variables are critical

identifiers to differences between natives and immigrants for immigrants' labour market integration.

### 4.1.2. Independent Variables

Various independent variables are utilised to estimate labour market outcomes for natives and immigrants in this study. These independent variables can be categorised into two groups that are critical independent and control variables. Critical independent variables, such as being foreign-born, years since migration and dummies for cohorts, reveal where they are in the integration process for immigrants. These variables allow us to explain the disparities in labour market outcomes and the immigrants' labour market assimilation process in Turkey. In this study, there are other independent variables used as control variables, such as age, education level and marital status. These control variables are widely accepted in determinants of labour market outcomes in the labour economics literature as well as in immigrants' labour market assimilation literature. Table 9 provides definitions of both the critical independent and control variables. In this chapter, I explain firstly the critical independent variables and then the control variables with details in the following subsections.

**Table 9: Definitions of Independent Variables**

| Variables | Definitions |
|---|---|
| Critical Independent Variables | |
| Years Since Migration | It is equal to the difference between the year that the survey was conducted and the year of migration. |
| Being Foreign-Born | If the respondent is foreign-born, it takes the value of 1, 0 otherwise. |
| Dummy Variables for Immigrant Cohorts | |
| 2012-2020 arrivals | If the respondent migrated towards Turkey after 2012, it takes 1, 0 otherwise. |
| 2000-2011 arrivals | If the respondent migrated towards Turkey between 2000 and 2011, it takes 1, 0 otherwise. |
| 1990-1999 arrivals | If the respondent migrated towards Turkey between 1990 and 1999, it takes 1, 0 otherwise. |
| 1980-1989 arrivals | If the respondent migrated towards Turkey between 1980 and 1989, it takes 1, 0 otherwise. |
| Before 1980 arrivals | If the respondent migrated towards Turkey prior to 1980, it takes 1, 0 otherwise. |
| Control Variables | |
| Age | It equals the last completed age. |
| Education | |
| Non-Graduated | If the respondent has not any degree, it takes 1; otherwise, 0. |
| Primary School | If the respondent has a primary school degree, it takes 1; otherwise, 0. |
| Middle School | If the respondent has a middle school degree, it takes 1; otherwise, 0. |
| High School | If the respondent has a high school, it takes 1; otherwise, 0. |
| Vocational High School | If the respondent has a vocational high school, it takes 1; otherwise, 0. |
| Higher Education | If the respondent has a graduate or a post-graduate degree, it takes 1; otherwise, 0. |
| Marital Status (Married=1) | If the respondent is married, it takes the value of 1, 0 otherwise. |

#### 4.1.2.1. Critical Independent Variables

In this study, I use three critical independent variables in the regression estimation of labour market outcomes for immigrants. These variables are years since migration, a binary variable of being foreign-born and dummy variables for each immigrant cohort. These are defined using the HLFS data set. These variables are widely used and accepted

in the economic adaptation studies for immigrants (Chiswick, 1978; Borjas, 1985). This section explains the definitions and functions of these variables. I target to reveal labour market outcomes disparities between natives and immigrants or cohorts with these independent variables. I also discuss the relation between these variables and the research questions of this thesis in this section and try to answer which research questions can be met with which variables.

Firstly, years since migration (YSM) is derived from a question in the HLFS questionnaire that "Which year did you migrate to Turkey?". This question is answered only by immigrants. The application year of the survey is vital while calculating YSM because it is calculated with the "questionnaire year minus migration year" operation. After this calculation, the variable of the years that pass after the migration is revealed for each immigrant. This could be a proxy variable that explains the effects of acquiring knowledge and human capital in the destination country on labour market integration in case of data scarcity (Chiswick, 1978). In this respect, I use this variable as a proxy of country-specific and firm-specific skills and knowledge acquiring because, in the HLFS, there is not an indicator of post-migration experiences and skill acquisitions. With this approach, this variable could provide a viewpoint for the immigrants' economic assimilation process in Turkey. It might help to identify takeover points for immigrants. It will also illustrate the marginal effect of each year, which is resided, in Turkey on immigrants' labour market outcomes as a proxy of knowledge and skills acquiring.

The binary variable of being foreign-born is another independent variable in this study. If the respondent answers "Abroad" to the question of "Where were you born?" it takes the value of 1; it takes 0 otherwise. In other words, if it takes 1, the respondent is a foreign-born. Otherwise, the respondent is a native. This variable allows me to investigate the effect of being foreign-born on the labour market outcomes against similarly qualified natives. The impacts of this status could relate to the transferability problem of skills and qualifications. Also, it could be related to the deficiency in Turkish-language fluency. The variable of being foreign-born will prove the detrimental effects of this status and the necessity of economic adaptation.

As illustrated in Table 9, the last independent variables are cohort dummy variables. There are five different cohort dummy variables. I consider the year of migration to

Turkey when defining these cohorts' dummy variables. If the respondent immigrated to Turkey in a cohort's year interval, the dummy variable that represents this year interval takes 1 for this respondent. Otherwise, it takes 0. In other words, the dummy variable of the 2012-2020 arrivals means that immigrants who arrived in Turkey between 2012 and 2020. They take the value of 1 for this dummy variable, and other immigrants take 0. The other cohort dummies were also defined in the same way.

These dummy variables allow the examination of immigrants' economic assimilation process from different points of view. Firstly, this variable might give the chance to observe the change in immigrant quality according to the year of immigration (Borjas, 1985; 1995). This situation could explain the importance of human capital on labour market outcomes and immigrants' labour market integration. In addition, the differences between labour market outcomes, which might occur between groups with similar human capital structures, will also provide us with information about the existence of the period effect (Borjas, 2015). It could also explain differences in labour market outcomes between immigrant cohorts and native people depending on the policy effects. This explanation might be possible if the policy approach varies much among cohorts by year. In addition, with this variable, it is possible to observe the impact of ageing on labour market outcomes (Borjas, 2014; 2015; 2016). Finally, this variable could reveal the marginal effects of cohorts on labour market outcomes. In short, if there is a difference in terms of labour market outcomes depending on this variable, there are four possible explanations —immigrant quality, period effects, policy impacts and ageing—. By using these dummy variables, this different perspective can be revealed, and immigrants' labour market integration can be comprehended from this distinct perspective.

#### 4.1.2.2. Control Variables

I also use three control variables while estimating the labour market outcomes for both natives and immigrants to observe the demographic characteristics of the respondents. All of these variables are calculated from the HLFS. These variables are age, a dummy variable for the marital status, and six dummy variables to observe the education levels of respondents. The definitions of these variables are briefly given in Table 9 above. These variables are defined for both natives and immigrants. In this section, these

variables are explained with details like strengths, weaknesses and contributions to the analysis.

The first control variable is the completed age indicator. This variable is suitable for use as in the questionnaire. This variable provides to reveal the relationship between the age profile and labour market outcomes for immigrants and natives. Especially, age earning profile is the stylised fact of labour economics (Murphy & Welch, 1990). The human capital theory also expects a positive relationship between ageing and human capital investment (Borjas, 2019:325). With ageing, theory expects that members of households gain more working experience and more knowledge and become more skilled worker. In line with this theoretical framework, age is a variable that reflects and checks the age earning profile and the human capital accumulation process with ageing for natives and immigrants in Turkey.

Another control variable is the marital status dummy. This variable is formed from the answers to a closed-ended question in the HLFS. Marital status is defined in four different types by TurkStat in HLFS. These categories are "never married", "married", "divorced" or "widowed". I use single and married definitions for simplicity in this research. If the respondent categorised as married in HLFS, the marital status variable takes the value of 1 for this observation. Otherwise, the respondent is classified as single in this research, and the variable takes the value of 0. It is generally accepted relation that married people outperform unmarried people in labour market outcomes (Griliches, 1976; Hill, 1979; Bartlett & Callahan, 1984). This fact could be related to the labour market preferences toward married individuals (Schoeni, 1995). Therefore, this variable is defined to control and observe this widely used relation between wages and marital status for natives and immigrants in Turkey.

The last control variable is a group of dummy variables that are defined for graduated education degree. These variables are derived from answers to a multiple-choice question that is "What is the latest educational institution/level you graduated from?". Possible answers are "not completed any educational institution", "Primary school", "Secondary school", "High school", "Vocational or technical high school" and "Higher education (university, faculty or upper)" in questionnaires administered until 2014. There is one more possible answer added to the 2014 and following questionnaires. This additional

option is the post-graduate educational degrees. However, post-graduate education had been included in the university option before the 2014 questionnaire. For consistency in the analysis and estimation, this research continues to take these two educational attainments into one category.

Each respondent can take the value of 1 for an only category, and they take 0 for other categories. It means that the degree is the latest graduation from for a household member take the 1 value and for earlier degrees take the value of 0. In other words, a respondent who graduated from high school takes 1 for only high school dummy. Primary school degree and secondary school degree dummies take zero value along with university degree. Each variable is also defined in Table 9.

Marginal impact of educational degree on labour market outcomes is an established relation of labour economics (Dickinson, 2013). According to theory, higher educational degrees causes the higher labour market outcomes. In short, there is a positive relationship between education and labour market outcomes. This marginal impact is also seen for immigrants' labour market outcomes (Gonzalez, 2003). However, the magnitude of the effect of this verified relation could be varied for natives and immigrants and by country. This dummy variable group is defined to check and estimate this demonstrated relation for natives and immigrants in Turkey. This variable also control for the possible inequality of this relationship for natives and immigrants in Turkey.

Therefore, this section sets up a general framework for variables is used in the empirical analysis. Dependent variables were explained with the importance for economic adaptation of immigrants. Independent variables were clarified with usage reasons and ties with research questions. Control variables were demonstrated with reasons and necessities of use. The control variables allow analysing the labour market integration of immigrants more robust. In addition to these, I reveal the data limitations that I faced while defining variables in the following subsection. This subsection will also contain reasons of why I didn't define some control variables that are widely used in the relevant literature.

### 4.1.3. Data Limitations

In setting up an empirical framework, I encountered some limitations. While some limitations originate data structure of HLFS, others arise from legal and institutional changes in Turkey. Both independent variables and control variables have been affected by these limitations. They made impossible the creation of some important variables. For example, immigrants' origin as an independent variable and schooling year along with experience as a control variable could not be defined by using HLFS. These limitations are explained in detail according to possible unidentified variables in this section.

First of all, the HLFS questionnaire does not contain any questions about the source country of foreign-born people; therefore, there are not any identifiers about immigrants' origin. Hence, immigrants' origins cannot be differentiated from the available data set. This situation is an obstacle to observing the differences in labour market assimilation that occur depending on the source country of immigrants. This variable is generally used to estimate the effects of ethnic proximity of immigrants to the destination country. Besides, this variable is also utilised to check the volume of immigrants who come from one source country.

Secondly, the HLFS survey does not entail any information about the closeness of the mother tongue to the Turkish language of immigrants and the current Turkish language fluency of immigrants. Therefore, immigrants cannot be differentiated according to native language proximity to Turkish and actual fluency in Turkish by using HLFS. Nevertheless, years since migration variable might represent an increase in Turkish language fluency. Even so, improvements in Turkish fluency cannot be observed with certainty. These two main limitations cause some setbacks in comprehending the immigrant adaptation process from different perspectives. However, these disruptions do not affect the primary approach of this study to immigrants' adaptation process in Turkey.

In addition, this thesis also aimed to analyse the labour market integration of foreign-born female people. This analysis should contain a comparison of labour market outcomes for female natives and female immigrants with the same methodology in this study. However, this methodology is inapplicable for the female population because of the fewness in observation number of female immigrants. This is another limitation of this study.

Nevertheless, I show the estimation results with the female dummy variable for all populations in appendix 1.

On the other hand, there are some additional constraints for the control variables. Firstly, schooling years are an important control variable in labour economics studies. This variable defines educational attainment in terms of years. This variable is more flexible while estimating the labour market outcomes. It can be used in a quadratic fashion, and this reveals more complex results about labour market issues. Despite these estimation superiorities in the labour market outcomes, it is incalculable because of the data collection process and the institutional structure inconsistencies in education.

I mentioned inconsistency in recording educational indicators while discussing educational attainment dummies. Higher education is one of the possible options for the question of “What is the latest educational institution/level you graduated from?” in the HLFS. However, vocational community colleges, Doctor of Philosophy (PhD) degrees and other degrees between these two have been categorised in this answer simultaneously. Vocational community colleges provide two-year education in Turkey, but they are classified together with schools that offer more extended education periods, such as bachelor’s, master’s, and PhD degrees. This issue is related to the data collection process, but there is an additional institutional and legal inconsistency. Primary school education has been reduced from 5 to 4 years, and middle and high school education has been increased from 3 to 4 years with different legal changes in Turkey. Then, this application is named “4+4+4”, and there are some additional changes in the duration of compulsory education. These changes make the schooling years variable inconsistent. For these reasons, I prefer to use dummy variables to estimate the effects of educational attainments.

Secondly, due to the inability to calculate the years of schooling, I cannot use the labour market experience variable, whose importance was emphasised by Mincer (1974) in this study. This variable is calculated by the equation of "age minus years of schooling minus the school starting age". Another possible factor that hinders the reliable calculation of this variable in the coming years will be the frequently changed school starting age in recent years. This variable controls and estimates the effect of gaining experience while working on labour market outcomes. Years since migration could be the substitution for

it in case of unavailability of experience years, but using two of them together allows to differentiate acquiring working experience and skills and daily life experience each other.

This research provides a sufficient methodological framework to understand the integration of immigrants into the labour market in Turkey despite some lack of information and limitations in data. Although I could not overcome these shortcomings for this study, I tried to develop strategies to reduce their impact. Firstly, the deficiency of immigrants' origin identifier, as well as proximity identifier of the native tongue to the Turkish language, are tried to eliminate with a short historical exploration of international migration towards Turkey. In addition, I use the years since migration (YSM) as a proxy for the Turkish language fluency improvements of immigrants. Besides, age is a proxy for labour market experience. When considering the definition of labour market experience, a high correlation coefficient possibility between age and experience can be seen easily. Therefore, age could include experience relation for this study. Eventually, instead of schooling years, I use education levels dummy variables. Even if these overcoming methods may not provide the perfect solution, these applications solve the problems of these limitations.

### 4.1.4. Summary Statistics

I discuss and explain the summary statistics of both dependent, independent and control variables in this subsection. Table 10 provides summary statistics in accordance with immigrant cohorts and native-immigrant differences. Using groups, such as immigrant cohorts, natives and immigrants in the summary statistics create subsamples to elaborate on the overall characteristics of each group. These subsamples in summary statistics allow different perspectives for the same dataset. I exploit these different perspectives to comprehend current labour market assimilation issues. With this purpose, this section discusses the differences between natives and immigrants firstly. Then, the differences among immigrant cohorts and natives will be explored. These two different discussions allow analysing the two different perspectives on immigrant adaptation in Turkey. In this section, I discuss summary statistics by following both types of variables and the grouping of summary statistics. Firstly, I draw a general framework for summary statistics. Secondly, I discuss summary statistics of dependent variables by native-immigrant

difference, then per cohorts. Besides, summary statistics of independent and control variables will be clarified by following the same structure.

**Table 10: Descriptive Statistics - Mean Values - Men**

| | Natives | Migrants | All Men | 2012-2020 |
|---|---|---|---|---|
| No of Obs | 1772023 | 27094 | 1799117 | 578 |
| Labour Force Participation (%) | .7478 | .7141 | .7473 | .6937 |
| Employed (%) | .6766 | .6304 | .6759 | .5294 |
| LN Real Wages (TL) | 7.7483 | 7.7651 | 7.7486 | 7.4376 |
| YSM | N.A. | 21.735 | N.A. | 2.4498 |
| Being Migrant (Migrant=1) (%) | N.A. | N.A. | .015 | N.A. |
| Education (%) | | | | |
| Non-Graduated | .054 | .079 | .055 | .254 |
| Primary School | .334 | .181 | .331 | .198 |
| Secondary School | .246 | .215 | .246 | .243 |
| High School | .113 | .152 | .114 | .148 |
| Vocational High School | .103 | .182 | .104 | .039 |
| Higher Education | .146 | .189 | .147 | .114 |
| Age | 37.684 | 39.728 | 37.715 | 29.984 |
| Marital Status (Married=1) (%) | .668 | .710 | .669 | .562 |
| | 2000-2011 | 1990-1999 | 1980-1989 | Before 1980 |
| No of Obs | 2920 | 4723 | 7328 | 5636 |
| Labour Force Participation (%) | .6530 | .7912 | .8045 | .550 |
| Employed (%) | .5435 | .7025 | .7427 | .5032 |
| LN Real-Wages | 7.7687 | 7.7378 | 7.9307 | 7.9425 |
| YSM | 8.4438 | 20.445 | 27.344 | 44.436 |
| Being Migrant (Migrant=1) (%) | N.A. | N.A. | N.A. | N.A. |
| Education (%) | | | | |
| Non-Graduated | .077 | .014 | .018 | .022 |
| Primary School | .071 | .047 | .115 | .413 |
| Secondary School | .304 | .279 | .164 | .165 |
| High School | .227 | .169 | .149 | .075 |
| Vocational High School | .106 | .297 | .292 | .155 |
| Higher Education | .213 | .190 | .259 | .167 |
| Age | 31.619 | 39.343 | 41.515 | 52.345 |
| Marital Status (Married=1) (%) | .526 | .688 | .770 | .901 |

Table 10 displays the number of observations for each group. The total number of observations is approximately equal to 1.8 million in this study. Twenty-seven thousand

respondents of this grand total are foreign-born people. This amount means that 1.5 per cent of this sample consists of immigrants. Besides, the 1980-1989 immigrant cohort is the most populated group with more than 7 thousand observations among all cohorts. The 2012-2020 cohort is the least populated group with less than a thousand observations between all cohorts, which is an expected situation because they are the most recent arrival cohort.

Table 10 also shows the mean values of variables according to groups. Labour force participation ratio for male natives in Turkey is equal to approximately 75 per cent. In contrast, the same ratio is slightly higher than 71 for the immigrant males in Turkey. Employed male natives consist of a little less than 68 per cent of the whole male native population. On the contrary, this ratio equals 63 for the immigrant male population. While the mean value of wages for native males equals 7.748 TL in terms of the natural logarithm, it is almost 2 per cent higher for immigrant males on average, and it corresponds to 7.7651. The summary statistics of dependent variables reveal a puzzling situation regarding immigrants' labour market assimilation. Immigrants in Turkey are better off in wages outcomes than natives on average. They approximately earn 2 per cent higher than natives. Nevertheless, immigrants are performed worser than natives on average in the other two outcomes of the labour market, which are labour force participation and employment. While the labour force participation rate for immigrants is 4 per cent lower than natives on average, immigrants' employment rate is 5 per cent smaller than natives.

Mean values of three primary labour market outcomes for cohorts provide a distinct perspective for immigrants' economic adaptation. This viewpoint allows observing differences between immigrant cohorts in terms of labour market outcomes. In terms of labour force participation, 1980-1989 and 1990-1999 arrivals cohorts are the best off among cohorts with 80 per cent participation. They perform better than natives in the labour force participation. There is an approximately 5 per cent difference between natives and these two cohorts. On the contrary, the two recent cohorts, which arrived in 2000-2011 and 2012-2020, and the before 1980 arrivals, which are the earliest cohort, are worse-performed than natives in terms of LFP. In addition, the earliest cohort is the worst performed among cohorts in labour force participation with a 20 per cent gap as per natives.

The general results for the mean values of the employment status are almost identical with the labour force participation status except for percentages. 1980-1989 and 1990-1999 cohorts are the best-performed groups among immigrants, and they are well off than natives on average. 1980-89 cohort is 7 per cent better performed than natives in employment, and this difference is equal to 3 per cent on behalf of the 1990-99 cohort. Contrarily, the recent two cohorts and the earliest cohort are in a worse situation than natives regarding the mean value of employment status, and before 1980 arrivals are the most unsuccessful group between immigrant cohorts with a 17 per cent gap as per natives.

On the other hand, unlike the labour force participation and employment statuses, summary statistics for wages draw different results for immigrants' economic adaptation. Before 1980 arrivals are the most successful cohort among all, and they are better off than natives with approximately 20 per cent higher wages. Besides, 1980-1989 and 2000-2011 arrivals seem better off than natives in wages. The mean value of wages for 1990-1999 arrivals is almost identical with natives. Lastly, the recent cohort, which is 2012-2020 arrivals, are the worst off in wages on average, and they are worse off 30% than natives.

Table 10 also shows the distribution of education by groups. There are significant differences in the educational attainments between natives and immigrants in favour of immigrants. The table displays those immigrants in Turkey are more educated than natives on average. More than 50 per cent of male immigrants have a high school degree or above, while this proportion is slightly higher than 35 per cent for natives. While the total share of not completed any educational institution and primary school graduation in natives is approximately 39%, this is only equal to 26 per cent for immigrants. On the other hand, summary statistics for cohorts provide slightly different results about the educational attainments of immigrants. Percentage of a high school degree or above for immigrants who arrived between 1980-1989, 1990-1999, and 2000-2011 consistently higher than 50 per cent. Among cohorts, 1980-1989 arrivals are the most educated group, which 70 per cent of them have at least a high school degree. Besides, the cohort of 2012-2019 is the least schooled group, and sixty per cent of them have a secondary school degree or below. At last, approximately 40% of the before 1980 arrivals cohort have at least a high school degree. While there is a more educated average immigrant from the general perspective, this false notion disappears with the cohorts' summary statistics. This

shows that the educational attainments change by cohorts. These educational attainment differences could be a reason for economic adaptation differences.

Table 10 also provides the summary statistics of age for natives, immigrants and immigrants' cohorts. An average immigrant is two years older than an average native. The mean value of age for immigrants equals 39.7 years. On the other hand, according to cohorts' summary statistics, the average value of age decreases gradually from the earliest cohort to the recent one. The youngest cohort is 2012-2019 arrivals, and the mean value is equal to 30 years. On the other hand, Immigrants who arrived before 1980 are the oldest group. The mean value of age for them is slightly higher than 52 years. The other cohorts' average age values lie between these two values.

The marital status is the last control variable in this analysis. While 71 per cent of immigrants are married on average, this share is equal to 66 per cent for natives. When the mean values for cohorts are considered, summary statistics for the marital status follow a quite similar pattern with age in general. It means that this ratio takes a higher value for the earlier cohorts on average and smaller values for the recent cohorts. 90 per cent of the earliest cohort are married, whereas it is equal to 56 per cent for the recent immigrant cohort. The only distinction of marital status from age pattern is that the being married share in the 2000-2011 cohort is smaller than the recent cohort. The other two cohorts' being married percentages stand between the earliest and most recent cohorts.

Table 10 also provides summary statistics about critical independent variables that are constructed only for immigrant respondents. First of all, summary statistics for years since migration (YSM) show the average duration that passed after arriving in Turkey. The mean value of YSM for immigrant men is equal to 21.7 years. On the other hand, summary statistics of immigrant cohorts provide a more detailed view of this variable. The mean value of YSM gradually increases from the most recent cohort to the earliest cohort. It equals more than 44 years for the before 1980 arrivals, whereas it is only 2.5 years for the recent cohort. The mean values of other cohorts stand between these two values. The other independent variables are the dummy variables of being an immigrant and dummy variables for cohorts. The variable of being an immigrant has been mentioned before. I utilise this variable to observe the effect of being an immigrant on labour market outcomes against equivalent natives. Besides, dummy variables for each cohort allowed

this fragmented view towards immigrants in Turkey. With the help of these variables, summary statistics could be defined for each immigrant cohort separately and could follow changes in the mean value for them.

Consequently, summary statistics reveal complex results about the labour market integration of immigrants in Turkey. While immigrants appear to be successful in wages relative to natives, they seem unsuccessful in labour force participation and employment statuses on average. The cohorts' summary statistics must be examined to clarify this puzzling situation. Immigrants arriving between 1980-1989 and 1990-1999 are better position in all labour market outcomes than natives. On the other hand, the 2012-2020 arrivals are performed worse than natives in terms of all labour market outcomes. At last, mean values of labour market outcomes for the before 1980 arrivals and 2000-2011 cohort draw a similar picture with all immigrants' mean value. While these two cohorts are more successful in terms of wages than natives on average, the mean value of labour force participation and employment statuses for these two cohorts reveal that they are under-performed than natives. This fragmental view shows the origin of these complex results.

These summary statistics also show different results about control variables and the possible relation of these variables with labour market outcomes. Firstly, 1980-89 and 1990-99 cohorts are more educated than natives and other cohorts. When the success of these cohorts on all labour market outcomes is considered, this high educational attainment might be related to these impressive labour market outcomes results. On the other hand, the 2012-2020 cohort is the least educated group. The poor results in the labour market may be associated with this low educational attainment level. Secondly, before 1980 arrivals are the eldest cohort by far. Also, they seem to be unsuccessful in terms of labour force participation and employment statuses on average. This result might be related to a large number of elderly people in this group.

There may also be many other relationships in addition to these mentioned ones between these variables. These mentioned or unobservable potential relations can be clarified with regression estimations, and these relations must be established with the regression estimation. However, there is not one exact and superior estimation approach for all labour market outcomes. For this reason, it might be estimated with distinct methodologies. In addition, dependent variables require different estimation

methodologies due to their variable structure. Because of this, I adopt different approaches with different dependent variables in this study, and I explain these estimation methodologies in detail in the following section.

## 4.2. METHODOLOGY

This section explains the methodological approach and estimation equations used in this research to estimate the labour market outcomes for natives and immigrants in Turkey. There are some differences in the estimation approaches and equations for natives, immigrants and immigrant cohorts. Besides, estimation methodology differs for labour force participation, employment and wages. I use the logistic regression model to estimate labour force participation and employment in both cross-sectional and pooled cross-sectional models for both natives, immigrants and immigrant cohorts. However, I use the ordinary least squares methodology while estimating wages in both cross-sectional and pooled cross-sectional models for both natives, immigrants and immigrant cohorts. I explain the differences in these estimation methods and approaches in the first subsection. While explaining these differences, I also clarify the advantages and disadvantages of each approach with the reasons for using them.

With these estimations, I identify marginal effects of each variable on labour market outcomes and their size difference for natives, immigrants, and immigrant cohorts. In addition to this, I also might find out relative wage level differences between natives, immigrants, and immigrant cohorts. These wage level disparities are generally an advantage for natives against immigrants. The relative level of disparity favouring natives is also defined as the wage gap in the literature. In the following subsection, I also discuss the methodological framework of identifying the wage gap in this respect. In addition to this, I also explain the methodological application of the takeover point in the same subsection. This point is defined as the wage equalisation point of immigrants and natives. The terms and conditions to achieve this point are one of the primary identifiers of immigrants' economic adaptation and reaching this point by immigrants is evaluated as one of the leading indicators of adaptation.

### 4.2.1. Regression Methodology

#### 4.2.1.1. Cross-Sectional Estimation Methodology

The cross-sectional studies of the economic adaptation of immigrants are based on the methodological approach of Chiswick (1978). This empirical analysis uses the Mincer earnings function to estimate the economic integration of immigrants through wages. The fundamental Mincer earnings function explains wage income as a function of schooling and experience. This earnings function was fashioned by the human capital approach. It can be expanded with post-school human capital investments, sector-specific skill investments. This approach also assumes that natives only invest in home country-specific human capital. I adopt this approach for labour market outcomes in Turkey with some mandatory modifications. These were explained in the limitations subsection. One of the modifications is the definition of schooling as dummy variables of graduation levels. The other one is that using the age variable as a substitute for the experience variable because of the unavailability of the schooling years variable.

There are three different estimation equations, one for natives, the other for immigrants and another one for all samples. These equations are used to estimate these three dependent variables. These are labour force participation, employment status and the natural logarithm of monthly real wages. While estimating these dependent variables, I utilise two different estimation methodologies. For labour force participation and employment as a dependent variable, I use the logit model in all equations because these two are binary variables. After this logit estimation, I also compute the effects coefficients of these regressions. On the other hand, I use the ordinary least squares model for wages as a dependent variable. This model allows identifying marginal effects of each independent variable. This methodological brief embraces all equations. In other words, labour force participation and employment statuses are estimated by the logit model, and wages are estimated by the ordinary least squares model for all groups

I use equation 1 given below to estimate only native-born people's labour market outcomes. The dependent variables, which are three leading labour market outcomes, are represented by Y in the equation. β also represent coefficient values of control and

independent variables. The subscript i denotes observations. The other subscript n means natives, indicating that this equation is used only for natives. In addition, "i" indexes a dummy variable for each education level.

$$Y_{n,i} = \beta_0 + \beta_{n,i,k}\text{Education}_{n,i,k} + \beta_6\text{Age}_{n,i} + \beta_7\text{Age}^2_{n,i} + \beta_8\text{Marital Status}_{n,i} + u_{n,i} \quad (1)$$

This equation utilises a set of dummy variables for each different level of education, including respondents who have not completed any educational institution, primary school graduates, secondary school graduates, high school graduates, vocational high school graduates and finally, higher education graduates. The group of respondents, who has not completed any educational institution, is the reference dummy variable in this model. In other words, I do not estimate a coefficient for this dummy, and the coefficient variables of the other dummies will represent the relative effect of other educational degrees with respect to the reference group. I also adopt this design in all other equations.

The regression equations include age and the square of age as the independent variables. In other words, the labour market outcomes depend on age, but it happens so in a quadratic fashion. The change in the labour market outcomes does not measure only concerning age; it does not make sense to hold the square of age fixed while ageing. In this regard, I use the age variable in this fashion to observe the decreasing marginal effect of ageing and, as a proxy, the decreasing effect of experience acquisition on the labour market outcomes. In short, these independent variables help to show the parabolic impact of age on labour market outcomes. Besides, there is one additional control variable. The dummy variable of marital status is the last independent variable in equation 1. It shows the effect of being married on the labour market outcomes.

Equation 2 given below is designed to estimate the labour market outcomes for immigrants in Turkey. This equation includes the same control variables that included educational attainment dummies, age, the square of age and marital status dummy in equation 1. These control variables are indicated by the expression $C_{f,i}$. I use the same approach for control variables in this equation with equation 1. The subscripts in this equation are the same as those in equation 1 with meanings with one exception. The f subscript is used instead of n, and it represents foreign-born people. It shows again that I use equation 2 to estimate only immigrants' labour market outcomes. Equation 2 also contains an additional variable in a quadratic form. This is the years since migration,

which observes and establishes the effect of years of residing in Turkey on labour market outcomes of immigrants.

$$Y_{f,i} = \beta_0 + \beta_{f,c} C_{f,i} + \beta_9 \mathrm{YSM}_{f,i} + \beta_{10} \mathrm{YSM}_{f,i}^2 + u_{f,i} \quad (2)$$

The primary purpose of this equation observes the marginal effect of the number of years since the migration on immigrants' labour market outcomes in Turkey. For this purpose, this equation uses the years since migration variable in a quadratic manner. In other words, equation 2 contains years since migration (YSM) and its square. These two variables depend on one observation, and when YSM increases, its square also increases with it. It allows showing the non-linear shape of the marginal effect of each additional residing year on immigrants' labour market outcomes in Turkey. In short, this quadratic design might present the parabolic profile of economic adaptation. It might also be a proxy for Turkish language fluency, acquisition of destination or firm-specific skills, building a local network. I define the current wage gap using the estimation results of equations 1 and 2 together. Also, with the marginal effect, the takeover point for immigrants is defined in terms of wages with the help of these equations.

Equation 3 shown below is the last cross-sectional equation estimated in the empirical analysis. This equation is estimated for all sample including natives and immigrants. The control variables of this equation and the methodological approach are the same as the previous ones. Control variables represent by $C_i$. The subscripts of coefficients and variables are the same in this equation, but there is not an identifier for sample such as n or f. This again shows that this equation estimates for all sample. There is an additional dummy variable in equation 3. This is a binary variable of being a foreign-born. The main aim of estimating this equation is to observe the effect of being foreign-born on the labour market outcomes. An additional dummy variable is designed in this manner. This estimation may provide evidence whether or not being foreign-born is a disadvantage in the labour market against natives.

$$\mathrm{Y}_i = \beta_0 + \beta_c C_i + \beta_{11} \mathrm{Being\ foreign-born}_i + u_i \quad (3)$$

Consequently, the cross-sectional estimation process allows observing where the natives and immigrants are in terms of labour market outcomes and examining the response of immigrants' labour market outputs to the economic integration process using the variable of years since migration for migrants. With these equations, the wage gap and the takeover point can be defined. In addition, these equations allow me to examine how being an immigrant has an impact on labour market outcomes compared to their native counterparts.

#### 4.2.1.2 Pooled Cross-Sectional Estimation Methodology

The pooled cross-sectional estimation methodology of economic adaptation is based on the methodological application of Borjas (1985). The fundamental approach of this methodology to labour market outcomes is the same as the Mincer earnings function. In other words, the pooled cross-sectional methodology adopts the relation between labour market outcomes, and schooling and experience. As I mentioned in the Literature Review chapter, this method emerged as a criticism of Chiswick's cross-sectional methods. The cross-sectional analysis examines a dynamic process with a static method. It also assumes that the human capital structure of new entrant immigrants remains unchanged. Also, this method cannot observe immigrants who have failed in the labour market and have returned to their home country. In short, it allows a snapshot view of the immigrants' adaptation process. Therefore, the cross-sectional estimations of the labour market integration are widely accepted upwardly biased. In other words, cross-sectional estimates might exaggerate immigrants' economic adaptation. I use this approach in the pooled cross-sectional estimation for labour market outcomes in Turkey with the same modifications as the cross-sectional estimation for the control variables.

Pooled cross-sectional methodology analyses a dynamic process with more accuracy with arranging cross-sectional datasets collected in different years and pooling immigrants according to entry years. In this regard, the pooled cross-sectional method is used in this research to estimate labour market outcomes with some additional modifications. For instance, across-cohort growth and within-cohort growth are unobservable for immigrants in Turkey because of the HLFS. For observing the growth type of labour market outcomes for immigrants, each years' survey must contain much more observation for each cohort.

For this reason, this thesis estimates only growth in total for labour market outcomes for immigrants.

Equation 1 from the previous section, which estimates labour market outcomes for natives in the cross-sectional analysis, is used with all specifications in this methodology for natives. The main difference of this method apart from the cross-sectional method is the estimation approach to labour market outcomes for immigrants. This method estimates immigrants' labour market integration process by using groups defined by their arrival year. Thanks to this specification, the pooled cross-sectional estimation does not have to assume that immigrants' human capital quality has not changed over the years. On the contrary, this model allows observing and understanding the changing human capital quality. The analysis method in this thesis might also allow observing the changes in the socio-economic and human capital structure of immigrants coming to Turkey.

The labour market outcomes for migrants are estimated with equation 4 given below. $Y_{f,i}$ demonstrates dependent variables of this estimation equation. Control variables are illustrated by $C_{f,i}$. Subscripts of this estimation equation are the same as the former ones. The subscript f demonstrates the foreign-born people, and it shows that equation 4 estimates only immigrants. While estimating labour market outcomes for immigrants, this study uses the recent cohort as the reference group. The cohort for immigrants, who arrived in 2012 and later, is the recent group. While $D_{1970}$ denotes immigrants who arrived in Turkey before 1980, $\alpha_{1970}$ shows the coefficient. $D_{1980}$ indicates immigrants who arrived in Turkey between 1980 and 1989. $D_{1990}$ illustrates immigrants who arrived in Turkey between 1990 and 1999. $D_{2000}$ denotes immigrants who arrived in Turkey between 2000 and 2011. $\alpha_{1980}$, $\alpha_{1990}$, $\alpha_{2000}$ are the coefficient of these dummy variable indication immigrant cohorts.

$$Y_{f,i} = \beta_0 + \beta_{f,c}c_{f,i} + \alpha_{2000}D_{2000} + \alpha_{1990}D_{1990} + \alpha_{1980}D_{1980} + \alpha_{1970}D_{1970} + u_{f,i} \qquad (4)$$

The pooled cross-sectional model estimates immigrants' labour market outcomes by differentiating them according to their years of arrival. This entry year differentiation in the estimation equation applies different perspectives and approaches to immigrants' economic adaptation. First, this differentiation could enable me to examine the period effect. Second, the effects of the change in the human capital quality of immigrants on the labour market outcomes can be measured. In addition, although the origins of

immigrants are not known due to the limitations in the data set, the effect of origin on labour market outcomes can be discussed with the information obtained from the historical process. These distinct perspectives and approaches to immigrants' economic adaptation could be evaluated as superiorities of pooled estimation compared the cross-sectional estimation. Applying the pooled cross-sectional estimation method, this study can observe differences in economic adaptation among immigrants in Turkey.

Consequently, the pooled cross-sectional estimation is apart from the cross-sectional approach from various aspects. These differences allow understanding immigrant adaptation from different perspectives. It reveals the differences in the economic adaptation among immigrants per as cohorts. It enables me to follow the change in the human capital quality of immigrants. The pooled cross-sectional methodology estimates immigrants' economic adaptation, which is a dynamic process, with less contamination because it could be accepted as a more dynamic analysis application than cross-sectional methodology. With these two distinct methodologies, all three labour market outcomes estimate, and all these processes yield different coefficient results. These coefficients help to understand the marginal effect of each variable on these labour market outcomes. In addition to this marginal effect analysis, the relative level of the earnings of current immigrants within themselves and relative to natives is one of the leading determinants of labour market integration. In this respect, this study examines the wage gap between recently entered immigrants, natives, and earlier immigrants, and it explores the takeover point for immigrants against natives in terms of wages. The methodological application of measuring these relative levels is discussed in the following section.

### 4.2.2. Methodology for Identifying the Relative Wage Levels

Detecting differences in wage levels between immigrants and natives or between immigrant cohorts is one of the vital identifiers for answering whether and what extent immigrants’ labour market integration occurs or not. If these relative wage levels are identified, I can make inferences about possible reasons for the course of immigrants’ labour market integration. The wage gap between immigrants and natives is vital for immigrants' economic adaptation because it is a summary of the current situation. Along with this, it also allows me to determine the takeover point for immigrants in terms of

wages. Identifying the takeover point is important because this point reveals the possible accomplishment interval of immigrants' adaptation to the labour market in terms of wages.

Identifying the wage gap and the takeover point is completely dependent on determining the wage levels of immigrants and natives. Detecting these levels is highly related to estimated coefficient values obtained from the regression analysis and mean values of every variable. Calculating the values of the dependent variables is a critical element for determining the relative levels of labour market outcomes for the immigrant cohorts. Using these values, I calculate the wage levels on estimation equations for natives, immigrants, and immigrant cohorts. Equation 5 given below is the mathematical demonstration of this calculation. This equation is completely the same as equation 1. However, the hat symbols both on the dependent variable and on the coefficient values of independent variables and the bar symbols on variables reveal the difference of this equation. This equation is an estimated wages equation by ordinary least squares methodology. The hat symbol shows the estimated values of these variables. The bar symbol displays each variable mean value. In short, I detect the wage level for an average skilled native man with equation 5.

$$\widehat{LnW} = \widehat{\beta_0} + \widehat{\beta_{n,ı,k}}\overline{\text{Educatıon}_{n,ı,k}} + \widehat{\beta_6}\overline{\text{Age}_{n,ı}} + \widehat{\beta_7}\overline{\text{Age}^2_{n,ı}} + \widehat{\beta_8}\overline{\text{Marıtal Status}_{n,ı}} \qquad (5)$$

I calculate the wage level for an average skilled immigrant man by Equation 6, which has the same features as equation 2. The difference between equations 2 and 6 are hat and bar symbols. These symbols indicate that equation 6 is the estimated. This means that equation 2 is estimated by the ordinary least squares method, and these hatted coefficient values are the results of this estimation. An average immigrant man also represents an average value of years since migration value for immigrants. Comparing the native man wage level obtained from equation 5 and the immigrant man wage level obtained from equation 6 reveals the wage gap between the native and immigrant with the same average characteristics. In addition to this, the takeover point for immigrants in terms of years since migration can be calculated from these equations. It implies that check the marginal effect of each residing year on the wages of immigrant men in Turkey when remaining other variables constant. Applying this method, I estimate the takeover point for immigrants in ceteris paribus conditions in terms of residing years in Turkey.

$$\widehat{LNW} = \widehat{\beta_0} + \widehat{\beta_{f,c}}\overline{c_{f,i}} + \widehat{\beta_9}\overline{YSM_{f,i}} + \widehat{\beta_{10}}\overline{YSM_{f,i}^2} \quad (6)$$

Equation 7 given below demonstrates the effect of being an immigrant on the labour market outcomes. This equation has the same characteristics as equation 3. This effect reveals with the coefficient value of being a foreign-born variable. This coefficient shows the wage level difference between equally skilled and the same-aged immigrants and natives. This difference is generally detrimental to immigrants' wages (Borjas & Cassidy, 2019). Because the only difference between the two average respondents is an immigrant status, this wage gap is named as a wage penalty for immigrants.

$$\widehat{LNW} = \widehat{\beta_0} + \widehat{\beta_c}\overline{c_i} + \widehat{\beta_{11}}\text{Being foreign} - \text{born}_i \quad (7)$$

Equation 8 given below is the last equation estimated in this chapter. This equation enables me to measure the cohort effect on the wage levels for the sample of immigrants in Turkey. Features of equation 8 are the same as equation 4. This equation calculates the wage level for an average immigrant of each cohort. In this calculation, the recent immigrant cohort is the reference group. In this estimation, the wage level for each cohort is determined by using the mean values of each variable for each immigrant cohort. In this method, the wage level for each cohort depends not only on the migration year but also on the cohort's average educational attainment, age, and marital status. Comparing the wage level for each immigrant cohort between other immigrant cohorts and also against natives helps identify the wage gap issue for immigrants from a broader viewpoint. With this calculation, the wage gap between immigrant cohorts is clarified. In addition, comparing the wage level for each cohort with natives, I also explain the wage gap between natives and immigrant cohorts. The wage gap between immigrants' cohorts and also between immigrants and natives is unpacked with these analyses.

$$\widehat{LNW} = \widehat{\beta_0} + \widehat{\beta_{f,c}}\overline{c_{f,i}} + \widehat{\alpha_{2000}}D_{2000} + \widehat{\alpha_{1990}}D_{1990} + \widehat{\alpha_{1980}}D_{1980} + \widehat{\alpha_{1970}}D_{1970} \quad (8)$$

Consequently, this comprehensive methodological approach to wage levels unpacks the wage gap issue between natives and immigrants in Turkey with details. First, I explain the methodology of calculating wage levels, and then I discuss the natives' and immigrants' wage levels disparities, which are named as a wage gap. In addition to calculating the wage gap, I also debate the takeover point determination for the immigrants in Turkey. Then, the methodological viewpoint of the wage disparity issue

caused by only being an immigrant status is presented. Finally, I outline the methodology for differentiating the wage gap among the different immigrant cohorts and between natives and immigrant cohorts.

The wage gap between natives, immigrants, and immigrant cohorts, besides between immigrant cohorts themselves, can be analysed simultaneously with these empirical approaches explained above. These empirical analyses allow me to investigate the labour market integration of immigrants in Turkey in detail and from different viewpoints. In this regard, the following chapter presents estimation results, starting with the findings of the descriptive analysis. Then, it provides the results of regression estimations for all three dependent variables to explore the immigrants' labour market integration process and the marginal effect of each variable for their integration process. Finally, I analyse the wage gaps between natives, immigrants, and immigrant cohorts to understand the immigrants' economic integration success in Turkey.

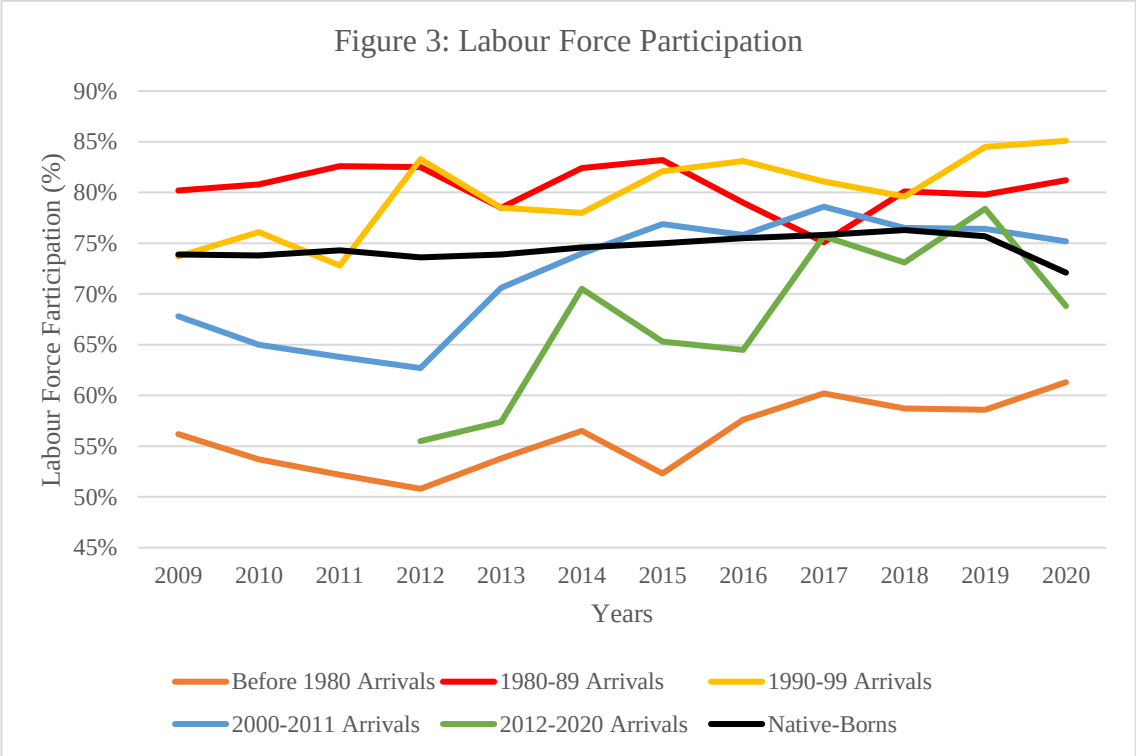
# CHAPTER 5

# ESTIMATION RESULTS

## 5.1. DESCRIPTIVE FINDINGS

This section presents the results of descriptive analyses of labour market outcomes for both native and immigrant males. Results of these analyses allow tracking the labour market integration process of immigrants from a distinct perspective than regression analysis. In this section, I draw three different figures, which show the results for main labour market outcomes for natives and immigrant cohorts and discuss these results through these figures. These three graphs show the course of three labour market outcomes for natives and five immigrant cohorts between 2009 and 2020. With these figures, I could detect the changes in labour market outcomes for cohorts and natives yearly. Differences in the labour market integration process and success are revealed with these figures for the survey years.

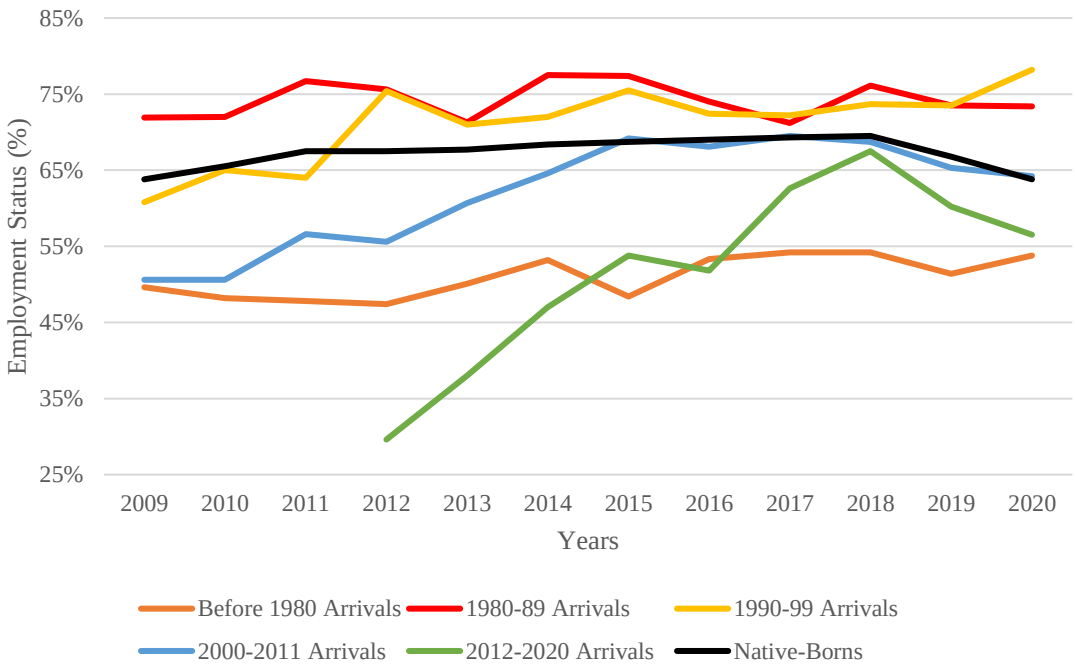
Figure 3 reports the labour force participation percentages for five various immigrant cohorts and natives between the 2009 and 2020 years. With this figure, success differences in labour force participation for natives and immigrant cohorts reveal for this year interval. In accordance with Figure 3, immigrants who arrived between 1980-1989 and 1990-1999 performed at least equal with natives in labour force participation through this time interval. These two cohorts can be evaluated as successful in the labour market participation to an important extent. In 2017, the 1980-1989 cohort experienced a rapid, but temporal shrink in this labour market outcome. This cohort's participation ratio in the labour force was always higher than natives, except in 2017. On the other hand, in the first years of figure 3, labour market participation percentages for the 1990-1999 cohort stood at remarkably similar values to natives. However, they advanced performances in this labour market outcome with 2012, and then the labour force participation percentages for the 1990-1999 cohort took consistently higher values than natives until the end of the interval.




2000-2011 arrivals' participation ratio to the labour force, on the contrary, was around 10% lower than natives in the first four years of Figure 3. In 2013, this immigrant cohort started to increase labour force participation performance, and from 2014, they began to perform similar to natives until the end of the interval. In addition to this, there was one more cohort that performed poorer than natives. The recent cohort, which 2012-2020 arrivals, had a 20% lower labour force participation ratio than natives in 2012. They improved participation performance gradually after that point, and they caught the natives' labour force participation ratio in 2017. Terminally, the before 1980 arrivals were the most marginal group in terms of labour force participation. The labour force participation percentages of immigrants arriving before 1980 were the lowest among all groups. Difference in the labour force participation percentage between this cohort and natives was never smaller than 10 per cent throughout the interval, along with, in 2012, it reached approximately 25 per cent. In short, the 1980-89 and 1990-99 cohorts were successful in labour force participation throughout the interval. The recent two cohorts improved their performance during the interval, and they reached similar percentages with natives in terms of labour force participation. However, the before 1980 cohort was completely underperformed in the labour force participation.

Figure 4 reveals the course of the employment status for the natives and immigrant cohorts between 2009 and 2020. In Figure 4, employment percentage differences unpack for natives and immigrant cohorts. This figure depicts some significant similarities with figure three at first sight. Even so, a detailed evaluation of this figure is needed. It shows that immigrants arriving between 1980-1989 and 1990-1999 performed similarly to the natives in employment status throughout the period. Employment percentage for the 1980-1989 cohort was always higher than natives despite some fluctuation during the period. Besides, the 1990-1999 cohort's employment status took similar values with natives in the first three years of the interval. Then, they improved employment status performance and better-performed than natives at the end of the interval. In this context, these two cohorts can be evaluated as successful in the labour market participation to an important extent.

Figure 4: Employment Status




For immigrants who arrived between 2000-2011 and 2012-2020, the employment status follows a similar path with the labour force participation. Employment percentage of 2000-2011 arrivals took lower values for the first half of this interval than natives. They advanced their employment performance gradually, and they caught natives in 2015. After that, employment percentages for the 2000-2011 cohort stood at remarkably similar

values to natives. On the other hand, 2012-2020 arrivals performed extremely poor in the employment status in the first years, but the employment success increased within the period. Nevertheless, the employment status percentage has never been equalised to the natives for this cohort. Figure 4 reveals a downward trend or plateaus in the employment status for each group after 2018, but the cohort most affected by this decline is the most recent one. This case also indicates the weakness of the 2012-2020 cohort's relationship to employment.

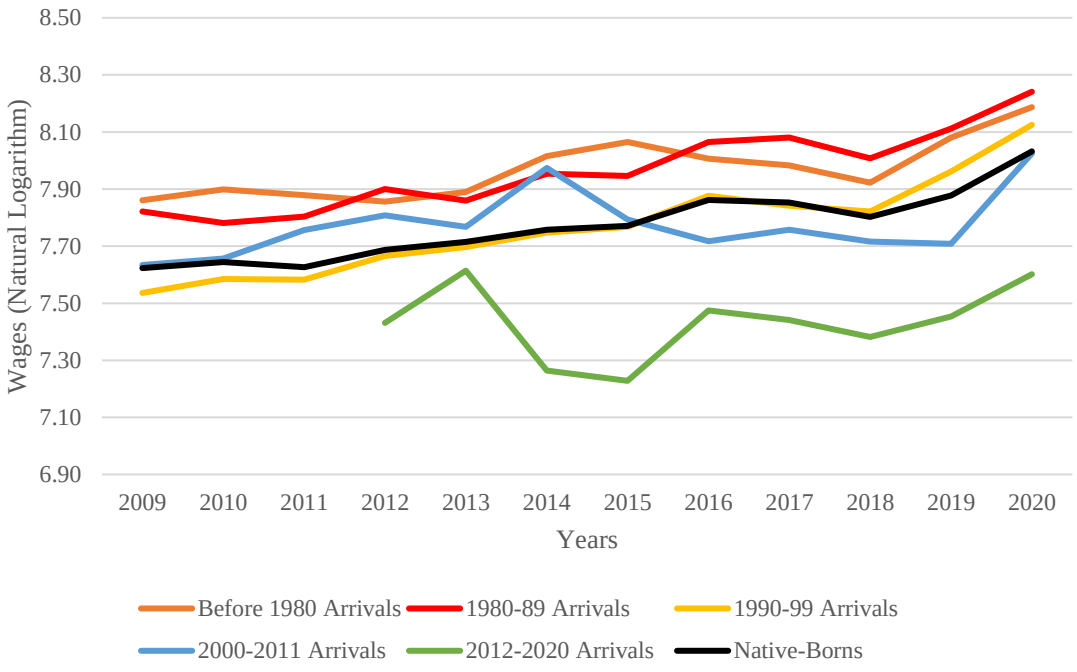
Finally, similar to the labour force participation, the employment status of immigrants who arrived prior to 1980 stood at the lowest values than the natives and other immigrants' cohorts. It could be explained that before 1980 arrivals were the eldest immigrant cohort. This cohort is, on average, older than the other groups shown above in Table 10. This cohort's average age is slightly higher than 52, which is more than ten years higher than the closest group on average. This situation may have resulted in low labour force participation and employment. In other words, the low rate of labour force participation and employment status may be related to the age indicator of this cohort.

Figure 4 shows that the three cohorts of 1980-90, 1990-99, and 2000-11 arrivals performed similarly with natives in employment percentage. 2012-20 arrivals have gradually improved their performance, and for 2020, their ratio was close to natives. Contrary to this general labour market integration picture, before 1980 arrivals did not improve employment percentage steadily within the period. However, it can be said that immigrants still tend to resemble natives in terms of the employment outcome over time.

Figure 5 presents the course of the natural logarithm of wages for five different immigrant cohorts and natives between 2009 and 2020. In this figure, the wage gap is revealed for the immigrant cohorts over against the natives. This figure draws the different outcomes about the immigrant cohorts and natives than the first two figures. Immigrants arriving before 1980 were the worst-performing cohort in the two previous labour market outcomes. Contrary to this situation, immigrants who arrived before 1980 with together 1980-1989 cohort steadily outperformed the natives in terms of wages. These two cohorts were the only cohorts who earned higher than natives throughout the period. There was not any single year that the before 1980 and the 1980-89 arrivals have earned less than

natives according to the figure. It should be clearly stated that these two cohorts were successful in the economic adaptation in terms of wages.

Figure 5: Natural Logarithm of Wages




The 1990-1999 cohort has performed quite similarly with natives throughout the period. They have earned slightly less than natives in the first half of this period but have been improving their wages steadily. The wage parity between the 1990-1999 cohort and natives were equalised in 2015. In 2018, this cohort's wage level passed the natives' level. They narrowed the wage gap steadily and while they had earned slightly lower than natives in the first years of this period, they started to earn slightly higher than natives at the last years of the interval. They could be evaluated as successfully integrated into the labour market in terms of wages.

Figure 5 reveals that the 2000-2011 cohort performed at least equal with natives at the first half of this period in wages. However, the wage level for this cohort shrank in 2015 and 2016. After that, the wage level of this cohort was flattened until 2020. Then, it jumped and equalised with natives. In short, while the wage level of this cohort had been higher than natives for the first half of the interval, they started to perform poorly in the second half of the interval

There seems to be a simultaneous reverse trend between the former labour market outcomes, which are labour force participation and employment, and wages. While they made progress in about 2014 and 2015 in the other labour market outcomes considered before, whereas there is a corresponding decline in wage output. This decrease could be explained by the fact that immigrants who found employment opportunities for the first time in 2014-2015 have to start working in lower-paid jobs. Lastly, immigrants who arrived between 2012 and 2020 are always behind the natives in terms of wages, despite fluctuations. This wage gap does not seem to lessen, on the contrary, this wage gap seems to be stabilised.

Consequently, the descriptive analysis has drawn a complex and puzzling frame about the labour market integration of immigrants in Turkey. This analysis showed that labour market integration could have happened for the earlier cohorts like 1980-1989 and 1990-1999. Immigrants who arrived between 1980-1989 and 1990-1999 are at least successful as natives in all labour market outcomes throughout the analysis interval. Deficient performance of the before 1980 arrivals in labour force participation and employment status might be evaluated as a preference depending on age. However, this cohort was clearly more successful than natives in wage output, and they were the highest-earning group in some years. The earliest three cohorts performed similarly in terms of wages.

On the other hand, while the 2000-2011 cohort advanced in terms of labour force participation and employment status with some ups and downs, wages had increased until 2015 and then started to decrease relatively. Nevertheless, in the last year of this analysis —that is 2020— they reached equal wage parity with natives again. In addition to this, immigrants who migrated between 2012-2020 mainly consist of Syrian refugees, progress somewhat in the labour force participation and the employment status, but the wage gap for this cohort is steady, and there is no convergence to natives' wage level.

The descriptive analysis actually generated clear results about the 1980-1989 and 1990-1999 cohorts. Their labour market performance weres at least equal with natives for all outcomes for every year. This might mean that they are successful in labour market integration. Besides, the before 1980 cohort could be evaluated as an integrated group, despite extremely poor performance in the labour force participation and employment with thanks to the strong results in wages. On the contrary, this analysis provides

confusing results about the process of immigrant integration into the labour market for the 2000-2011 arrivals. They could not perform well in all labour market outcomes simultaneously, but in the last year of the analysis, their all labour market outcomes stood at equal or higher values than natives. This might reflect the successful integration process for this cohort. At last, the recent cohort, which 2012-2020 arrivals, could not well perform, especially in wages. They advanced in the labour force participation and employment slightly, but the wage gap did not narrow throughout the analysis period for the recent cohort.

This descriptive analysis and figures reveal that earlier immigrant cohorts might have integrated into the labour market. There might have still been a disparity in terms of labour market outcomes for the recently arrived ones. However, these results are still puzzling because while some earlier immigrant cohorts are remarkably successful in some labour market outcomes, they experience significant disparities in others. These opposite results are also the case for the recent immigrant cohorts. While they enhance some of the labour market outcomes, the others could not be improved for the recent immigrant cohorts. These confusing results arise the necessity of regression estimation and evaluating the results of these regressions as wage levels. Regression estimations and detecting the wage gap allow me to follow differences in average human capital quality and cohort effect. The following section unpacks the regression estimation results. Then, in the next section, I evaluate the wage levels and gaps for natives and immigrants using regression estimation results.

## 5.2. FINDINGS OF REGRESSION ANALYSIS

This section presents the estimation results of the equations explained in the methodology section and its discussion. These estimation results may allow some fundamental inferences about the integration of immigrants in the labour market of Turkey. Examining the marginal effect of each variable by the coefficients could be crucial to comprehend labour market integration. It might help to identify the importance of each determiner for labour market outcomes and the relative size difference of these determiners for natives and immigrants. With these relative size differences and marginal effect analysis, these

regression results might allow generating some policy inferences and suggestions for Turkey.

The regression results are revealed by differentiating according to two different estimation approaches used in this thesis. These different regression results estimated by using the same data might enable us to understand the integration process of immigrants from multiple perspectives. These different perspectives allow understanding differences in the labour market integration process for immigrants' cohorts. Identifying the size of the coefficient or the marginal effect values of each determinant of labour market outcomes for the immigrant cohorts helps to assess the effect of each dimension of integration for each cohort. In this respect, firstly, I unpack the estimation results for the cross-sectional estimation in this section. After the discussion about the estimation results, the following section continues with the calculation results of the wage gap for natives, immigrants and immigrant cohorts. These results are vital for comprehending the labour market integration of immigrants from a distinct viewpoint.

### 5.2.1. Cross-Sectional Estimation

This section unveils the main results of the cross-sectional estimations for labour force participation, employment and wages. Estimation equations and methodological applications for these are explained in the methodology section. To summarise, this study utilises the logistic regression method when estimating the labour force participation equation and the employment equation because these dependent variables are binary. The wage equation is estimated with the ordinary least-squares estimation methodology because the dependent variable is continuous. With these equations, I estimate the determinants of all labour market outcomes for both male natives, male immigrants, and males.

The marginal effect of each determinant of labour market outcomes for natives and immigrants and relative size differences of these determinants by natives and immigrants can be listed as the main results of these estimations. In this respect, this section focuses on the marginal effects, which cause convergence or divergence between immigrants and

natives on the labour market outcomes, along with estimated coefficient values. I prefer to unpack the outstanding results of labour force participation and employment estimation together because these labour market outcomes have similar features, and also, the estimation methods of these regressions equations are the same. Along with this, the estimation results unveil that the labour market determinants work analogously for these labour market outcomes. Then, this section elaborates on the factors of the wages separately from the first two dependent variables because the structures of the independent variables and the estimation method are different. While outlining the determinants of wages, I again focus on the marginal effects of each variable.

Table 11 presents the cross-sectional regression results estimated with the logistic regression model for the labour force participation. There are three different regression results for natives, immigrants, and all male sample. I designed each regression equations for making deductions about specific research questions. I utilise different variables while estimating the labour force participation for natives, immigrants and all male sample. Using various variables for different estimation groups might help to understand the labour market participation dimension of the economic integration from different perspectives and answer various research questions. With this aim, reviewing the regression results and marginal effect analysis of these equations is an important part of this research.

| Table 11: Cross-Sectional Estimations for the Labour Force Participation for Males | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable | | | | | | |
| Labour Force Participation | Natives | Marginal Effects | Migrants | Marginal Effects | All Men | Marginal Effect |
| Constant | -6.107*** | NA | -4.121*** | NA | -6.059*** | NA |
| | (.018) | | (.127) | | (.018) | |
| Age | .410*** | .063*** | .327*** | .059*** | .409*** | .063*** |
| | (.0009) | (.0001) | (-.007) | (.0014) | (.0009) | (.0001) |
| $Age^2$ | -.005*** | -.0008*** | -.004*** | -.0008*** | -.0055*** | -.0008*** |
| | (.00001) | (.0000) | (.00009) | (.00002) | (.00001) | (.0000) |
| Education (Ref: Non-graduates) | | | | | | |
| Primary School | .379*** | .056*** | -.308*** | -.0586*** | .367*** | .054*** |
| | (.008) | (.0012) | (.065) | (.0130) | (.008) | (.0012) |
| Middle School | .423*** | .061*** | -.453*** | -.087*** | .396*** | .057*** |
| | (.008) | (.0011) | (.0601) | (.0122) | (.008) | (.0011) |
| High School | -.012*** | -.002* | -.717*** | -.145*** | -.031*** | -.004** |
| | (.009) | (.0014) | (.062) | (.0138) | (.009) | (.0014) |
| Vocational High School | .582*** | .077*** | -.241*** | -.045*** | .556*** | .075*** |
| | (.009) | (.0011) | (.067) | (.0131) | (.009) | (.0011) |
| University | .863*** | .1102*** | .354*** | .0602*** | .849*** | .1092*** |
| | (.009) | (.0009) | (.069) | (.0111) | (.009) | (.001) |
| Marital Status (Married=1) | 1.049*** | .1796*** | .872*** | .171*** | 1.045*** | .1794*** |
| | (.006) | (.0012) | (.045) | (.0093) | (.006) | (.0011) |
| YSM | NA | NA | .036*** | .0066*** | NA | NA |
| | | | (.0032) | (.00059) | | |
| $YSM^2$ | NA | NA | -.0004*** | -.00009*** | NA | NA |
| | | | (.00006) | (.00001) | | |
| Being Immigrant | NA | NA | NA | NA | -.330*** | -.056*** |
| | | | | | (.015) | (.0028) |
| Pr(LFP) | NA | .8087 | NA | .7635 | NA | .8080 |
| Pseudo $R^2$ | 0.2372 | NA | 0.2324 | NA | 0.2368 | NA |
| N | 1,967,723 | NA | 30,470 | NA | 1,998,212 | NA |
| *** ρ-value<0.01 ** ρ-value<0.05 * ρ-value < 0.1 | | | | | | |

Quadratic design of age variable has revealed that it has a decreasing positive effect on labour force participation for both immigrants and natives. In other words, while the effect of age is positive, the square of age takes a negative coefficient value. Nevertheless, it should not be forgotten that age and the square of age affects the labour force participation together and simultaneously. This simultaneous move of these uncovers the effect of ageing on labour force participation. The coefficient of the square of age shows the decreasing marginal effect of age on labour force participation. This decreasing positive effect might be associated with the decreasing marginal effect of additional post-schooling human capital investment, and it is also related to the limitations of the marginal effect of acquiring labour market experience (Mincer 1974). On the other hand, the size of this decreasing positive effect is not the same for immigrants and natives on the labour force participation. It seems that natives take more advantage of the decreasing positive

effect of age. The marginal effect of the square of age is the same for natives and immigrants, and the coefficient value equals -.0008. However, the marginal effect of the age takes a higher coefficient value for natives than for immigrants and these equal .063 and .059, respectively. This means that the positive effect decreases more slowly for natives than for immigrants. In short, the coefficient values of age variables of the marginal effect analysis show that there is a decreasing positive effect relation between labour force participation and ageing. Besides, the differences between the coefficient values of age variables for natives and immigrants show that the negative marginal effect relation is higher for immigrants.

Education is another crucial element for the labour market outcomes. The reference of educational dummies is the group that has not completed any educational institution. Firstly, natives take the positive marginal effect for every graduation degree except high school graduates for the labour force participation as compared to the reference group, and it increases with the level of education. These dummies are statistically significant for the natives. The negative effect of high school graduation is equal to -0.002. University and higher degrees make way the highest positive effect on labour force participation with the coefficient of 0.1102. Vocational high school seems to be the second-best educational degree, and it is followed by middle school graduates and primary school graduates, respectively.

There are significant differences between natives and immigrants in the marginal effects of education dummy variables. The reference is respondents that have not completed any educational institution for also immigrants. However, only university or higher degree graduates reap the positive impact for labour force participation. The marginal effect is negative for the other four degrees for immigrants as compared to the reference group. However, the vocational high school degree causes the slightest negative effect, and the high school graduates have the highest negative effect for both labour force participation. The coefficient values of educational dummies for natives and immigrants on labour force participation are distinct. These marginal effect differences in education could be associated with the different valuation of the same level of educational attainment in Turkey and abroad by the Turkish labour market. However, the pattern of the marginal

effects of educational levels is similar for both natives and immigrants. University or higher degree is the most advantageous graduate level for both natives and immigrants in labour force participation. Besides, high school graduation is the most disadvantageous degree for natives and immigrants in labour force participation.

The marital status dummy positively affects the labour force participation for each group. In other words, being married creates a positive effect on labour force participation for both native and immigrant males. Besides, the positive marginal effect of being married is higher for natives than for immigrants in labour force participation.

The number of years spent in Turkey after migrating is crucial for understanding immigrants' labour force participation status since acquiring more local experience, Turkey-specific skills, and knowledge for immigrant people with longer resident duration is an expectation (Borjas, 1995). In this regard, more years spent in the destination country might cause higher labour market outcomes. The years since migration variable was fashioned in quadratic in this study. This functional form of YSM allow me to observe the decreasing positive effect of each additional year spent in Turkey.

Years of residence in Turkey causes a positive marginal effect on labour force participation for immigrants, but it is not a linearly increasing relationship because YSM took a positive coefficient value, and YSM square's coefficient value was negative. YSM has a decreasing positive effect on labour force participation. In short, the years since migration has a positive effect on the labour force participation, but it decreases. Improving Turkish-language fluency, building a local professional network, acquiring Turkey-specific or firm-specific skills, or some combinations of these elements could be a reason for this positive effect. On the other hand, this marginal effect is in a decreasing feature. The decreasing positive effect shows the limitations of the marginal effect from these skill acquisitions. Each additional acquisition or improvement in the mentioned reasons contributes to labour market participation lesser for immigrants in Turkey.

Lastly, I explain the effect of being an immigrant on the labour force participation status. Being an immigrant affects the labour force participation negatively. This impact means

two identical persons may face different labour force participation conditions due to one of them being only being an immigrant. This means that labour force participation could be more difficult for immigrants. This obstacle to labour force participation might be slowing down the process of the labour market integration of immigrants.

I clarified the cross-sectional regression results of the labour force participation and the marginal effects of each variable on labour force participation until here in this section. Now, I focus on employment status and the marginal effect of each determinant on it. The regression and marginal effect analysis results for employment are displayed in Table 12. The marginal effect pattern of variables is similar for labour force participation and employment in general terms. It is clearly visible when each variable's coefficient values and marginal effect values are examined comparatively. For this reason, I mention the main similarities between determinants of labour force participation and employment, along with the main focus in this section is dissimilarities between them largely. Distinctions and similarities between labour force participation and employment statuses could clarify the different aspects of the labour market integration.

| Table 12: Cross-Sectional Estimations for the Employment for Males | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable | | | | | | |
| Employment | Natives | Marginal Effects | Immigrants | Marginal Effect | All Men | Marginal Effect |
| Constant | -5.422*** (.016) | NA | -3.432*** (.120) | NA | -5.377*** (.016) | NA |
| Age | .321*** (.0008) | .066*** (.0001) | .238*** (.006) | .054*** (.0016) | .321*** (.0008) | .066*** (.0001) |
| $Age^2$ | -.004*** (.0008) | -.0008*** (.0000) | -.0036*** (.00008) | -.0008*** (.0002) | -.004*** (.00001) | -.0008*** (.0000) |
| Education (Ref: Non-graduates) | | | | | | |
| Primary School | .4001*** (007) | .079*** (.0014) | -.339*** (.059) | -.079*** (.0141) | .387*** (.007) | .077*** (.0014) |
| Middle School | .537*** (.008) | .103*** (.0014) | -.505*** (.054) | -.1188*** (.0131) | .510*** (.007) | .099*** (.0014) |
| High School | .229*** (.008) | .0454*** (.0016) | -.616*** (.057) | -.1468*** (.014) | .210*** (.008) | .041*** (.0016) |
| Vocational High School | .705*** (.008) | .1271*** (.0013) | -.334*** (.061) | -.078*** (.0145) | .679*** (.008) | .1234*** (.0013) |
| University | .896*** (.008) | .1586*** (.0012) | .127** (.060) | .028*** (.0133) | .880*** (.008) | .1566*** (.0012) |
| Marital Status (Married=1) | 1.056*** (.005) | .2295*** (.0012) | .964*** (.039) | .2266*** (.0092) | 1.054*** (.005) | .2293*** (.0012) |
| YSM | NA | NA | .056*** (.002) | .012*** (.0006) | NA | NA |
| $YSM^2$ | NA | NA | -.0007*** (.00005) | -.0001*** (.0000) | NA | NA |
| Being Immigrant | NA | NA | NA | NA | -.369*** (.013) | -.081*** (.0031) |
| Pr(Emp) | NA | .7095 | NA | .6510 | NA | .7085 |
| Pseudo $R^2$ | 0.1789 | NA | 0.1755 | NA | 0.1783 | NA |
| N | 1,967,723 | NA | 30,470 | NA | 1,998,212 | NA |
| *** ρ-value<0.01 ** ρ-value<0.05 * ρ-value < 0.1 | | | | | | |

Before explaining the employment estimation results by comparing them with the results of the labour force participation, it should be mentioned that all specifications of these regression equations are the same. Both are estimated for the binary dependent variable, and all variables are the same. Besides, this is estimated for the distinct characteristics of the same sample. In this respect, the determinants of employment can be explained by comparing them with the determinants of labour force participation.

Clarifying the similarities of each variable's marginal effect on labour force participation and employment is crucial for stressing their similar features. Firstly, age is used in a quadratic form in this estimation, and there is a decreasing positive effect of age on employment for both natives and immigrants. Besides, the positive marginal effect of age on employment is higher for natives than immigrants, just like on labour force

participation. Second, higher education degrees have the highest positive effect as compared to the reference group on employment for natives, and high school degree has the smallest positive effect. In addition, only higher education has a positive effect on employment for immigrants in Turkey. Moreover, the positive effect of being married on employment is higher for natives than for immigrants. Lastly, the years since migration affects immigrants' employment positively in Turkey, but it is at decreasing rate, just like on labour force participation. Additionally, being an immigrant has a negative effect on employment. In brief, these are the general lines of similar results for labour force participation and employment. This summary shows that the main results are quite similar for these two labour market outcomes.

There are some contrasts between the results of estimations of labour force participation and employment despite many mentioned similarities. Firstly, a high school degree affects labour force participation slightly negative for natives. However, this degree has a positive effect on employment for natives even though it has the lowest rate as compared to a respondent from not completed any educational institution. Additionally, the size of the marginal effect of educational dummies is larger for natives on employment. While the positive impact of education for natives is higher on employment, the effect of higher education decreases on employment for immigrants in Turkey. The negative effect of the other educational attainments increases as compared to the reference group. In addition, being an immigrant is more detrimental for employment. After summarising the marginal effects of determinants for labour force participation and employment status, now I explain the determinants of wages in this section. This section contains the effects of each element and the differences of these elements on wages between natives and immigrants.

Table 13 displays the cross-sectional estimation results for wages for both native males, immigrant males, and all males sample. I use different regression equations to estimate wages for each group. The main structure of these equations is similar to the former ones, but there is the main difference between these. The dependent variable is not a binary variable in this estimation equation. Consequently, I prefer a different estimation procedure because of this difference. Wage equations are estimated with the ordinary least squares methodology. The other specifications in the equations are quite similar to

the labour force participation and employment equations. For instance, age and years since migration variables are again in quadratic form, and educational attainments are defined with dummies.

Table 13: Cross-Sectional Estimations for the Wages for Male

| Dependent Variable | | | |
|---|---|---|---|
| Natural Logarithm Wages | Natives | Immigrants | All Men |
| Constant | 5.710*** (.006) | 6.450*** (.042) | 5.728*** (.006) |
| Age | .079*** (.0003) | .045*** (.002) | .078*** (.0003) |
| $Age^2$ | -.0008*** (4.22e-05) | -.0005*** (.00002) | -.0008*** (4.18e-05) |
| Education (Ref: Non-graduates) | | | |
| Primary School | .027*** (.003) | -.051** (.017) | .022*** (.003) |
| Middle School | .208*** (.003) | .051*** (.018) | .201*** (.003) |
| High School | .339*** (.003) | .174*** (.018) | .332*** (.003) |
| Vocational High School | .386*** (.003) | .176*** (.017) | .377*** (.003) |
| University | .852*** (.003) | .735*** (.017) | .847*** (.003) |
| Marital Status (Married=1) | .105*** (.001) | .087*** (.0106) | .104*** (.001) |
| YSM | NA | .0078*** (.0009) | NA |
| $YSM^2$ | NA | -.00003** (.00002) | NA |
| Being Immigrant | NA | NA | -.037*** (.0037) |
| $R^2$ | 0.4228 | 0.3957 | 0.4217 |
| N | 812,359 | 14,265 | 826,626 |

*** ρ-value<0.01 ** ρ-value<0.05 * ρ-value < 0.1

Age is again in the quadratic form in this equation. The coefficient of age variable shows that wages increase with the ageing effect. However, this effect is not linear relation. This positive effect occurs at a decreasing rate. Therefore, the age variable reveals the age-earning profile relation in Turkey for both natives and immigrants. In accordance with the age-earnings profile of a typical worker, wages rise rapidly when the worker is young, and it reaches a peak on the country-specific and labour market-specific conditions. Then, wages hold at the peak for a while and then start to decline (Murphy & Welch, 1990). In some cases, this profile may never reach the summit in a human lifespan and wages never begin to fall, but the effect of ageing on wages is getting smaller in almost all cases (Rankin et al., 2010).

The empirical results of this study also seem consistent with this relationship for both natives and immigrants. Each additional age increases wages for both natives and immigrants, but each age's positive effect on wages is lessening. This effect seems higher for natives than immigrants, but the square of the age also take a higher coefficient value. It could be raised the sharper diminishing effect for natives.

The effect of education on wages is another common control variable in the labour economics literature. Educational attainments affect wages mostly positively (Card, 1999). The coefficient values of education dummy variables show that this relation is valid also for Turkey. The group that has not completed any educational institution is the reference variable for this dummy group. For both natives and immigrants, higher education degrees have the highest positive effect on wages as compared to the reference group. Primary school graduation is the only educational attainment that creates a negative effect for immigrants. There are not any educational attainments that cause a negative effect on wages for natives. Wage earnings-education relation follows the same path both for natives and immigrants despite the coefficient size differences. In other words, higher educational attainments are caused to higher wages for both natives and immigrants in Turkey generally. However, natives gain a higher positive effect for each degree of educational attainment than immigrants in Turkey. In addition, the effect of being married on wages is positive for both natives and immigrants in Turkey. Notwithstanding, this effect is higher for natives than immigrants.

Years passed after arriving at the destination country is another crucial factor for immigrants on labour market outcome for the integration (Duleep, 2015). It may capture immigrants' knowledge and skill acquisition in the destination country. Years since migration variable is also designed in quadratic form in this study. This element's effect is positive for immigrants' wages in Turkey. However, this enhancing effect is not a linear relation. The negative coefficient value of the square of the YSM reveals the diminishing positive effect of years passed after arriving at the destination country. This diminishing positive effect might be related to the diminishing effect of acquiring additional knowledge, skill, and improvement in Turkish-language improvement. In short, residence years in Turkey have a positive effect on wages for immigrants, but each additional year has a minor impact on wages.

The third regression in Table 13, which is estimated for all men, shows that the immigrants might earn less than natives only for being an immigrant when comparing two identical workers. This difference is named the wage gap. The coefficient value of the "being an immigrant" variable shows that this gap relation is also valid for Turkey.

While being an immigrant causes a wage gap in Turkey, the years passed in Turkey help the immigrants to narrow this gap.

In addition to these results for the male population, in accordance with the cross-sectional estimation results tables in appendix 1, being female is a clearly negative impact on labour market outcomes. However, being an immigrant female has a more negative impact on labour force participation and employment than being a native female, but this effect is reversed on wages. In addition to this, the positive effect of being married seems to have disappeared with the inclusion of women in the sample. Lastly, the effect of years since migration seems similar to the estimations for the male population.

Consequently, this section is summarised the marginal effects of age, educational attainment, marital status, years since migration and being an immigrant on labour market outcomes for both natives and immigrants in Turkey by using cross-sectional estimations' results. The coefficients of these effects vary depending on whether estimated for natives or immigrants. Natives are more advantageous than immigrants in almost every element for labour market outcomes. Whereas the coefficient values follow a similar path, each determinant of labour market output takes a higher value for natives than immigrants. For example, every educational attainment level has a higher positive effect for natives than immigrants as compared to respondents who have not completed any educational institution. In addition, immigrants seem to eliminate the disadvantage caused by these elements with the decreasing effect of years passed after their arrival. This diminishing effect is caused by the quadratic design of years since migration. It is related to the limitedness of the marginal effects of both local knowledge accumulation, improvement in Turkish-language fluency and skills development. Besides, being an immigrant creates a negative gap in labour market outcomes. This gap also relates to the deficiency of destination country-specific skills and transfer problems of skills that immigrants brought from their home country. These regression results and each variable's marginal effect might show that immigrants are a disadvantageous group in the labour market. However, they can adapt to the Turkish labour market by spending years in Turkey.

### 5.2.2. Pooled Cross-Sectional Estimation

In this subsection, I discuss the estimation results of the pooled cross-sectional analysis with immigrants' cohorts for the three major labour market outcomes. Separate regressions were applied for natives and immigrants for each labour market output to employ different variables while estimating the labour market outcomes. As mentioned in the methodology chapter, the regression equations, which were estimated for natives in this subsection, are the same as the cross-sectional regressions. In this regard, the regression results estimated for natives are completely the same as the former estimations for each labour market outcome in this subsection. Because of this, I do not elaborate on regression results for natives again in this section. I will mention natives' estimation results while only comparing with immigrants. However, I estimated regressions for the immigrants in this subsection with the dummy variables for immigrants' cohorts. In these regression analyses, I do not use years since migration and being an immigrant variables because dummies for immigrant cohorts represent years since migration as a categorical variable and these dummies were defined for only immigrants (Borjas, 2015). These estimations allow a chance to understand changes in the human capital quality of immigrants and the cohort effect in the immigrants' labour market integration process. Besides, these regressions may inform me about the impact of migration motivation and period effect on the integration process.

Table 14 provides estimation results and marginal effect coefficients of the labour force participation for the pooled cross-sectional analysis. Immigrants' labour market outcomes are estimated with dummy variables for each immigrant cohort in pooled cross-sectional estimation. Despite these additional variables, the control determinants —age, educational attainment level, marital status— affected the labour force participation in a similar path to the cross-sectional model. Following the results of pooled cross-sectional estimation, only higher education degrees cause a positive effect on immigrants' labour force participation. Being married has a positive effect, and age affects labour force participation positively, but this positive effect diminishes with ageing. In short, the coefficient values of control variables take very similar values to the cross-sectional model. Therefore, the marginal effect of being a member of an immigrant cohort on

labour force participation is the main concern of this subsection.

Table 14: Pooled Cross-Sectional Estimations for the Labour Force Participation for Male

| Dependent Variable | | | | |
|---|---|---|---|---|
| Labour Force Participation | Natives | Marginal Effects | Immigrants | Marginal Effects |
| Constant | -6.107*** | NA | -3.975*** | NA |
| | (.018) | | (.129) | |
| Age | .410*** | .063*** | .325*** | .058*** |
| | (.0009) | (.0001) | (.007) | (.0013) |
| $Age^2$ | -.005*** | -.0008*** | -.0047*** | -.0008*** |
| | (.00001) | (.0000) | (.00008) | (.00002) |
| Education (Ref: Non-graduates) | | | | |
| Primary School | .379*** | .056*** | -.216*** | -.0403*** |
| | (.008) | (.0012) | (.060) | (.012) |
| Middle School | .423*** | .061*** | -.433*** | -.082*** |
| | (.008) | (.0011) | (.060) | (.012) |
| High School | -.012*** | -.002** | -.718*** | -.144*** |
| | (.009) | (.0014) | (.063) | (.013) |
| Vocational High School | .582*** | .077*** | -.291*** | -.054*** |
| | (.009) | (.0011) | (.067) | (.013) |
| University | .863*** | .1102*** | .364*** | .061*** |
| | (.009) | (.0009) | (.071) | (.011) |
| Being Married | 1.049*** | .1796*** | .860*** | .167*** |
| | (.006) | (.0012) | (.045) | (.009) |
| Cohort Dummy Variables (Ref: 2012-2020 Arrivals) | | | | |
| Before 1980 Arrivals | NA | NA | .175*** | .0306*** |
| | | | (.053) | (.009) |
| 1980-1989 Arrivals | NA | NA | .580*** | .096*** |
| | | | (.051) | (.007) |
| 1990-1999 Arrivals | NA | NA | .686*** | .108*** |
| | | | (.052) | (.007) |
| 2000-2011 Arrivals | NA | NA | -.172*** | -.032*** |
| | | | (.049) | (.009) |
| Pr(LFP) | NA | .8087 | NA | .7651 |
| Pseudo $R^2$ | 0.2372 | NA | 0.2369 | NA |
| N | 1,967,723 | NA | 30,489 | NA |

*** ρ-value<0.01 ** ρ-value<0.05 * ρ-value < 0.1

The most recent cohort, which are 2012 and later arrivals, is the reference group of immigrants' cohort dummies. All immigrant cohorts take great advantage of labour force participation as compared to the reference immigrant's cohort except 2000-2011 arrivals. The most advantageous immigrant cohort in the labour force participation is the 1990-1999 cohort, followed by the 1980-1989 cohort. According to the table, the 2000-2011 cohort is the only immigrant cohort that experienced a negative effect compared to the reference cohort in the labour force participation. In addition, being a member of the earliest cohort who immigrated before 1980 provides a minor advantageous effect on the labour force participation. Before 1980 arrivals are the eldest immigrant cohort by far. This minor marginal effect could be related to this age issue of them.

Table 15 displays the estimation results and marginal effect coefficients of the employment. Despite the immigrant cohorts' dummy variables, the control variables — age, education, marital status— affected the labour force participation in a similar path to the cross-sectional model. According to the results of this estimation, only university or higher degrees cause a positive effect on immigrants' employment. Being married has a positive effect for immigrants but is slightly lower than natives. The effect of age on employment is positive, but this effect is diminishing. I focus on the marginal effect of being a member of an immigrant cohort on employment because control variables in this estimation affect employment remarkably similar to the cross-sectional model.

Table 15: Pooled Cross-Sectional Estimations for the Employment for Male

| Dependent Variable | | | | |
|---|---|---|---|---|
| Employment | Natives | Marginal Effects | Immigrants | Marginal Effects |
| Constant | -5.422*** | NA | -3.336*** | NA |
| | (.016) | | (.121) | |
| Age | .321*** | .066*** | .242*** | .055*** |
| | (.0008) | (.0001) | (.006) | (.0015) |
| $Age^2$ | -.004*** | -.0008*** | -.0036*** | -.0008*** |
| | (.0008) | (.0000) | (.00008) | (.0000) |
| Education (Ref: Non-graduates) | | | | |
| Primary School | .4001*** | .079*** | -.265*** | -.061*** |
| | (007) | (.0014) | (.058) | (.013) |
| Middle School | .537*** | .103*** | -.461*** | -.108*** |
| | (.008) | (.0014) | (.057) | (.013) |
| High School | .229*** | .0454*** | -.595*** | -141*** |
| | (.008) | (.0016) | (.061) | (.014) |
| Vocational High School | .705*** | .1271*** | -.336*** | -.078*** |
| | (.008) | (.0013) | (.061) | (.014) |
| University | .896*** | .1586*** | .164*** | .036*** |
| | (.008) | (.0012) | (.0607) | (.013) |
| Being Married | 1.056*** | .2295*** | .949*** | .223*** |
| | (.005) | (.0012) | (.039) | (.009) |
| Cohort Dummy Variables (Ref: 2012-2020 Arrivals) | | | | |
| Before 1980 Arrivals | NA | NA | .471*** | .101*** |
| | | | (.048) | (.009) |
| 1980-1989 Arrivals | NA | NA | .813*** | .171*** |
| | | | (.043) | (.008) |
| 1990-1999 Arrivals | NA | NA | .778*** | .1601*** |
| | | | (.045) | (.008) |
| 2000-2011 Arrivals | NA | NA | -.057** | -.013** |
| | | | (.0466) | (.0107) |
| Pr(Emp) | NA | .7095 | NA | .6513 |
| Pseudo $R^2$ | 0.1789 | NA | 0.1765 | NA |
| N | 1,967,723 | NA | 30,489 | NA |

*** ρ-value<0.01 ** ρ-value<0.05 * ρ-value < 0.1

The 2012 and later arrivals immigrant cohort is the reference group in this model. The pattern of the marginal effect of these dummy variables on employment is very similar to labour force participation estimation. The 2000-2011 cohort again is the only disadvantageous group as compared to the reference group. Before 1980 arrivals are the least advantageous group. The only difference is that the most advantageous immigrant cohort in employment is the 1980-1989 cohort, followed by the 1990-1999 cohort.

Table 16 unveils estimation results for wages for the pooled cross-sectional equations. Control variables also affect wages in this estimation very similarly with the cross-sectional estimation of wages. According to the results of pooled cross-sectional estimation, only primary school degree causes a negative effect on immigrants' wages as compared to the reference group. Besides, higher educational attainments yield higher coefficients on wages. Being married has a positive effect, and this positive effect is higher for natives. The age variable is again designed as quadratic. It affects wages positively, but this effect diminishes with ageing. After this summary about control variables, I focus on the effects of being a member of an immigrant cohort on wages.

Table 16: Pooled Cross-Sectional Estimations for the Wages for Male

| Dependent Variable | | |
|---|---|---|
| Natural Logarithm Wages | Natives | Immigrants |
| Constant | 5.710*** (.006) | 6.429*** (.043) |
| Age | .079*** (.0003) | .047*** (.002) |
| $Age^2$ | -.0008*** (4.22e-05) | -.0005*** (.00003) |
| Education (Ref: Non-graduates) | | |
| Primary School | .027*** (.003) | -.035** (.018) |
| Middle School | .208*** (.003) | .063*** (.017) |
| High School | .339*** (.003) | .180*** (.018) |
| Vocational High School | .386*** (.003) | .187*** (.018) |
| University | .852*** (.003) | .744*** (.017) |
| Being Married | .105*** (.001) | .0807*** (.0106) |
| Cohort Dummy Variables (Ref: 2012-2020 Arrivals) | | |
| Before 1980 Arrivals | NA | .182*** (.015) |
| 1980-1989 Arrivals | NA | .163*** (.012) |
| 1990-1999 Arrivals | NA | .068*** (.013) |
| 2000-2011 Arrivals | NA | .107*** (.015) |
| $R^2$ | 0.4228 | 0.3920 |
| Pseudo $R^2$ | NA | NA |
| N | 812,359 | 14,265 |

*** ρ-value<0.01 ** ρ-value<0.05 * ρ-value < 0.1

The effects of immigrant cohorts' variables seem different on wages than the former two estimation results. Firstly, there is not any negative coefficient value for any immigrant

cohort as compared to the reference group. Before 1980 arrivals cohort is the most advantageous group among immigrants, and the 1980-89 cohort follows them. Secondly, the 1990-99 arrivals group is not the most advantageous as compared to the reference immigrant cohort, unlike the first two estimations. In addition to this, the coefficient value for this cohort is the lowest. 2000-2011 immigrant cohort take higher coefficient value than 1990-99 arrivals.

In addition to these results for the male population, following the pooled cross-sectional estimation results tables in appendix 1, being female is a clearly negative impact on labour market outcomes. However, being an immigrant female has a less negative impact on wages than being a native female, but this effect is reversed on labour force participation and employment. In addition to this, the positive effect of being married seems to have disappeared with the inclusion of women in the sample. Besides, similar to the estimations for the male population, 1980-89 and 1990-99 cohorts have the highest positive marginal effect on labour force participation and employment. It follows by the before the 1980 arrivals. The only difference is that the negative marginal effect of the 2000-2011 cohort on labour force participation and employment is turned slightly positive. Lastly, cohort coefficients of wage estimations for females are similar to male estimations. The before 1980 cohort has the highest positive marginal effect and follows by 1980-89 arrivals and then the 2000-2011 cohort. The smallest positive marginal effect is for the 1990-99 cohort according to the reference cohort.

Consequently, this section elaborated the results of regression estimation for both natives and immigrants and in both approaches, which are cross-sectional and pooled cross-sectional, and by using both methodologies, which are logistic regression and ordinary least squares. I focused on the marginal effect of each variable and mainly explained the impact difference of each variable for natives and immigrants in this section. These explanations help to understand the labour market integration of immigrants in Turkey, especially in labour force participation and employment. However, these regression results are not the most robust analysis approach about wages. Understanding these immigrant cohorts' exact situation regarding the labour market outcomes —wages— against each other and natives is not possible with these coefficients. Relative levels in

terms of the wages of immigrants and natives might be revealed with the measuring of gaps with the estimation results and the mean values. Measuring the gaps with these values is elaborated in the next section.

## 5.3. WAGE LEVELS AND THE WAGE GAP

I calculate the wage gap between natives and immigrants in this subsection from distinct points of view. The methodological approach for these calculations was covered in the methodology section. First of all, I figure out the wage gap by using cross-sectional estimation results for an average native and immigrant. Coefficient values of the regression results represent the potential ways of labour market integration for immigrants. In this respect, while investigating the wage gap, I evaluate the socio-economic structure of natives and immigrants and the marginal effect of each variable. In addition, I also determine the takeover point for immigrants. The takeover point is defined as immigrants becoming more successful than natives in wages in terms of years since migration on average (Chiswick, 1978). In other words, this point indicates how many years after the immigration, an average immigrant catches up with an average native regarding wages. Also, the effects of being foreign-born on labour market outcomes are explained in this section.

On the other hand, I also use the pooled cross-sectional model to assess the wage gap between natives and immigrant cohorts. In other words, the cohort effect on the wage gap is also explored in this section (Borjas, 1985). This subsection includes the wage level for natives and each immigrant cohort. While investigating these wage levels, I evaluate the socio-economic structure of natives and cohorts and the marginal effect of each variable. These might include the effect of the change in the socio-economic quality of immigrants in years, macroeconomic conditions, policy approach. The labour market integration process might vary following these impacts. I explain these two separate viewpoints to the wage gap in this order. The following subsection elaborates wage levels using the cross-sectional model, and the subsequent section explores the wage gap with the pooled cross-sectional model.

### 5.3.1. Calculation with Cross-Sectional Estimation

The main concerns of this subsection are to explain the wage gap only is caused by being an immigrant, which is named wage penalty, and whether there has been labour market integration after the migration with the years spent for immigrants in Turkey. In this regard, integration means closing the wage gap and equalising the wage levels with natives for immigrants. I use the results of the cross-sectional model in this section. This model also allows calculating the takeover point for immigrants in terms of years since migration. It shows how many years after the migration to Turkey, wage levels equalisation happens for natives and immigrants. In addition, I explain the current situation of wage levels of natives and immigrants in this section.

Being an immigrant has a harmful impact on labour market outcomes (Chiswick, 1978; Borjas, 1985). Cross-sectional regression results estimated for all men show the effect of being an immigrant on the labour market outcomes. Table 11 shows that being an immigrant causes a reduction in the probability to participate in the labour force for immigrants against native people who are similar to them in terms of other features in Turkey. This negative effect is also available in Table 12 for employment. In addition to these, table 13 reveals that being an immigrant affects also wages deprecatingly. Being an immigrant causes a 3.7 per cent penalty in wages against the equivalent natives. It means that two completely equivalent men, in our estimation, do not earn equally. This difference means that one of them earns 3.7% lower than the other because of being an immigrant. These differences in the labour market output levels can be named a wage penalty because there is not any difference in any variable.

This difference arises as a penalty only being an immigrant. However, there could be some reasons for this penalty. Being an immigrant causes a gap in labour market outcomes between immigrants and natives because of the gap in Turkey-specific skills, such as illiteracy in Turkish-language or absence of firm or country-specific skills. Besides, labour market unfamiliarity could be caused to a longer job-seeking process. In addition, migration policies could hinder the hiring of immigrant in the labour market.

Nevertheless, this gap can be closed up with acquiring local knowledge and skills with years in Turkey. This lessening probability might observe with the "years since migration" variable in this study.

Years since migration (YSM) can be accepted as a proxy variable for acquiring Turkey and firm-specific skills, improving fluency in Turkish, establishing the labour market network elements. In the post-migration period, as an expectation, immigrants are improving their fluency in Turkish and gradually getting familiar with the customs and structure of labour markets while residing in Turkey. Besides, they could invest in Turkey-specific and firm-specific skills and gain local labour market experience with working in Turkey, which also helps to the labour market integration. All of these possible integration mechanisms are proxied by the YSM variable.

Year since migration variable works in a similar principal for three main labour market outcomes in Turkey. The positive effect of residing years in Turkey for immigrants in all labour market outcomes is diminishing. Each additional year after migration to Turkey increases the probability of labour market participation and employment of immigrants, but each year affects less positively than the previous one. The highest positive effect of years since migration on labour force participation arises between 35-40 years after migration, but years since migration positive impact on employment lasts until somewhere between 55 and 60 years, and it starts to inverse after that point. This diminishing positive relation can be explained by the fact that the marginal value of each additional skill is less. The inversion effect occurs when an immigrant reaches the limits of the marginal effect of accumulating the extra Turkey-specific experience and skills.

This diminishing relation is also available in the earnings of immigrants. Each additional year in Turkey increases wages, but the magnitude of the positive effect of each year lessens. Nevertheless, this diminishing effect is not as strong as that for labour force participation and employment. The marginal effect of years since migration on wages peaks around more than a hundred years since migration in Turkey and then begins to decline. Since this limit cannot be achievable within an average life expectancy, there is

not any practical limit for the positive effect of residing years in Turkey on wages for immigrants.

The final aim of this section is to identify the takeover point for immigrants in wages. The methodology of calculating wage levels and accordingly the takeover point was elaborated in the methodology section. As a reminder, this point is calculated with the equation numbers 5 and 6. The equations are used with the estimated coefficient and the mean values of each variable. The average person's wage levels are revealed with this calculation for natives and immigrants. Then, the wage gap for average native and immigrant can be identified, and by altering the YSM and square of the YSM, the takeover point can be measured in terms of years since migration.

The takeover point demonstrates how many years after immigration, the immigrants' wages catch up and pass with the natives without any additional change in other features. All assimilation mechanisms are represented by the "years since migration" in this analysis when identifying this point. While an average native man earns approximately 7.801 Turkish Liras monthly as the natural logarithm, the estimated wage as the natural logarithm for a newly entered immigrant man in Turkey is around 7.664 Turkish Liras. This gap between newly entered immigrants and natives is about 20 per cent. Although at a decreasing rate, this gap lessens with the number of years passed in Turkey.

It seems this gap closes at some point between the $20^{th}$ and $25^{th}$ years of migration in Turkey for an average immigrant. According to the estimation, immigrants' earnings continue to rise after that point, and they start to earn more than equivalent natives in consecutive years. On the other hand, the average value of YSM in Turkey of immigrants is slightly more than twenty-one years. This means 7.818 Turkish Liras monthly earning as a natural logarithm for immigrants, and it causes an 8 per thousand wage gap to the disadvantage of the natives. In other words, it can be said that an average immigrant in Turkey could be integrated successfully into the Turkish labour market after more than 20 years passed of migration in terms of wages.

In conclusion, being an immigrant causes negative impacts on labour market outcomes in Turkey, and these adverse effects disappear with the years spent in Turkey after migration. Labour force participation and employment probability reduce with being an immigrant status. Immigrants' wages are 3.7 per cent lower than equivalent natives in terms of other variables. However, this gap dissolves with the number of years that passed in Turkey. The positive effect of YSM on labour force participation probability disappears somewhere between 35 and 40 years, and its impact on employment probability summits between 55 and 60 years after migration. These time intervals to experience the highest effect of years spent in Turkey on the labour force participation and employment is long to integrate with the Turkish labour market.

The wage gap between natives and immigrants disappears around 20-25 years after migration. When the average value of YSM for immigrants in Turkey, which is a little over 21, is evaluated, it can be said that economic integration happens in terms of wages. An average immigrant earns higher than an average native in Turkey. Consequently, immigrants with average features can integrate the Turkish labour market about 20-25 years after migration.

### 5.3.2. Calculation with Pooled Cross-Sectional Estimation

Being an immigrant has a harmful impact on labour market outcomes (Chiswick, 1978; Borjas, 1985). Cross-sectional regression results estimated for all men show the effect of being an immigrant on the labour market outcomes. Table 11 shows that being an immigrant causes a reduction in the probability to participate in the labour force for immigrants against native people who are similar to them in terms of other features in Turkey. This negative marginal effect is also available in Table 12 for employment. In addition to these, table 13 reveals that being an immigrant affects also wages deprecatingly. Being an immigrant causes a 3.7 per cent penalty in wages against the equivalent natives. It means that two completely equivalent men, in our estimation, do not earn equally. This difference means that one of them earns 3.7% lower than the other

because of being an immigrant. These differences in the labour market output levels can be named a wage penalty because there is not any difference in any variable.

Firstly, the labour force participation and employment are estimated by using logistic regression with dummy variables of cohorts. The results of this estimation are revealed above in Tables 14 and 15. This estimation shows the effect of being a cohort member on the labour force participation and employment probabilities with the control variables. The effects of being a cohort member on labour force participation vary pretty differently. The effect of being a member of one of the cohorts that immigrated to Turkey between 1999 and 1980 is massively positive. This 20-year interval seems the most beneficial time regarding the marginal effect on immigrants' labour force participation. The coefficient value of migrating towards Turkey between 1980-1989 and 1990-1999 cohorts on labour force participation equals 0.096 and 0.108, respectively. The coefficient value for before 1980 arrivals are approximately equal to 0.03. Being a member of the immigrant group that arrived between 2000 and 2011 causes a negative effect on labour force participation as compared to the reference group which is 2012 and later arrivals.

The marginal effects of being in a cohort on employment also vary quite distinct. Coefficient values of marginal analysis for three cohorts that migrate before 2000 are massively positive as compared to the reference group, but for 2000-2011 arrivals have a negative effect. The 1980-89 cohort has the highest positive impact among all immigrant cohorts, which equals 0.171. The coefficient values of marginal analysis for the before 1980 and the 1990-99 cohorts are equal to 0.101 and 0.1601, respectively. In contrast, the effect of the cohort dummy for immigrants who migrated towards Turkey between 2000-2011 is negative, and it equals -0.013. In short, having immigrated to Turkey before 2000 has a positive impact on labour force participation and employment opportunities. In contrast, immigrants who arrived in 2000 and after experience slightly negative or 0 marginal effects on these outcomes. The coefficient values for this effect differentiate significantly before and after 2000. It can be said that immigrants who arrived before 2000 are successfully integrated into Turkey's labour market. On the other hand, being an immigrant who arrived in Turkey after 2000 seems a hurdle for the labour market integration in terms of labour force participation and employment.

Another dimension of the economic adaptation of immigrants is the difference in wage levels. The process of narrowing the wage gap for an average immigrant is shown in the section above. This section evaluates wage gaps between immigrant cohorts and natives. While calculating wage gaps for natives and immigrant cohorts, pooled cross-sectional estimation uses the same method as the cross-sectional analysis. This method utilises the estimated values of variable coefficients and the mean values of each variable in the estimation equations numbers 5 and 8 to measure the natural logarithm of the real monthly wage for an average person in each group. This calculation is not for identifying the takeover point. This method allows me to calculate the wage levels of natives, immigrants and immigrant cohorts. Then, the wage gap is identified by comparing these levels. With this calculation, effects of the historical breaks, changes in human capital quality, the period effect can be comprehended.

The estimated real monthly wage in Turkish Lira for natives as natural logarithm series is viewed in Table 17. The figures for immigrant cohorts in Table 17 show the wage gap for each immigrant cohort against natives. Positive estimated numbers for immigrant cohorts mean that this cohort got ahead of natives in wages. Higher or equal wage earnings for immigrants than natives generally occur for the earlier cohorts. On the other hand, negative figures indicate that this cohort did not manage to catch up with the natives in wages. The negative gap is more common in the recent cohorts. These natural logarithm values allow evaluating the wage gap between immigrant cohorts.

Table 17: The Wage Gap between Immigrant Cohorts and Natives in Monthly Turkish Lira by Natural Logarithm

| | Wage-Gap in LN |
|---|---|
| Native-Born | 7.8068 TL |
| $D_{2012}$ | -0.2952 TL |
| $D_{2000}$ | -0.0526 TL |
| $D_{1990}$ | -0.0134 TL |
| $D_{1980}$ | +0.1396 TL |
| $D_{1970}$ | +0.0082 TL |

The 1980-1989 cohort is the highest wage-earner group among all immigrant cohorts and natives. 1980-89 arrival immigrant cohort earn approximately 14 per cent higher than natives on average. In addition, the wage gap, on average, have closed for the before 1980 and the 1990-1999 cohorts. However, before 1980 arrivals earn slightly higher and 1990-1999 arrivals earn slightly less than natives. These gaps equal approximately 1 per cent for these two immigrant cohorts on oppositely. In short, the 1980-89 cohort earns far higher than natives, and the before 1980 and the 1990-99 cohorts earn equally with natives. On the other hand, the recent two immigrant cohorts earn less than natives, but the wage gap worsens for the latest arrivals immigrant cohort. The wage gap is equal slightly higher than 5 per cent for the 2000-2011 immigrant cohort. Besides, the recent cohort, which is 2012 and later arrivals, is at the worst wage level among all groups. They earn 30 per cent lower than natives on average.

In conclusion, 1980-89 arrivals are the outperformed immigrant cohort among all others. They have got ahead of all the other immigrant cohorts in all three outcomes of the labour market. The coefficient values of marginal effect analyses take the highest values for them. This success is related to the years spent by members of this cohort in Turkey. Besides, Turkey-specific or firm-specific human capital investments by this immigrant cohort in the post-migration process, improving Turkish fluency might have helped this successful integration. Lastly, I should note that most of this cohort are mostly ethnic relatives of Turkish people. In line with the ethnic perspective of Turkey's immigration policy, the generous easiness was given to Bulgar Turks, who are the majority of the 1980-89 cohort, such as granting citizenship and the exemption in military service, must have helped to integration for this cohort.

The before 1980 and 1990-1999 cohorts are quite successful in the integration process, but these two cohorts are outperformed in different labour market outcomes. Firstly, being a member of 1990-99 arrivals' effect on labour force participation and employment are similar to the 1980-89 cohort. However, the marginal value of the before 1980 cohort on the labour force participation and employment is smaller than these two cohorts, although it is positive. Secondly, before 1980 arrivals are outperformed the 1990-99 cohort in terms of wages, although both of them worse than the 1980-89 cohort. The wage level

difference between the before 1980 and 1990-99 cohorts equal 2 per cent. The slightly negative value of the wage gap for the 1990-99 cohort is a relatively small gap, and it does not affect the integration success of this cohort.

The two recent cohorts seem to be unsuccessful in the labour market integration. Firstly, the effect of being a member of 2000-2011 arrivals as compared to the 2012 and later arrivals cohort is negative on the labour force participation and employment. The 2000-2011 cohort is the only immigrant group faced with a negative effect on these two labour market outcomes. This shows that the 2000-2011 immigrant cohort is a failure in labour market integration. Secondly, the wage gap for the 2000-2011 and the 2012 and later arrivals cohorts equal slightly higher than 5 per cent and slightly lower than 30 per cent respectively. These wages gaps clearly state that these two cohorts have not completed the labour market integration process.

In short, the 1980-89 cohort is the most successful immigrant group, and they earn higher than natives clearly. Before 1980 arrivals and between 1990 and 1999 arrivals are taken advantage of the marginal effect on labour force participation and employment, and they earn similar with natives. On the other hand, the 2000-2011 cohort's marginal effect values are negative, and they earn less than natives. Lastly, the wage gap is huge for the 2012 and later arrivals cohort.

# CONCLUSION

The main aim of this thesis has been to provide new insight into the immigrant labour market integration process from Turkey that can be considered as an upper-middle income country. This integration process is tested with the Household Labour Force Survey that is conducted by TurkStat for Turkey. One of the leading research questions of the thesis is "Do spending years in Turkey cause higher labour market outcomes for foreign-born people?" with testing the existence of the initial wage gap among natives and immigrants in Turkey. The other one is "Is the take-over point is valid also for Turkey?". The last question for this thesis is that "How does cohort analysis change the immigrants' integration perspective, and how do human capital structure differences among immigrant cohorts affect the adaptation process for Turkey?".

The main result of the cross-sectional estimation is that immigrants' economic adaptation happens with the spending years in Turkey for all labour market outcomes. An immigrant with an average qualification between immigrants in Turkey earns less than a native-born person right after migrating to Turkey. The wage gap closes with years passed in Turkey in line with the hypothesis that years spent in the destination country is helpful for integration. The estimation also finds that the take-over point for wages happens between 20-25 years after migration. In addition, years resided in Turkey is helpful for all labour market outcomes for immigrants. The duration passed in Turkey also helps improve the labour force participation and the employment probabilities of immigrants. In short, according to the cross-sectional analysis, spending years in Turkey helps immigrants to enhance the labour market outcomes, and it means that economic adaptation of immigrants happens in Turkey.

The pooled cross-sectional analysis presents a different approach towards immigrants' economic adaptation in Turkey. The main result of this viewpoint is that the integration pace estimated by cross-sectional analysis is higher than the actual rate. According to the pooled estimation, the economic adaptation of immigrants in Turkey is much slower than estimated in the cross-sectional approach. This shows that cross-sectional analysis also

collaborates with the labour market integration process of immigrants in Turkey in line with the literature. The wage gap for the latest cohort is equal to 30 per cent. The 2000-2011 immigrant cohort also did not manage to close the wage parity completely against natives. In terms of wages, following the pooled cross-sectional estimation, only the earliest three cohorts seem to achieve wage parity, or they can earn at least equally with natives. In addition to this, the pooled cross-sectional estimation results showed that the recent two cohorts perform weaker than earlier ones in terms of labour force participation and employment statuses. Briefly, according to the pooled cross-sectional estimation, labour market integration for immigrants in Turkey does not happen as rapid as estimated in the cross-sectional approach, and adaptation pace varies among immigrant cohorts.

The pooled approach revealed that recent immigrants' human capital quality is not as good as the earlier ones. Average immigrants' human capital quality for the recent cohort in Turkey has dropped sharply with the blasting of the Syrian Civil War. Therefore, they are younger -consequently less experienced- and less educated than the earlier immigrants. This change in average quality could explain the failure to adapt economically in Turkey for the recent immigrant cohort. This difference between the highlighter results of cross-sectional and pooled cross-sectional approaches, which are estimated for the Turkish labour market, is an additional confirmation that it shouldn't tar all foreigners with the same brush. In short, this deterioration in immigrants' human capital quality could change the immigrants' integration rate for the earlier and recent immigrant cohorts.

This study applies these theoretical and empirical frameworks to immigrants and natives of the Turkish labour market. While adopting these frameworks, there were some limitations because of the data structure. First, HLFS does not contain the origin country information of immigrants. Secondly, the number of observations for each cohort of immigrants in each survey does not allow to differentiate across-cohort and within-cohort growths. Third, schooling years cannot be definable because of some legal changes and data limitations. Despite these and many other limitations, this thesis goes beyond the general traditional tendency of focusing on the wage gap and whether it is lessened in the literature. In addition to this tendency, I also analyse the labour force participation and

employment statuses in this study. This approach is quite a new application even for developed countries' labour markets for the immigrant assimilation hypothesis.

This thesis contributes to the literature of the immigrant's economic adaptation literature in three ways with some methodological modifications and estimation results. First of all, it is rare because it compares two different estimation approaches in one study for the same country, same year intervals with the same data set. Secondly, current literature about immigrants' economic adaptation in the destination country mainly consists of analyses for high-income and developed countries, such as the US, the UK, Germany and France. This thesis also provides rare evidence from a middle-income country. Moreover, I contribute also to the immigrant labour market integration hypothesis with this study. This research offers fresh pieces of evidence that support this hypothesis from the Turkish labour market and immigrants in Turkey. This study has a unique place in the literature considering these contributions.

Despite all efforts and answers, many possible research questions are also waiting to be explored in further studies. The possible primary additional investigation could be revisiting the immigrants' labour market assimilation process for Turkey and exploring the whether slowdown tendency in assimilation continues. This phenomenon is revealed for the immigrants that reside in the US by Borjas (2015). To explore this question, following years' surveys must be waited. Besides, further research is needed to determine the causes of the slowdown. Another possible further study can be designed to reveal the immigrants' assimilation mechanisms. However, the structure of the data set of HLFS did not allow to analyse of mechanisms in this study. All these possible further studies will help comprehend immigrants' adaptation in Turkey from a broader viewpoint.

# REFERENCES


Abdulla, K. (2020). Human Capital Accumulation: Evidence from Immigrants in Low-Income Countries. *Journal of Comparative Economics*, 48(4), 951-973.

Accetturo, A., & Infante, L. (2010). Immigrant earnings in the Italian labour market. *Giornale Degli Economisti e Annali Di Economia, 69 (Anno 123)(1), 1–27.*

Akbari, A. H. (2008). Immigrant naturalization and its impacts on immigrant labour market performance and treasury. In P. Bevelander & D. J. Devoretz (Eds.), *The economics of citizenship* (pp. 127-154). Malmö University Press

Aktar, A. (2003). Homogenising the Nation, Turkifying the Economy. In R. Hirschon (Eds.), *Crossing the Aegean: An Appraisal of the 1923 Compulsory Population Exchange between Greece and Turkey*, Berghahn Books, New York and Oxford, 79-96.

Alba, R., & Nee, V. (2012). Rethinking assimilation theory for a new era of immigration. The New Immigration: *An Interdisciplinary Reader*, 31(4), 35–65. https://doi.org/10.4324/9780203621028-8

Aldashev, A., Gernandt, J., & Thomsen, S. (2012). The Immigrant-Native Wage Gap in Germany. *Jahrbucher fur Nationalokonomie und Statistik*. 232, 490-517. 10.1515/jbnst-2012-0502.

Alexander, R., & Ward, Z. (2018). Age at arrival and assimilation during the age of mass migration. *Journal of Economic History*, 78(3), 904-937.

Algan, Y., Dustmann, C., Glitz, A., & Manning, A. (2010). The Economic Situation of First and Second-Generation Immigrants in France, Germany and the United Kingdom. *The Economic Journal*, 120(542), F4–F30. doi:10.1111/j.1468-0297.2009.02338.x

Altonji, J. G., & Card, D. (1991). The effects of immigration on the labor market outcomes of less-skilled natives. In J. M. Abowd & R. B. Freeman (eds.), *Immigration, trade, and the labor market* (pp. 201-234). University of Chicago Press.

Amaral, E. F., Rios-Neto, E. L., & Potter, J. E. (2016). The influence of internal migration on male earnings in Brazil, 1970–2000. *Migration and Development*, 5(1), 55-78.

Amin, S., & Uyar, B. (2021). Pay gap between foreign-born and native-born doctors in the United States, *Applied Economics*, 53(5), 650-662, DOI:10.1080/00036846.2020.1808578

Antecol, H., Kuhn, P., & Trejo, S. J. (2006). Assimilation via prices or quantities? Sources of immigrant earnings growth in Australia, Canada, and the United States. *Journal of Human Resources*, 41(4), 821-840.

Ari, K. (2000). *Büyük Mübadele-Türkiye'ye Zorunlu Göç (1923–1925).* Tarih Vakfı Yurt Yayınları, İstanbul

Aydemir, A. (2003). Effects of business cycles on the labour market assimilation of immigrants. *Analytical Studies Branch* Research Paper Series, June, 203, 1–38.

Aydemir, A., & Skuterud, M. (2005). Explaining the deteriorating entry earnings of Canada's immigrant cohorts, 1966–2000. *Canadian Journal of Economics/Revue Canadienne d'économique*, 38(2), 641-672.

Aygul, H.H.& Eke, E. (Eds.). (2018). *21. Yüzyılda Ulsulararası Göç ve Mülteciler: Bir Türkiye Perspektifi*. Nobel Akademik Yayıncılık, Ankara.

Bacolod, M., & Rangel, M. A. (2017). Economic assimilation and skill acquisition: Evidence from the occupational sorting of childhood immigrants. *Demography*, 54(2), 571-602.

Balkan, B., & Tumen, S. (2016). Immigration and prices: quasi-experimental evidence from Syrian refugees in Turkey. *Journal of Population Economics*, 29(3), 657-686.

Banerjee, R., & Verma, A. (2012). Post-migration Education Among Recent Adult Immigrants to Canada. *Journal of International Migration and Integration*, 13(1), 59–82. https://doi.org/10.1007/s12134-011-0193-5

Barth, E., Bratsberg, B., & Raaum, O. (2004). Identifying earnings assimilation of immigrants under changing macroeconomic conditions. *Scandinavian Journal of Economics*, 106(1), 1–22. https://doi.org/10.1111/j.0347-0520.2004.t01-1-00345.x

Bartlett R.L., & Callahan C. (1984). Wage determination and marital status: Another look. *Industrial Relations*, 23(Winter), 90-96.

Bartram, D. (2015). Forced migration and "rejected alternatives": A conceptual refinement. *Journal of Immigrant & Refugee Studies*, 13(4), 439-456.

Bauer, T. K., & Zimmermann, K. F. (2000). Immigration policy in integrated national economies (No. 170). *IZA Discussion Papers.*

Bauer, T., Epstein, G. S., & Gang, I. N. (2005). Enclaves, language, and the location choice of migrants. *Journal of Population Economics*, 18(4), 649–662. https://doi.org/10.1007/s00148-005-0009-z

Beaman, L. A. (2012). Social networks and the dynamics of labour market outcomes: Evidence from refugees resettled in the U.S. *Review of Economic Studies*, 79(1), 128–161. https://doi.org/10.1093/restud/rdr017

Becker, G. (1964). *Human capital: a theoretical and empirical analysis with special reference to education*. New York, NBER.

Beenstock, M., Chiswick, B. R., & Paltiel, A. (2010). Testing the immigrant assimilation hypothesis with longitudinal data. *Review of Economics of the Household*, 8(1), 7-27.

Bellemare, C. (2007). A life-cycle model of outmigration and economic assimilation of immigrants in Germany. *European Economic Review*, 51(3), 553–576.

Beltan, S. B. (2006). Citizenship and identity in Turkey: The case of the post-1980 Turkish-Muslim immigrants from Macedonia [Unpublished M. A. PolSci Thesis], Bogazici Universitesi.

Berker, A. (2011). Labor-Market Consequences of Internal Migration in Turkey. *Economic Development and Cultural Change*, 60:1, 197-239.

Bertoli, S., Moraga, J. F. H., & Ortega, F. (2013). Crossing the border: Self-selection, earnings and individual migration decisions. *Journal of Development Economics*, 101, 75-91.

Beyer, R.C.M. (2019). Wage Performance of Immigrants in Germany. *German Economic Review*, 20(4), 141-169. https://doi.org/10.1111/geer.12159

Bhattarai, K. (2017). Determinants of Wages and Labour Supply in the UK. *Chinese Business Review*, 16(3), 1–23. https://doi.org/10.17265/1537-1506/2017.03.002

Bils, M. J. (1985). Real Wages over the Business Cycle: Evidence from Panel Data. *Journal of Political Economy*, 93(4), 666–689. https://doi.org/10.1086/261325

Bloemraad, I., Korteweg, A., & Yurdakul, G. (2008). Citizenship and immigration: Multiculturalism, assimilation, and challenges to the nation-state. *Annual Review of Sociology*, 34, 153–179. https://doi.org/10.1146/annurev.soc.34.040507.134608

Bodvarsson, O. B., & Van den Berg, H. (2013). *The Economics of Immigration: Theory and Policy*. Springer-Verlag, New York.

Borjas, G. & Katz, L. (2007). 1. The Evolution of the Mexican-Born Workforce in the United States. In G. Borjas (Ed.), *Mexican Immigration to the United States* (pp. 13-56). Chicago: University of Chicago Press. https://doi.org/10.7208/9780226066684-003

Borjas, G. (2000). Ethnic enclaves and assimilation. *Swedish Economic Policy Review*, 7, 89–122.

Borjas, G. J. (1985). Assimilation, changes in cohort quality, and the earnings of immigrants. *Journal of labor Economics*, 3(4), 463-489.

Borjas, G. J. (1987). Self-Selection and the Earnings of Immigrants. The American Economic Review, 77(4), 531–553. http://www.jstor.org/stable/1814529

Borjas, G. J. (1995). Assimilation and changes in cohort quality revisited: what happened to immigrant earnings in the 1980s?. *Journal of labor economics*, 13(2), 201-245.

Borjas, G. J. (1996). The new economics of immigration. *The Atlantic Monthly*, 278(5), 72-80.

Borjas, G. J. (2014). *Immigration Economics*. Harvard University Press. www.jstor.org/stable/j.ctt6wprgr

Borjas, G. J. (2015). The slowdown in the economic assimilation of immigrants: Aging and cohort effects revisited again. *Journal of Human Capital*, 9(4), 483-517.

Borjas, G. J. (2016). *We Wanted Workers: Unraveling the Immigration Narrative*. W. W. Norton & Company.

Borjas, G. J. (2018). Lessons from immigration economics. *The Independent Review*, 22(3), 329-340.

Borjas, G. J. (2019). Immigration and economic growth (No. w25836). *National Bureau of Economic Research.*

Borjas, G. J., & Cassidy, H. (2019). The wage penalty to undocumented immigration. Labour Economics, 61, 101757. doi:10.1016/j.labeco.2019.101757

Borjas, G. J., Bronars, S. G., & Trejo, S. J. (1992). Self-selection and internal migration in the United States. *Journal of urban Economics*, 32(2), 159-185.

Borjas, G.J. (2019). *Labor Economics*, Eighth Edition. Mc Graw Hill Education

Bradbury, K., Foote, C.L., & Triest, R.K. (2008). *Labor Supply in the New Century*. Federal Reserve Bank of Boston.

Bratsberg, B., & Ragan, J. F. (2002). The Impact of Host-Country Schooling on Earnings: A Study of Male Immigrants in the United States. *The Journal of Human Resources*, 37(1), 63–105. https://doi.org/10.2307/3069604

Budría, S., & Swedberg, P. (2012). The impact of language proficiency on immigrants' earnings. *Revista de Economia Aplicada*, 23(67), 63–91.

Burkert, C., & Seibert, H. (2007). Labour market outcomes after vocational training in Germany: Equal opportunities for migrants and natives? (No. 31/2007). IAB-Discussion Paper. https://www.econstor.eu/bitstream/10419/32679/1/608260703.pdf

Cai, Shu and Zimmermann, Klaus F., Social Assimilation and Labor Market Outcomes of Migrants in China (December 14, 2020). Available at SSRN: https://ssrn.com/abstract=3750684 or http://dx.doi.org/10.2139/ssrn.3750684

Card, D. (1999). The causal effect of education on earnings. Handbook of labor economics, 3, 1801-1863.

Card, D., & Peri, G. (2016). Immigration economics by George J. Borjas: a review essay. *Journal of Economic Literature*, 54(4), 1333-49.

Castles, S. (2014). International migration at a crossroads. *Citizenship Studies*, 18(2), 190-207.

Castles, S., & Miller, M. J. (2003). *The Age of Migration: International population movements in the modern world.* Palgrave, London: Macmillan Publisher Limited. doi: https://doi.org/10.1007/978-1-349-26846-7

Chiswick, B. R. (1978). The effect of Americanization on the earnings of foreign-born men. *Journal of political Economy*, 86(5), 897-921.

Chiswick, B. R. (1991). Speaking, reading, and earnings among low-skilled immigrants. *Journal of labor economics*, 9(2), 149-170.

Chiswick, B. R., & Miller, P. W. (2002a). Immigrant earnings: Language skills, linguistic concentrations and the business cycle. *Journal of population economics*, 15(1), 31-57.

Chiswick, B. R., & Miller, P. W. (2007). *The economics of language: International analyses*. Routledge. https://doi.org/10.4324/9780203963159

Chiswick, B. R., & Miller, P. W. (2010). The effects of educational-occupational mismatch on immigrant earnings in Australia, with international comparisons. *International Migration Review*, 44(4), 869–898. https://doi.org/10.1111/j.1747-7379.2010.00829.x

Chiswick, B. R., & Miller, P. W. (2012). Negative and positive assimilation, skill transferability, and linguistic distance. *Journal of Human Capital*, 6(1), 35-55.

Chiswick, B. R., & Miller, P. W. (2015). International migration and the economics of language. In *Handbook of the economics of international migration* (Vol. 1, pp. 211-269). North-Holland.

Chiswick, B. R., & Miller, W. (2011). The "negative" assimilation of immigrants: a special case. *ILR Review*, 64(3), 502-525.

Chiswick, B. R., Lee, Y. L., & Miller, P. W. (2005a). Immigrant earnings: a longitudinal analysis. *Review of Income and Wealth*, 51(4), 485-503.

Chiswick, B. R., Lee, Y. L., & Miller, P. W. (2005b). A longitudinal analysts of immigrant occupational mobility: A test of the immigrant assimilation hypothesis. *International Migration Review*, 39(2), 332-353.

Chiswick, B., & Miller, P. (2007). Modeling Immigrants' Language Skills. *Research in Labor Economics*. 27. 10.1016/S0147-9121(07)00003-9.

Chiswick, B., R. & Lee, Y., L., & Miller, P., W. (2002). Immigrants' Language Skills and Visa Category, *IZA Discussion Papers 471*, Institute of Labor Economics (IZA).

Ci, W., Laing, M., Voia, M., & Worswick, C. (2020). Immigrant Earnings Returns to Post-Migration Education: Evidence for Canada, 1999-2013. *Canadian Journal of Economics*, 53(4), 1599-1617.

Cobb-Clark, D. A. (2003). Public policy and the labor market adjustment of new immigrants to Australia. *Journal of Population Economics*, 16(4), 655–681. https://doi.org/10.1007/s00148-003-0153-2

Crawley, H. (2010). Chance or Choice? Understanding why asylum seekers come to the UK. *Refugee Council Discussion Paper*. https://www.refugeecouncil.org.uk/assets/0001/5702/rcchance.pdf

Çetin, T. (2009). The socio-economic outcomes of the last turkish migration from Bulgaria to Turkey. *Journal of Turkish Studies*, 3(7), 241-270.

Damm, A. P. (2009). Ethnic enclaves and immigrant labor market outcomes: Quasi-experimental evidence. *Journal of Labor Economics*, 27(2), 281–314. https://doi.org/10.1086/599336

Di Maria, C., & Stryszowski, P. (2009). Migration, human capital accumulation and economic development. *Journal of Development Economics*, 90(2), 306–313. https://doi.org/10.1016/j.jdeveco.2008.06.008

Dickson, M. (2013). The causal effect of education on wages revisited. Oxford Bulletin of Economics and Statistics, 75(4), 477-498.

Dougherty, C. R. S., & Jimenez, E. (1991). The specification of earnings functions: Tests and implications. *Economics of Education Review*, 10(2), 85–98. https://doi.org/10.1016/0272-7757(91)90001-6

Duleep, H. O. (2015). The adjustment of immigrants in the labor market. In *Handbook of the economics of international migration* (Vol. 1, pp. 105-182). North-Holland.

Duleep, H. O., & Dowhan, D. J. (2002). Insights from longitudinal data on the earnings growth of US foreign-born men. *Demography*, 39(3), 485-506.

Duleep, H., Jaeger, D., & Regets, M. (2012). How Immigration May Affect U.S. Native Entrepreneurship: Theoretical Building Blocks and Preliminary Results. *IZA Discussion Paper, 6677*.

Dustmann, C. (1994). Speaking fluency, writing fluency and earnings of migrants. *Journal of Population economics*, *7*(2), 133-156.

Elrick, T., & Lewandowska, E. (2008). Matching and Making Labour Demand and Supply: Agents in Polish Migrant Networks of Domestic Elderly Care in Germany and Italy. *Journal of Ethnic and Migration Studies*, 34(5), 717-734. doi:10.1080/13691830802105954

Erdogan, M.M. (2015). *Türkiye'deki Suriyeliler: Toplumsal Kabul ve Uyum*. İstanbul Bilgi Üniversitesi Yayınları, İstanbul.

Erdogan, M.M. (2017). *Suriyeliler Barometresi 2017: Suriyelilerle Uyum içinde Yaşamın Çerçevesi.* İstanbul Bilgi Üniversitesi Yayınları, İstanbul.

Erdogan, M.M., & Kaya, A. (Eds.). (2015). *Türkiye'nin Göç Tarihi: 14. Yüzyıldan 21. Yüzyıla Türkiye'ye Göçler*. İstanbul Bilgi Üniversitesi Yayınları, İstanbul.

Fernández, C., & Ortega, C. (2007). Labor market assimilation of immigrants in Spain: employment at the expense of bad job-matches? *Spanish Economic Review*, 10(2), 83–107. doi:10.1007/s10108-007-9032-4

Fertig, M., & Schurer, S. (2007). Earnings Assimilation of Immigrants in Germany: The Importance of Heterogeneity and Attrition Bias. No 30, SOEPpapers on Multidisciplinary Panel Data Research, *DIW Berlin*, The German Socio-Economic Panel (SOEP).

Friedberg, R. M. (1992). The labor market assimilation of immigrants in the United States: the role of age at arrival. *Brown University*.

Friedberg, R. M. (2000). You can't take it with you? Immigrant assimilation and the portability of human capital. *Journal of labor economics*, 18(2), 221-251.

Gang, I. N., & Zimmermann, K. F. (2000). Is Child Like Parent? Educational Attainment and Ethnic Origin. *Journal of Human Resources*, 151, 550-569.

Gathmann, C., & Keller, N. (2014). Returns to Citizenship? Evidence from Germany's Recent Immigration Reforms. *CESifo Working Paper Series No. 4738*, Available at SSRN: https://ssrn.com/abstract=2432911

Gathmann, C., & Keller, N. (2018). Access to citizenship and the economic assimilation of immigrants. *The Economic Journal*, 128(616), 3141-3181.

Gelman, A., & Hill, J. (2007). *Data Analysis using Regression and Multilevel/Hierarchical Models*. Cambridge University Press: Cambridge; New York, pp. 60-61.

Geray, C. (1962). *Türkiye'den ve Türkiye'ye göçler ve Göçmenlerin İskânı: 1923-1960*. Siyasal Bilgiler Fakültesi, Maliye Ensititüsü, Ankara.

Gill, F., & Ahmad, W. (2019). The Earnings Disadvantage of 21st Century Immigrants in the United States. *The American Economist*, 64(1), 31–44. https://doi.org/10.1177/0569434518793367

Goldin, C. (1994). The Political Economy of Immigration Restriction in the United States, 1890 to 1921. In C. Goldin and G. D. Libecap (Eds.) *The Regulated Economy: A Historical Approach to Political Economy*, 223-258. University of Chicago Press.

Gollin, D. (2014). The Lewis Model: A 60-Year Retrospective. *The Journal of Economic Perspectives*, 28(3), 71–88. http://www.jstor.org/stable/23800576

Gonzalez, A. (2003). The Education and Wages of Immigrant Children: The Impact of Age at Arrival. *Economics of Education Review*, 22(2), 203-212.

Gorodzeisky, A., & Semyonov, M. (2017). "Labor force participation, unemployment and occupational attainment among immigrants in West European countries" ed. Ignacio Correa-Velez. PLoS One, 12(5), e0176856.

Green, A. G., & Green, D. A. (1999). The Economic Goals of Canada's Immigration Policy: Past and Present. Canadian Public Policy / Analyse de Politiques, 25(4), 425–451.

Green, D. A. (1999). Immigrant Occupational Attainment: Assimilation and Mobility Over Time. *Journal of Labor Economics*, 17(1), 49-79.

Green, D. A., & Worswick, C. (2012). Immigrant Earnings Profiles in the Presence of Human Capital Investment: Measuring Cohort and Macro Effects. *Labour Economics*, 19(2), 241-259.

Guarnizo, L. E., Portes, A., & Haller, W. (2003). Assimilation and Transnationalism: Determinants of Transnational Political Action among Contemporary Migrants. *American Journal of Sociology*, 108(6), 1211-1248.

Harman, C. (2017). *A People's History of the World: From the Stone Age to the New Millennium*. Verso Books.

Heckman, J. J., & Sedlacek, G. (1985). Heterogeneity, Aggregation, and Market Wage Functions: an Empirical Model of Self-Selection in the Labor Market. *Journal of political Economy*, 93(6), 1077-1125.

Heinz F. F., Ward-Warmedinger M, (2006). Cross Border Labour Mobility within an Enlarged EU. *European Central Bank, Occasional Paper Series No. 52*

Hill, M. S. (1979). The Wage Effects of Marital Status and Children. *Journal of Human Resources*, 14(4), 579-594.

Himmler, O. & Jackle R. (2018), Literacy and the Migrant-Native Wage Gap. *Review of Income and Wealth*. 64(3), 592-623.

Hirschon, R. (Ed.). (2003*). Crossing the Aegean: an appraisal of the 1923 compulsory population exchange between Greece and Turkey*. Berghahn Books.

Hou, F. & Lu, Y. (2017) International Students, Immigration and Earnings Growth: The Effect of a Pre-Immigration Host-Country University Education. IZA Journal of Development and Migration, 7(1), 1–24.

Hu, W. Y. (2000). Immigrant Earnings Assimilation: Estimates from Longitudinal Data. *American Economic Review*, 90(2), 368-372.

Hum, D., & Simpson, W. (2004). Economic Integration of Immigrants to Canada: A Short Survey. *Canadian Journal of Urban Research*, 13(1), 46-61.

Husted, L., Nielsen, H. S., Rosholm, M., & Smith, N. (2001). Employment and Wage Assimilation of Male First-Generation Immigrants in Denmark. *International Journal of Manpower*, 22(1/2), 39–71.

Icdugyu, A., Erder, S., & Genckaya, O.F. (2014). Türkiye'nin Uluslararası Göç Politikaları, 1923-2023: Ulus-Devlet Oluşumundan Ulus-Ötesi Dönüşümlere. *Koç Üniversitesi Göç Araştırmaları Merkezi Mirekoç*, 2014/1

Icduygu, A., & Sert, D. (2009). *Historical Trends in Emigration and Immigration. Focus-Migration: Turkey*. Hamburgisches Weltwirtschaftsinstitut.

Ingwersen, K. & Thomsen, S.L. (2019). The Immigrant-Native Wage Gap in Germany Revisited. *IZA Discussion Papers, No. 12358*, Institute of Labor Economics (IZA), Bonn

Ishida, K., Nakamuro, M., & Takenaka, A. (2016). The Academic Achievement of Immigrant Children in Japan: An Empirical Analysis of the Assimilation Hypothesis. *Educational Studies in Japan*, 10, 93-107.

İçduygu, A. (2014). Turkey's Migration Transition and Its Implications for the Euro-Turkish Transnational Space. In S. Aydin-Düzgit, D. Huber, M. Müftüler-Baç, E. F. Keyman, J. Tasci and N. Tocci(Eds.) *Global Turkey in Europe II*, 81-106.

İçduygu, A., & Aksel, D. B. (2012). *Türkiye'de Düzensiz Göç*. Uluslararası Göç Örgütü Türkiye.

İçduygu, A., & Aksel, D. B. (2013). Turkish Migration Policies: A Critical Historical Retrospective. Perceptions: *Journal of International Affairs*, 18(3), 167-190.

İçduygu, A., & Diker, E. (2017). Labor Market Integration of Syrian Refugees in Turkey: From Refugees to Settlers. *The Journal of Migration Studies*, 3(1), 12-35.

İçduygu, A., & Kirişci, K. (Eds.). (2009). *Land of Diverse Migrations: Challenges of Emigration and Immigration in Turkey* (Vol. 236). Arion Publishing.

İçduygu, A., & Organisation Internationale pour les Migrations. (2003*). Irregular Migration in Turkey* (No. 12). Geneva: International Organization for Migration.

Kayaoglu, A., and A.Kaya. 2011. "Citizenship Withering Away? Social Affiliations and Labor Market Integration of Turkish Origin Immigrants in Germany and France." *University of Louvain Discussion Paper 2011(33).*

Kaynak, M. & Yinanç, R. (1992). *Iraklı Sığınmacılar ve Türkiye (1988-1991)*, Tanmak Yayınları, Ankara.

Keller, N., Gathmann, C., & Monscheuer, O. (2015). Citizenship and the Social Integration of Immigrants: Evidence from Germany's Immigration Reforms. *VfS Annual Conference 2015 (Muenster): Economic Development - Theory and Policy 113184*, Verein für Socialpolitik / German Economic Association.

Keyder, Ç. (2003). The Consequences of the Exchange of Populations for Turkey. In Renée Hirschon (Eds.), *Crossing the Aegean: An Appraisal of the 1923 Compulsory Population Exchange between Greece and Turkey,* Berghahn Books, New York and Oxford, 39-52.

Keyman, E. F., & Icduygu, A. (2003). Globalization, Civil Society and Citizenship in Turkey: Actors, Boundaries and Discourses. *Citizenship Studies*, 7(2), 219–234. doi:10.1080/1362102032000065982

Kirisci, K. (1996). Is Turkey Lifting the Geographical Limitation - the November 1994 Regulation on Asylum in Turkey. *Int'l J. Refugee* L., 8, 293.

Kirisci, K. (2000). Disaggregating Turkish Citizenship and Immigration Practices. *Middle Eastern Studies*, 36, (3), 8.

Kirişçi, K. (1995). Post Second World War Immigration from Balkan Countries to Turkey. *New Perspectives on Turkey*, 12, 61-77.

Kirişçi, K., & Karaca, S. (2015). Hoşgörü ve Çelişkiler: 1989, 1991 ve 2011'de Türkiye'ye Yönelen Kitlesel Mülteci Akınları. In Ayhan Kaya and M. Murat Erdogan (Eds.), *Türkiye'nin Göç Tarihi: 14. Yüzyıldan 21. Yüzyıla Türkiye'ye Göçler*, Bilgi Üniversitesi Yayınları, İstanbul, 295-314.

Ladas, S. P. (1932). *The Exchange of Minorities: Bulgaria, Greece and Turkey*. (Vol. 8, No. 11). New York, Macmillan.

Lazear, E. P. (1999). Culture and language. *Journal of political Economy*, 107(S6), S95-S126.

Lehmer, F., & Ludsteck, J. (2011). The Immigrant Wage Gap in Germany: Are East Europeans Worse Off? *International Migration Review*, 45(4), 872-906.

Lehmer, F., & Ludsteck, J. (2015). Wage Assimilation of Foreigners: Which Factors Close the Gap? Evidence From Germany. *Review of Income and Wealth*, 61(4), 677-701.

Lemos, S. (2013). Immigrant Economic Assimilation: Evidence from UK Longitudinal Data between 1978 and 2006. *Labour Economics*, 24, 339-353.

Lessem, R., & Sanders, C. (2020). Immigrant Wage Growth in the United States: the Role of Occupational Upgrading. *International Economic Review*, *61*(2), 941-972.

Lewis, B. (2001). *The Muslim Discovery of Europe*. WW Norton & Company.

Lin, S., Wu, F., & Li, Z. (2020). Social Integration of Migrants Across Chinese Neighbourhoods. *Geoforum*, 112(2), 118–128. https://doi.org/10.1016/j.geoforum.2020.04.008

Livingston, G., & Kahn, J. R. (2002). An American Dream Unfulfilled: The Limited Mobility of Mexican Americans. *Social Science Quarterly*, 83(4), 1003–1012. https://doi.org/10.1111/1540-6237.00129

Llull, J. (2018). Immigration, Wages, and Education: a Labour Market Equilibrium Structural Model. *The Review of Economic Studies*, 85(3(304)), 1852–1896. https://www.jstor.org/stable/26543951

Lubotsky, D. (2011). The Effect of Changes in the US Wage Structure on Recent Immigrants' Earnings. *The Review of Economics and Statistics*, 93(1), 59-71.

Lucas, R. E. B. (2015). African Migration. In *Handbook of the Economics of International Migration*, 1445–1596. doi:10.1016/b978-0-444-53768-3.00026-6

Luong, M., & Hébert, B. P. (2009). Age and Earnings. *Perspectives on Labour and Income*, 21(1), 19.

Marinescu, I., & Triyana, M. (2016). The Sources of Wage Growth in a Developing Country. *IZA Journal of Labor and Development*, 5(1). https://doi.org/10.1186/s40175-016-0047-9

Masters, S. H. (1972). Are Black Migrants from the South to the Northern Cities Worse Off than Blacks Already There?. *Journal of Human Resources*, 411-423.

McCarthy, J. (1983). Foundations of the Turkish Republic: Social and Economic Change. *Middle Eastern Studies*, 19(2), 139-151.

McDonald, J. T., & Worswick, C. (1998). The Earnings of Immigrant Men in Canada: Job Tenure, Cohort, and Macroeconomic Conditions. *Industrial and Labor Relations Review*, 51(3), 465–482. https://doi.org/10.1177/001979399805100306

McDonald, J. T., & Worswick, C. (1999). Confirmations and Contradictions Wages, Implicit Contracts, and the Business Cycle: Evidence from Canadian Micro Data. *Journal of Political Economy*, 107(4), 884–892. https://doi.org/10.1086/250083

Mcdonald, J. T., & Worswick, C. (1999). The Earnings of Immigrant Men in Australia: Assimilation, Cohort Effects, and Macroeconomic Conditions. *Economic Record*, 75(1), 49–62. https://doi.org/10.1111/j.1475-4932.1999.tb02433.x

McGuinness, S., & Sloane, P. J. (2011). Labour Market Mismatch among UK Graduates: an Analysis Using REFLEX Data. *Economics of Education Review*, 30(1), 130–145. https://doi.org/10.1016/j.econedurev.2010.07.006

McKenzie, D., Theoharides, C., & Yang, D. (2014). Distortions in the International Migrant Labor Market: Evidence from Filipino Migration and Wage Responses to Destination Country Economic Shocks. *American Economic Journal: Applied Economics*, 6(2), 49-75.

Meyers, E. (2000). Theories of International Immigration Policy: a Comparative Analysis. *International Migration Review*, 34(4), 1245–1282. https://doi.org/10.1177/019791830003400407

Mincer, J. (1974). Schooling, Experience, and Earnings. *Human Behavior & Social Institutions* No. 2.

Mincer, J. (1975). Education, Experience, and the Distribution of Earnings and Employment: An Overview. In *Education, income, and human behavior*, 71-94.

Murphy, K. M., & Welch, F. (1990a). Empirical Age-Earnings Profiles. *Journal of Labor economics*, 8(2), 202-229.

Murphy, K. M., & Welch, F. (1990b). Wage Differentials in the 1980s: the Role of the International Trade. *Applied Econometrics*, (No. 23).

Mühleisen, W., Røthing, Å., & Svendsen, S. H. B. (2012). Norwegian Sexualities: Assimilation and Exclusion in Norwegian Immigration Policy. *Sexualities*, 15(2), 139–155. https://doi.org/10.1177/1363460712436540

Natter, K. (2018). Rethinking Immigration Policy Theory Beyond 'Western Liberal Democracies'. *Comparative Migration Studies*, 6(1), 1-21. https://doi.org/10.1186/s40878-018-0071-9

Nielsen, H. S., Rosholm, M., Smith, N., & Husted, L. (2004). Qualifications, Discrimination, or Assimilation? an Extended Framework for Analysing Immigrant Wage Gaps. *Empirical Economics*, 29(4), 855-883.

OECD (2021). Foreign-born population (indicator). https://data.oecd.org/migration/foreign-born-population.htm#indicator-chart doi: 10.1787/5a368e1b-en (Accessed on 12 April 2021)

Ottaviano, G. I., & Peri, G. (2005). Rethinking the Gains from Immigration: Theory and Evidence from the US. *National Bureau of Economic Research*, (No. w11672).

Ottaviano, G. I., & Peri, G. (2012). Rethinking the Effect of Immigration on Wages. *Journal of the European economic association*, 10(1), 152-197.

Ozgur Baklacioglu, N. (2015). Yugoslavya'dan Türkiye'ye Göçlerde Sayılar, Koşullar ve Tartışmalar. In Ayhan Kaya and M. Murat Erdogan (Eds.), *Türkiye'nin Göç Tarihi: 14. Yüzyıldan 21. Yüzyıla Türkiye'ye Göçler*, Bilgi Üniversitesi Yayınları, İstanbul, 191-220.

Öksüz, H., & Köksal, Ü. (2004). Emigration from Yugoslavia to Turkey (1923–1960). *Turkish Review of Balkan Studies*, 9, 145-177.

Özgür-Baklacioglu, N. (2006). Dual citizenship, extraterritorial elections and national policies: Turkish dual citizens in the Bulgarian-Turkish political sphere. In *Beyond sovereignty: from status law to transnational citizenship*, 319-358.

Parla, A. (2003). Marking Time along the Bulgarian-Turkish Border. *Ethnography*, 4(4), 561-575.

Parla, A. (2006). Longing, Belonging and Locations of Homeland Among Turkish Immigrants From Bulgaria. *Southeast European and Black Sea Studies*, 6(4), 543-557.

Pendakur, R., & Bevelander, P. (2014). Citizenship, Enclaves and Earnings: Comparing Two Cool Countries. *Citizenship Studies*, 18(3-4), 384-407.

Peri, G., & Rutledge, Z. (2020). Revisiting Economic Assimilation of Mexican and Central American Immigrants in the United States. *IZA Discussion Paper* No. 12976.

Postepska, A., & Vella, F. (2013). *Determinants and Persistence of Immigrant Ranking across Occupational Groups in the US*. Georgetown University, Working Paper.

Poulton, H. (1993). *The Balkans*, Minority Rights Publications, London

Rankin, N., Sandefur, J., & Teal, F. (2010). Learning & Earning in Africa: Where are the Returns to Education High? (No. 2010-02). *Centre for the Study of African Economies*, University of Oxford.

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.

Rivera-Batiz, F. L. (1992). English Language Proficiency and the Earnings of Young Immigrants in U.S. Labor Markets. *Review of Policy Research*, 11(2), 165–175. https://doi.org/10.1111/j.1541-1338.1992.tb00399.x

Robinson, V., & Segrott, J. (2002). *Understanding the Decision-Making of Asylum Seekers* (Vol. 12). London: Home Office.

Ross, D. R., & Zimmermann, K. F. (1993). Evaluating Reported Determinants of Labor Demand. *Labour Economics*, 1(1), 71-84.

Rutledge, Z., & Peri, G. (2020). Economic Assimilation of Mexicans and Central Americans in the United States. *IZA DP No. 12976*

Sanders, J. M., & Nee, V. (1987). Limits of Ethnic Solidarity in the Enclave Economy. *American Sociological Review*, 52(6), 745–773. https://doi.org/10.2307/2095833.

Schaafsma, J., & Sweetman, A. (2001). Immigrant Earnings: Age at Immigration Matters. *The Canadian Journal of Economics / Revue Canadienne d'Economique*, 34(4), 1066–1099. http://www.jstor.org/stable/3131938

Schoeni, R. (1995). Marital Status and Earnings in Developed Countries. *Journal of Population Economics*, 8(4), 351-359. doi:10.1007/bf00180873

Schultz, T. P., & Mwabu, G. (1998). Labor Unions and the Distribution of Wages and Employment in South Africa. *ILR Review*, 51(4), 680-703.

Schumacher, E. J. (2011). Foreign-Born Nurses in the US Labor Market. *Health Economics*, 20(3), 362-378.

Skran, C. M. (2011). *Refugees in Inter-War Europe*. Clarendon Press.

Spence, M. (1973). Job Market Signaling. The Quarterly *Journal of Economics*, 87(3), 355–374. https://doi.org/10.2307/1882010

Stiglitz, J. E. (1975). The Theory of "Screening," Education, and the Distribution of Income. *The American Economic Review*, 65(3), 283–300. http://www.jstor.org/stable/1804834

Şimşir, B. (1986). "Migrations from Bulgaria to Turkey: The 1950-1951 Exodus", *Dış Politika*, 7 (3-4), 68.

Takenaka, A., Nakamuro, M., & Ishida, K. (2016). Negative Assimilation: How Immigrants Experience Economic Mobility in Japan. *International Migration Review*, 50(2), 506-533.

Taylor, E.J. (1999), The New Economics of Labour Migration and the Role of Remittances in the Migration Process. *International Migration*, 37: 63-88. doi:10.1111/1468-2435.00066

Tekeli, I. (1994). Involuntary Displacement and the Problem of Resettlement in Turkey from the Ottoman Empire to the Present. *Center for Migration Studies special issues*, 11(4), 202-226.

Tekeli, İ., & İlkin, S. (2003). *Cumhuriyetin Harcı (Vol. 2)*. İstanbul Bilgi Üniversitesi, İstanbul.

Thornton, R. J., Rodgers, J. D., & Brookshire, M. L. (1997). On the Interpretation of Age-Earnings Profiles. *Journal of Labor Research*, 18(2), 351-365.

Tumen, S. (2016). The Economic Impact of Syrian Refugees on Host Countries: Quasi-Experimental Evidence from Turkey. *American Economic Review*, 106(5), 456-460.

UNHCR (2021). Syria Regional Refugee Response (indicator). https://data.unhcr.org/en/situations/syria#_ga=2.140080435.1491782074.1618212486-1640337075.1617176851 (Accessed on 12 April 2021)

Vega, I. I., & Ortiz, V. (2018). Mexican Americans and Immigration Attitudes: a Cohort Analysis of Assimilation and Group Consciousness. *Social Problems*, 65(2), 137-153.

Villarreal, A., & Tamborini, C. R. (2018). Immigrants' Economic Assimilation: Evidence from Longitudinal Earnings Records. *American Sociological Review*, 83(4), 686-715.

Visintin, S., Tijdens, K., & van Klaveren, M. (2015). Skill Mismatch among Migrant Workers: Evidence from a Large Multi-Country Dataset. *IZA Journal of Migration*, 4(1), 1-34. https://doi.org/10.1186/s40176-015-0040-0

Xie, Y., & Gough, M. (2011). Ethnic Enclaves and the Earnings of Immigrants. *Demography*, 48(4), 1293–1315. https://doi.org/10.1007/s13524-011-0058-8

Yildirim, O. (2006). The 1923 Population Exchange, Refugees and National Historiographies ın Greece And Turkey. *East European Quarterly*, 40(1), 45.

Zahl-Thanem, A., & Haugen, M. S. (2019). Attitudes Toward Immigrants in Rural Norway. A Rural-Urban Comparison. *Sociologia Ruralis*, 59(4), 685-700.

Zimmermann, K. F., Bauer, T., & Lofstrom, M. (2000). Immigration Policy, Assimilation Of Immigrants and Natives' Sentiments Towards Immigrants: Evidence from 12 OECD-Countries. *Swedish Economic Policy Review*, 7(ii), 11–53. http://www.escholarship.org/uc/item/1m58x0z3

# APPENDIX 1

# ESTIMATION RESULTS WITH FEMALE DUMMY VARIABLE

Table 18: Estimation Results for the Labour Force Participation with Female Dummy Variable

| Dependent Variable | | | | | | |
|---|---|---|---|---|---|---|
| Labour Force Participation | Natives | Marginal Effects | Immigrants CS | Marginal Effects | Immigrants PCS | Marginal Effects |
| Constant | -4.646 *** (.011) | NA | -4.791 *** (.090) | NA | -4.808*** (.090) | NA |
| Age | .331 *** (.0006) | .082 *** (.0001) | .340 *** (.005) | .084 *** (.0013) | .350 *** (.005) | .087 *** (.001) |
| $Age^2$ | -.004 *** (7.91e-06) | -.001 *** (.000) | -.004 *** (.000) | -.001*** (.00002) | -.004 *** (.0000) | -.001 *** (.000) |
| Education (Ref: Non-Graduates) | | | | | | |
| Primary School | .162 *** (.004) | .040 *** (.0009) | -.117 ** (.040) | -.029*** (.009) | -.085 ** (.039) | -.021 ** (.009) |
| Middle School | .222 *** (.005) | .054 *** (.001) | .053 * (.375) | .013 * (.009) | .044 * (.037) | .011 * (.009) |
| High School | .079 *** (.005) | .019 *** (.001) | .015 (.038) | .003 (.009) | -.009 (.038) | -.002 (.009) |
| Vocational High School | .576 *** (.005) | .136 *** (.001) | .349 *** (.041) | .087 *** (.0102) | .321 *** (.041) | .080 *** (.010) |
| University | 1.453 *** (.005) | .310 *** (.0008) | 1.061 *** (.038) | .255 *** (.008) | 1.062 *** (.038) | .255 *** (.008) |
| Being Married | -.072 *** (.003) | -.017 *** (.0008) | -.413 *** (.024) | -.102*** (.006) | -.423 *** (.024) | -.105 *** (.006) |
| Being Female | -2.059 *** (.002) | -.469 *** .0005 | -2.164 *** (.021) | -.493*** (.003) | -2.186 *** (.020) | -.497 *** (.003) |
| YSM | NA | NA | .058 *** (.002) | .014 *** (.0005) | NA | NA |
| $YSM^2$ | NA | NA | -.0009 *** (.0000) | -.0002*** (.00001) | NA | NA |
| Cohort Dummy Variables (Ref:2012-2020 Arrivals) | | | | | | |
| Before 1980 Arrivals | NA | NA | NA | NA | .345 *** (.034) | .086 *** (.008) |
| 1980-89 Arrivals | NA | NA | NA | NA | .723 *** (.029) | .178 *** (.007) |
| 1990-99 Arrivals | NA | NA | NA | NA | .921 *** (.030) | .223 *** (.007) |
| 2000-11 Arrivals | NA | NA | NA | NA | .129 *** (.029) | .032 *** (.007) |
| Pr(LFP) | NA | .547 | NA | .485 | NA | .486 |
| Pseudo $R^2$ | .2418 | NA | .2657 | NA | .2691 | NA |
| N | 4025979 | 4025979 | 69715 | 69715 | 69715 | 69715 |

*** ρ-value<0.01 ** ρ-value<0.05 * ρ-value < 0.1

| Table 19: Estimation Results for the Employment with Female Dummy Variable | | | | | | |
|---|---|---|---|---|---|---|
| Dependent Variable | | | | | | |
| Employment | Natives | Marginal Effects | Immigrants CS | Marginal Effects | Immigrants PCS | Marginal Effects |
| Constant | -4.513 *** (0.011) | NA | -4.511 *** (.090) | NA | -4.564 *** (.090) | NA |
| Age | .285 *** (.001) | .071 *** (.0001) | .281 *** (.005) | .067 *** (.001) | .294 *** (.005) | .070 *** (.001) |
| $Age^2$ | -.004 *** (.000) | -.0009 *** (.0000) | -.004 *** (.000) | -.0009 *** (.0000) | -.003 *** (.0000) | -.0009 *** (.0000) |
| Education (Ref: Non-Graduates) | | | | | | |
| Primary School | .135 *** (.004) | .033 *** (.0009) | -.168 *** (0.040) | -.039 *** (.009) | -.137 *** (.039) | -.032 *** (.009) |
| Middle School | .240 *** (0.005) | .059 *** (.001) | -.056 * (.037) | -.013 * (.008) | -.050 ** (.037) | -.012 ** (.008) |
| High School | .056 *** (.005) | .013 *** (.001) | -.095 ** (.038) | -.022 ** (.009) | -.108 *** (.038) | -.025 *** (.009) |
| Vocational High School | .472 *** (0.005) | .117 *** (.001) | .176 *** (.040) | .042 *** (.009) | .163 *** (.040) | .039 *** (.009) |
| University | 1.152 *** (.005) | .274 *** (.001) | .791 *** (.037) | .193 *** (.009) | .801 *** (.037) | .196 *** (.009) |
| Being Married | .198 *** (.003) | .049 *** (.0008) | -.099 *** (.024) | -.023 *** (.005) | -.110 *** (.023) | -.026 *** (.005) |
| Being Female | -1.809 *** (.002) | -.422 *** (.0005) | -1.840 *** (.019) | -.423 *** (.004) | -1.853 *** (.019) | -.426 *** (.003) |
| YSM | NA | NA | .065 *** (.002) | .015 *** (.0004) | NA | NA |
| $YSM^2$ | NA | NA | -.001 *** (.000) | -.0002 *** (.00001) | NA | NA |
| Cohort Dummy Variables (Ref:2012-2020 Arrivals) | | | | | | |
| Before 1980 Arrivals | NA | NA | NA | NA | .443 *** (.034) | .108 *** (.008) |
| 1980-89 Arrivals | NA | NA | NA | NA | .791 *** (.028) | .193 *** (.006) |
| 1990-99 Arrivals | NA | NA | NA | NA | .926 *** (.029) | .227 *** (.007) |
| 2000-11 Arrivals | NA | NA | NA | NA | .166 *** (.029) | .040 *** (.007) |
| Pr(LFP) | NA | .468 | NA | .401 | NA | .402 |
| Pseude $R^2$ | .2018 | NA | .2169 | NA | .2186 | NA |
| N | 4025979 | 4025979 | 69715 | 69715 | 69715 | 69715 |
| *** ρ-value<0.01 ** ρ-value<0.05 * ρ-value < 0.1 | | | | | | |

| Table 20: Estimation Results for Wages with Female Dummy Variable | | | |
|---|---|---|---|
| Dependent Variable | | | |
| Employment | Natives | Immigrants CS | Immigrants PCS |
| Constant | 5.706 *** (.005) | 6.362 *** (.036 ) | 6.352 *** (.036) |
| Age | .076 *** (.0003) | .0504 *** (.002) | .050 *** (.002) |
| $Age^2$ | -.0008 *** (3.82e-06) | -.0005 *** (.00002) | -.0005 *** (.00002) |
| Education (Ref: Non-Graduates) | | | |
| Primary School | .069 *** (.002) | -.051 *** (.017) | -.034 ** (.017) |
| Middle School | .263 *** (.002) | .084 *** (.016) | .091 *** (.016) |
| High School | .420 *** (.002) | .220 *** (.016) | .223 *** (.017) |
| Vocational High School | .474 *** (.002) | .218 *** (.017) | .223 *** (.017) |
| University | .956 *** (.002) | .774 *** (.015) | .781 *** (.016) |
| Being Married | .086 *** (.001) | .055 *** (.008) | .051 *** (.008) |
| Being Female | -.210 *** (.001) | -.175 *** (.006) | -.182 *** (.007) |
| YSM | NA | .0046 *** (.0008) | NA |
| $YSM^2$ | NA | .00004 ** (.00001) | NA |
| Cohort Dummy Variables (Ref:2012-2020 Arrivals) | | | |
| Before 1980 Arrivals | NA | NA | .186 *** (.013) |
| 1980-89 Arrivals | NA | NA | .150 *** (.010) |
| 1990-99 Arrivals | NA | NA | .054 *** (.010) |
| 2000-11 Arrivals | NA | NA | .091 *** (.012) |
| $R^2$ | .4309 | .3754 | .3709 |
| N | 1116407 | 22652 | 22652 |
| *** ρ-value<0.01 ** ρ-value<0.05 * ρ-value < 0.1 | | | |

# APPENDIX 2

# ORIGINALTY REPORT

**HACETTEPE UNIVERSITY**
**GRADUATE SCHOOL OF SOCIAL SCIENCES**
**MASTER'S THESIS ORIGINALITY REPORT**

**HACETTEPE UNIVERSITY**
**GRADUATE SCHOOL OF SOCIAL SCIENCES**
**ECONOMICS DEPARTMENT**

Date: 30/05/2022

Thesis Title : Evaluation of Labour Market Integration of Foreign-Born Population in Turkey: A Cohort Analysis

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I respectfully submit this for approval.

Date and Signature

| | |
|---|---|
| **Name Surname:** | Egemen Can TOKER |
| **Student No:** | N18138458 |
| **Department:** | Economics |
| **Program:** | Economics Master's Programme |

**ADVISOR APPROVAL**

APPROVED.

Assoc. Prof. Dr. Ali Berker

# APPENDIX 3

# ETHICS BOARD WAIVER FORM

**HACETTEPE UNIVERSITY**
**GRADUATE SCHOOL OF SOCIAL SCIENCES**
**ETHICS COMMISSION FORM FOR THESIS**

**HACETTEPE UNIVERSITY**
**GRADUATE SCHOOL OF SOCIAL SCIENCES**
**ECONOMICS DEPARTMENT**

Date: 01/06/2022

Thesis Title: Evaluation of Labour Market Integration of Foreign-Born Population in Turkey: A Cohort Analysis

My thesis work related to the title above:

1. Does not perform experimentation on animals or people.
2. Does not necessitate the use of biological material (blood, urine, biological fluids and samples, etc.).
3. Does not involve any interference of the body's integrity.
4. Is not based on observational and descriptive research (survey, interview, measures/scales, data scanning, system-model development).

I declare, I have carefully read Hacettepe University's Ethics Regulations and the Commission's Guidelines, and in order to proceed with my thesis according to these regulations I do not have to get permission from the Ethics Board/Commission for anything; in any infringement of the regulations I accept all legal responsibility and I declare that all the information I have provided is true.

I respectfully submit this for approval.

Date and Signature

| | |
|---|---|
| **Name Surname:** | Egemen Can TOKER |
| **Student No:** | N18138458 |
| **Department:** | Economics |
| **Program:** | Economics Master's Programme |
| **Status:** | ☒ MA ☐ Ph.D. ☐ Combined MA/ Ph.D. |

**ADVISER COMMENTS AND APPROVAL**

Assoc. Prof. Dr. Ali Berker