

Tartu University
Faculty of International Relations and Regional Studies
John Skytte Institute of Political Studies

Alvira Asif Ali Khan

Should the Concept of Highly Skilled Migration be Redefined? A Case Analysis of Estonia

MA Thesis

Supervisor: Kristjan Kaldur (MA) and Dr Chiara Amini (PhD)

Tartu 2022

Authorship Declaration

I have prepared this Master's thesis independently. All the views of other authors, and the data from literary sources and elsewhere, have been cited

Word Count of the thesis: 22,264

Alvira Asif Ali Khan, 16th May 2022

Abstract

Despite receiving countries' growing favourable perceptions of highly skilled (labour) migrants, defining, and using the concept of high-skilled migration is a puzzling question. The uncertainty that results makes it difficult to quantify human capital, preventing worldwide evaluations of skills, and makes it challenging to evaluate immigration policy. In this thesis, three standard criteria are evaluated to provide a discussion on this phenomenon of highly skilled migration. The term "highly skilled" has been evaluated from a definitional perspective under the paradigm of academics, the global labour market and immigration policies. To assess the applicability of the criteria defining a "highly skilled", Estonia has used a case study to assess how the definitional approach differs from immigration policies and thus provide a critical analytical discussion on the relevancy of "highly skilled" in the new knowledge economy.

Table of Contents

1. Introduction	8
2. Literature Review.....	13
2.1 Relevance of HSM.....	13
2.2 Theoretical Discussion	15
2.2.1 Human Capital Approach	15
2.2.2 Academic Approach to defining HSM	17
2.2.3 Policy approach to HSM.....	18
3. Conceptualisation of HSM.....	23
3.1 Criteria Analysis.....	23
3.1.1 Education.....	24
3.1.2 Occupation.....	27
3.1.3 Income	29
3.1.4 Contested Categories: Students	31
3.1.5 The traditional dichotomy of “Highly Skilled” vs “Low Skilled”	33
3.1.6 The Global Labour Market in the 21st Century	35
4. Highly Skilled Migration of TCNs in Estonia	37
4.2 National Policies and Measures for TCN’s.....	38
4.3 Regulations.....	41
4.3.1 Immigration Statistics of TCN’s	44
4.4 Estonia’s Labour Market Forecast	47
5. Findings and Discussion.....	48
5.1 Methodology	48
5.1.1 Quantitative Data.....	51
5.1.2 Qualitative Data.....	51
5.2. Research Findings	53
5.1.1 Education	53
5.1.2 Occupation.....	59
5.1.3 Income Criteria	63
5.1.4 Contested Category: Students.....	65
6. Conclusion	67

List of Figures

Figure 1: Research Design: Testing the applicability of the identified criteria used to define a highly skilled migrant.	49
Figure 2: TCN's education level by occupation.	55
Figure 3: TCN's Nationals (Without Tertiary Education).....	55
Figure 4: TCN's with "No University Degree"	56
Figure 5: Future Employment Growth (in %) in Estonia 2020-2030	60
Figure 6: Income by Level of Education	64

List of Tables

Table 1: UNESCO's International Classification of Education.....	25
Table 2: ISCO Major Groups to Skills.....	28
Table 3 List of Occupations and Wages from the Alien's Act.....	39
Table 4: Migration Statistics	45
Table 5: Total Number of registrations of short-term employment (2016-2020)	46
Table 6: First-time temporary residences permit	47
Table 7: Labour Market Forecast 2013-2022	62

List of Abbreviations

OECD	Organisation for Economic Co-operation
PBS	Points-based system
ILO	International Labour Organisation
HSM	Highly Skilled Migrant
EMN	European Migration Network
TCN	Third Country Nationals
OSKA	Estonian Qualification Authority
ISCO	International Standard Classification of Occupation
ISCED	International Standard Classification of Education
UNESCO	United Nation Education Scientific and Cultural Organisation

1. Introduction

Restrictive migration policies have evoked scholarly interest in highly skilled migration (Boucher & Cerna, 2014). Various researchers have studied the effect of policy shifts on migration flows over time and investigated the relationship between the rising emphasis on skills-based immigration policies and the growth of skilled migration in pioneering industrialized countries (Palmer and Pytlikova 2015). Moreover, Alternative strand of research concentrates on policy changes. It implies that technological progress, the ageing of the population, and the globalization of production are why there is so much competition for talent worldwide (Kapur & McHale, 2005). The scholarly literature is just now beginning to address the question of who and what determines skilled migration (Boucher & Cerna, 2014).

Definition of highly skilled has been researched within economic and political science. The research on this phenomenon assists the public policy, especially within the immigration field and thus is defined by the policymakers. In this essence, whoever qualifies for the immigration schemes is entered via a specific immigration channel and captured in the administrative data. Various countries often use a salary scale within the policy domain, whereas others prefer a higher education (tertiary education) to define a highly skilled migrant (Chaloff & Lemaitre, 2009).

Moreover, the definition within academic literature varies from one author to another, with many researchers preferring not to provide a definition for this phenomenon (Weinar et al., 2020). In evaluating the areas where definitions are provided, there is a widespread consensus that education attainment is favoured above income levels as the suitable metric (Triandafyllidou and Gropas, 2014).

On the other hand, the used tertiary education cut-off conflates the "highly skilled" with "highly educated." Because the term "tertiary-educated" is defined differently in different countries, some scholars claim that academic achievement does not accurately reflect one's actual skill set in the real world (e.g., a college degree vs PhD). Furthermore, the quality of higher education differs globally, and educational attainment is not synonymous with labour-market capabilities (Weinar et al., 2020).

Skills and abilities of an individual vary and often dependent on the context, source, and country. It is certainly dependent on the receiving countries, there are different skill requirements in various fields, societies, and labour markets. Researchers have also raised

concerns over cross-sectoral skill sets, highlighting skills that can vary throughout the educational system. They can be taught in one institution but might in another. Moreover, economies need different skills, from trade or marketable to post-doctoral expertise in narrow disciplines.

Therefore, to contribute towards the literature of highly skilled migration, this thesis will address the research gap of conceptualising highly skilled migration through identifying criteria used to define a highly skilled migrant. Thus, this research will provide the thesis to understand whether term is operationalizable to be used further in the academic literature. Whether the criteria's defining highly skilled migrant is operationalizable will be identified using the case study of Estonia.

In this setting, Estonia, a small yet digitally connected country with, appears to be paying greater attention to addressing "highly skilled" migration in further strengthening its "knowledge economy" to sustain its world competitiveness. Within the labour migration landscape, Estonia had traditionally played a role of a sending country (than a receiving country), especially when it joined the EU. Realising the increase in negative net migration has caused structural labour shortages, this has led to an increase in Estonia's openness towards immigration, as the migration policy has become more pragmatic and flexible in the last few years. On the other hand, the need for immigrants stems from Estonian nationals lacking practical and relevant skills despite having a higher qualified (36%) workforce above the EU average (29%) (CEDEFOP, 2020 p.27).

In terms of the definition of highly skilled migrant, the European Migration Network defines "highly skilled" based legislation stipulated in the Alien's Act (*Välismaalaste seadus*) which states that an individual must have relevant professional training to secure employment as a top specialist in Estonia. (The Alien's Act, 2013).

The definition of a highly skilled migrant in Estonia excludes educational attainment levels as the legislation only stipulates the requirement of "professional training" or "experience". This case study is important for two reasons:

- The lack of an "educational criterion" in the legislation differs from other immigration policies and the academic debate since tertiary education is considered the crucial criteria in assessing a "highly skilled" migrant.
- The research on the definition and conceptualisation of highly skilled migrants has never been done before in Estonia. Although, previous related research on Estonia

such as Ortega (2014) has highlighted the importance of highly skilled migrants in assessing Estonia's attractions policy, it has failed to provide a conceptual understanding and critical analysis of the term. Thus, this thesis will first identify the criteria used to define a highly skilled migrant in Estonia which will be used against the criteria which will be identified in the theoretical discussion. Thus, it will not only provide a conceptualisation of highly skilled migrant, but the operationalisation of the term will be analysed via comparing it with Estonia to illustrate the usefulness of the term highly skilled migrant.

Therefore, the research gap to assess the relevance of the term used to define "highly skilled migrant" will be address via two research questions, which are as follows:

1. What criteria defines a highly skilled migrant?
2. Is the definition of highly skilled migrant applicable in the academic research on labour migration.

The author believes that the debate on this term will provide a more critical perspective for constructing such definitions in the future.

For answering the research questions stated above, the Chapter 2 of the thesis consist of four sub-chapter which is aimed at providing a discussion on academic and policy debates on highly skilled migration. The first section begins with understanding the importance of highly skilled migration to provide an overview on how they have been used in the academic and policy literature. The second section provides a brief overview on how "skill" is perceived in the theoretical literature within the field of immigration followed by the second section wherein empirical approach (data driven analysis) which provides different academic debates on criteria used to define a highly skilled. The following discussion then is focused on the policy debate to understand the immigration system demand based, supply based and hybrid systems to understand country's preferences and understanding of highly skilled migrant. Finally, Chapter 2 thus provided information on education, occupation and income being the widely used criteria in the field of immigration.

For further understanding of the criteria, Chapter 3 has been divided into six sub-sections. The first three sections provide a critical analysis of these three criteria: education, occupation, and income. The fourth section was designed to understand how these criteria affect several types of migrants. However, this thesis has only addressed one type of migrant which are students as it was easier to access the statistics on this group compared to refugees

or dependants (contested categories, they are not considered as highly skilled migrants). The fifth section provide discussion on how highly skilled differ from other groups, which also support the thesis to acknowledge the key difference for a thorough understanding of the phenomenon of highly skilled migrant. The last section of Chapter 3 ends with global trends observed in the labour market to identify whether the trends confirm the use and applicability of the criteria in defining a highly skilled migrant. Chapter 2 and Chapter 3 combined together build a theoretical framework which will be further used to test the applicability of the criteria to define a highly skilled migrant, with the case analysis of Estonia.

To test the applicability of criteria identified in the literature to define a highly skilled, the Chapter 4 first provides a brief overview of the case of Estonia, wherein the first section explains the current national policies and measures for immigrants (third-country nationals) and how they define a highly skilled migrant in Estonia. This section also provides an analysis on different strategic documents and legislation to strengthen the understanding of how the phenomena of highly skilled migration is perceived in Estonia. The next section of the chapter 4 is dedicated to understanding the regulation which includes information on short-term employment, long-term employment, and regulations for international students to provide an understanding on the rules and regulations applied to an immigrant (more specifically third-country nationals). Followed by regulations, the next section includes information on immigration statistics which provides an analysis on immigration flows in Estonia, with regards both to short-term and long-term employment. Finally, the last section covers Estonia's labour market needs which is illustrated via representing the forecast on the labour market in Estonia to analyse the country's overall economic environment, strength, and weakness.

Finally, Chapter 5 present information on the methodology including the focus of the analysis as merging the theoretical framework found in Chapter 2 and 3 and analysis of the theoretical drivers with the case of Estonia. Third-country nationals were chosen for this research because they are a distinct group compared to Estonians and EU citizens who share the same benefits, particularly the freedom of movement. Also, Estonia has been chosen as a case study due to research on conceptualising highly skilled migrants has not been done previously. Moreover, the section also includes information on the mixed-method design consisting of qualitative and quantitative methods chosen for this thesis. The methodology section splits into two parts explaining the qualitative and quantitative data. The qualitative approach includes using secondary sources such as strategic reports, legislation, policy

debates, and previous academic research, for example, the Government Action Plan, Entrepreneurship growth strategy, and internationalisation strategy, to find relevant information on Estonia's definition of a highly skilled migrant.

On the other hand, the quantitative data includes two data sets, including data from the Police and Border Guard Board from 2010-2015 and the Integration Monitoring Survey Data (2020). The data from the Police and Border Guard Board is used as a supplementary data to show the trends since 2010 and is used as additional evidence to support the research questions. The data set included information on occupation and education but did not include any information on salary levels. Also, although it was easier to access the data, the data has a few limitations, including the fact that it does not differentiate between higher education levels, which could be either applied to higher education or university level. Therefore, the Integration Monitoring Survey data (2020) is used as the primary data set which has not been used before in academic research on migrants, and provides the relevant variables including education, occupation and income required to test the usefulness of the term highly skilled. The reason for choosing two different data was to suffice the conditions of identifying the applicability of the criteria identified in the literature to the case of Estonia.

The quantitative data provide descriptive statistics on the criteria identified in the literature and how it differs from the definition of the highly skilled migrant in Estonia. The criteria are compared and analysed along with other theoretical drivers such as the impact of the immigration system, the importance of highly skilled migrants and global trends observed in the labour market.

Finally, Chapter 5 is focused on merging the literature with the case of Estonia. The idea of the thesis is to compare the criteria identified in the literature. Thus, the author also conducted a semi-structured interview with government officials to gain more information on this phenomenon and the justification for the criteria's used to define a highly skilled migrant. to provide descriptive statistics on the criteria identified in the literature and how it differs from the definition of the highly skilled migrant in Estonia. The criteria are compared and analysed along with other theoretical drivers such as the impact of the immigration system, the importance of highly skilled migrants and global trends observed in the labour market.

The findings of this thesis show that the three criteria, namely education, occupation, and income, are widely used to define a highly skilled migrant. These criteria, however, are problematic; for example, defaulting tertiary education (bachelor's degree) to determine a

highly skilled excludes talented individuals who have gained skills via different routes namely work experience, training, short courses etc. Regarding occupation, the literature, particularly the international standard classification of occupation, showed a tendency to rely on education to identify the highly skilled occupation, indicating the irrelevancy of the term. Lastly, the income threshold in identifying a highly skilled also represents how it can create gender disparities if not thoroughly assessed and designed.

Therefore, the academic literature needs to redirect its attention to determining "skill" in a narrow sense, wherein occupations, interpersonal skills, and job descriptions are considered while developing a regional or an international framework. This thesis has provided an impetus on how global trends in the labour market and the rise of technology are changing the way we assess a skilled migrant or a highly skilled. This has also found that the term highly skilled does not necessarily mean anything, except that some of the interview analyses showed that "highly" is associated with an individual's higher education levels (above bachelor's degree).

As the thesis also addressed the applicability of the criteria education, occupation, and income in the case study of Estonia, the findings also invalidated the criteria in defining a highly skilled. For example, Estonia's legislation's lack of education levels showed that educational levels alone could not indicate an individual's skill level. Estonia's legislation has classified occupations reflecting the International Standard Classification of Occupation (ISCO) categories in terms of occupation. However, the "top specialist" occupations are listed in the legislation to address labour shortages. The nation relies on its "Knowledge Economy" and thus has created an income threshold to only filter migrants who can add value to Estonia's economy.

2. Literature Review

2.1 Relevance of HSM

Highly Skilled Migration has been one of the necessary categories in the global migration streams. This group has seen tremendous growth since the beginning of the century (Widmaier & Dumont, 2011). Developed countries often become attractive destinations for highly skilled migrants (Arslan et al., 2015). The most significant players in the so-called "Global Talent" race include countries like Australia, Canada, New Zealand, and the United States (Ker et al., 2017). However, it has been estimated that Europe will require most of the

highly skilled migrants for several reasons. For example, the EU commission mentioned how the EU is behind in the race to attract "global talent," especially compared with Canada, Australia, and the United States. This is due to demographic change in Europe being immense with an increasingly ageing population, lower birth rates and shortages of skills across EU member states (New Pact on Migration and Asylum, 2020).

This reflects the need and interests of the European Union in attracting highly skilled migrants. More often, scholars and policymakers prefer valuing innovation to improve the skill composition wherein highly skilled migrants play a crucial role in strengthening the workforce and increasing productivity (Facchini & Lodigiani, 2014).

Many theories and evidence show that people endowed with human capital tends to be highly mobile as they have a higher tendency to assimilate and can utilise different opportunities provided by the destination countries. (Coulombe & Tremblay, 2009). This is because even talented people are less susceptible to job loss since they are difficult to replace. The reason for this competition to recruit top talent thus is becoming increasingly relevant compared to the competition to attract traditional human capital and international investments.

Another factor recommended by Michaels et al., (2013) for the need for highly skilled migrants comes from the contemporary economies which are now experiencing growth in their ICT sector which illustrates the need and the demand for more highly skilled migrants (Michaels et al., 2013). Moreover, public opinion in a destination country often prefers this group of migrants (Helbling & Kriesi, 2014) since their ability to integrate differs highly skilled from other migrants (Lundquist et al., 2013). For example, Scientists are often highly mobile, and their contribution to knowledge transfer is well received in the destination countries. This group shows knowledge networks between the host and the destination country, illustrating the flow of knowledge exchange in both directions. The influx of highly skilled migrants, particularly entrepreneurs (Honig et al., 2010), benefits destination countries. For example, highly skilled migrants working in knowledge-intensive sectors render substantial value-added (Nathan, 2013). In addition, the spillover effect wherein migrant entrepreneurs can create domestic competition at a sector level can challenge the local incumbents to compete via being innovative and increasing their productivity (Aghion et al., 2012). It has also been shown to reduce inequality (Aydemir & Borjas, 2007), increase levels of innovation (Aghion et al., 2015), decrease social spending (Giulietti & Wahba, 2013), improve exports (Docquier & Rapoport, 2008) and international investments (Pandya

& Leblang, 2012). Furthermore, the greater the influx of highly skilled migrants, the better relations with international research institutes, improving the higher education system (Borjas & Doran, 2012).

2.2 Theoretical Discussion

2.2.1 Human Capital Approach

In the academic and policy discussion over skilled immigration, "skill" is often defined differently. These opposing countervailing approaches do not consider different definitions making the investigation of underlying assumptions more difficult. Thus, the first part of the thesis will discuss the two approaches to defining skills, including theoretical and empirical. This discussion will thus provide a thorough interpretation of the criteria used in defining a "highly skilled" migrant.

The origin of human capital is highly reflected by the neoclassical approach to labour economics (Tan, 2014). Although human capital is more than just an economic theory. It is a comprehensive approach which considers human affairs from a particular perspective which helps to propose and develop appropriate policies accordingly. Both theories however share the fundamental assumptions on how individual choices and decision-making processes, market dynamics, and other factors impact language acquisition and educational attainment (both are proxies for skill). Nonetheless, the concept of skills is much more contentious than the present literature on migration suggests; for instance, Becker (1964) explains human capital as "the product of conscious investment (in education, training or work experience) made by individuals via incurring current expenditures for future rewards. Thus, Becker's definition indicates that education is not the only pathway to having human capital; occupational training is also an essential factor contributing to an individual's human capital. Moreover, it is either via firms or educational institutions (developing transferable skills which can be applied to multiple employment sectors) or via specialized training provided by industry (enabling firms to reap benefits which directly enhance the productivity of a firm) (Becker, 1964). Regardless of whether an employee is a native or foreign-born, Becker's concept of human capital holds since all workers bring various skills, abilities, and talents. Skills ranging from cultural and social capabilities to those developed via prior work experience or education contribute to an organization's growth and increase an economy's competitiveness.

In addition to this, the human capital approach to skill also reflects the relationship between "skill" and productivity as skills acquired either via professional training or education results in increased productivity and higher income (Becker, 2009). However, the impact of investing in training, short-term earnings are discarded in favour of potential income growth in the future (Becker, 2009). Another human capital theorist, Borja (1987), argues that wages reflect an individual's skills, which can be transferrable to any labour market. Employers tend to be 'profit-maximizing' and value those skills regardless of any market economy (Borjas, 1987). As a result, income is often viewed as a proxy for 'skill' (Boucher, 2016; Ruggles et al., 2010).

Human capital approach has been more often used in developing educational policies around the world although it is not only limited to these sectors since it is an extensive approach which covers varying areas from health to migration (Tan, 2014). The human capital theory explains migration selectivity beyond cost-based arguments. Migrants are frequently not representative of the communities from which they originate. Among the knowledge and skills that migrants hold are criteria that are easier to measure, such as language skills and education, but they also incorporate social, cultural, and technical talents that are not easy to measure. Working knowledge and technical abilities are among the most difficult-to-measure competencies (ibid). These competencies are acquired through informal means, such as trial and error, observation, interactions, or engagement occurring on and off the job in one's own community host or abroad. People differ in personal talents, knowledge, physical abilities, age, and gender, so disparities in how people anticipate benefits from moving show that they may expect differential returns on their migration investment (Hagan, 2016). Thus, an individual's propensity to migrate partly depends on the returns they expect from their investment.

Moreover, analysing the approach, we can conclude that migrants are often selected based on their education and specific skills required by the labour market in the destination countries. The theoretical explanation thus suggests why migrations decline with age and why there is a higher propensity of individuals with higher education to migrate. (Zaiceva, 2014). But the scope of this article is confined to education. Thus, the essential methodological and analytical consequence of this is that scholars need to focus on labour market factors such as differences in employer or wages and consider the socioeconomic 'capital' and traits since they are embodied in the migration decisions. Thus, this theoretical approach will be a crucial

criterion which will be referred to throughout the thesis in defining the phenomena of highly skilled migrants.

2.2.2 Academic Approach to defining HSM

The academic literature on highly skilled migrants uses variety of different criteria to define highly skilled migrant. For example, some authors believe that highly skilled migrants comes from a higher socio-economic status, tends to easily assimilate faster in a destination and have been associated with higher level of education mainly graduate degree education (Czaika, 2018, Parsons et al., 2014; Silva, 2014; Harvey, 2008; Madziva et al., 2016; Fobker et al., 2016; Peri and Sparbers, 2011) whereas some identifies a highly skilled migrant with post-secondary education (Mahroum, 2000; Chiswick, 1978 and Li et al., 2015) Also, some authors such as Genova (2016) defines highly skilled migrants as international students (Iredal, 2001) and professionals (Genova, 2016).

Docquier and Marfouk (2006) developed the OECD's bilateral migration database. (See also Lowell and Marfouk, 2009) They initially disaggregated the data via the level of education and then further included gender and enlarged their data set by adding more destination countries. Recent attempts include a combination of data and labour force surveys and population registers outside of the OECD to represent a broader indication of movement of skilled immigrants (Arslan et al.; 2016). These approaches address 'skill' via assessing the level of education of anyone possessing tertiary education, thus can be qualified as 'skilled'.

On the other hand, there are various researchers who identifies highly skilled migrant via occupations for example, According to Czaika (2018), Biltz (2010) and Parson (2014), he defines highly skilled migrant as someone whose occupation comes under the first three top categories of the International Standard Classification of Occupation a. managers, b. professionals and c. associate or technical workers. Moreover, other scholar such as Salt (1992) identified highly skilled as someone whose skills are in alignment with the job requirement.

Parsons et al. (2014) provided a validity check though creating an occupational measure which shows that in a survey, only 665,000 out of twelve million immigrants (sample size) in the United States are considered as highly skilled if measured based on occupation only. On the other hand, using education as a proxy revealed that only ten million of the whole sample qualify as highly skilled. In addition to this, there are differences across occupations; for

example, within the field of business and management, it was observed that 50% of the workers had completed tertiary education (Bachelor's degree) (Parsons et al., 2014).

According to the Cully (2012) Using education as an equivalent term for skill does not better understand how those skills were developed and deployed in the 'black box of an organization, another alternative approach includes the Canberra Manual defining "highly skilled" workers with either tertiary education or below qualifications employed in advanced sectors such as science and technology (Parsons et al., 2014). However, this approach to skill again fails to consider individuals who may be classified as skilled because of their labour market or sector-specific traits. For example, artists and athletes are often highly skilled depending on the receiving country, but not every one of them necessarily acquire a bachelor's degree (Weinar et al., 2020).

Evaluating the evidence discussed above demonstrates the significance of defining 'skill' for selection outcomes in immigration policies; depending on how 'skill' is structured and developed in immigration policies will immediately impact the acceptance or rejection of an immigrant in the destination country. Thus, academics that use only one definition of "skill" provide valuable benchmarking data on migrants from different countries. However, it lacks clarity on which type of migrant is entering via skilled immigration visas as every visa differs and through a hybrid definition of skill. Therefore, it is necessary to understand different approaches to attracting highly skilled migrants. Thus, the next section will investigate the distinct types of migration systems and how it differs from one country to another.

2.2.3 Policy approach to HSM

This section will present a background on several types of immigration systems used to attract "highly skilled" migrant and provides examples of which country prefers which approaches and why. This section will thus highlight a country's needs and labour shortages, enabling the government to select these pathways often to attract certain types of migrants.

According to Czaika and Parsons (2017) western industrialised economies, since the mid-1990s, have been at the forefront of the shift to knowledge-based economies, leading the worldwide drift towards immigration policies aimed at providing the knowledge workers required to sustain the economic transitions. The rationale for these economies for such a specific policy included population ageing and skills shortages associated with knowledge-intensive industries (Triandafyllidou & Isaakyan, 2016). On the other hand, economic and demographic trends impacted the developing countries (BRICS and other emerging

economies) to a certain extent. Over the last decade, these countries entered the competition for talent to strengthen their production and increase their economic development (Boeri et al., 2012). The rise of what Solimano (2008) refers to as the "global labour market" and what Czaika (2018) refers to as the "global skills market" altered the way governments choose skilled migrants. The policymakers thus have reacted to this development via assessing their country's relative attractiveness and the opportunities they can offer for highly skilled migrants. The three approaches are thus discussed below.

2.1.3.1 Demand-Driven System

Labour migration systems can be either demand or supply driven. A demand-driven immigrant system addresses short-term labour fluctuations and aims to employ labour migrants to fill immediate needs or labour shortages (Chaloff & Lemaitre, 2009). The requirements of a demand-driven supply often involve the labour migrant obtaining a job offer as a precondition to entering the destination's labour market. Wherein employers often take the lead role in the recruitment and the selection process, implying that employers have control over identifying which qualifications and skills deem necessary or in demand. However, the state also plays a vital role since it sets a restriction by stating the minimum education or income thresholds to avoid increased reliance on employers. (Papademetriou & Sumption, 2011). The United States and most European countries (Sweden & Spain) are partially employer driven. The requirement for a job offer is an assessment of an international worker's employability in the destination's labour market. Therefore, these conditions successfully identify migrant workers who can be employed immediately; nevertheless, competent migrants who do not meet an urgent labour shortage may be discouraged.

In addition to a job offer, immigration system for example in Europe often demands work permit requests to be accepted following a labour market test, which differs from one case to another and depends on the current availability of a domestic employee to fill in advertised vacancies. Moreover, labour market tests protect native workers by only employing foreign migrants who are needed and are not found within the domestic labour market (Kirss et al., 2014).

Countries create a list of occupations facing shortages that are excluded from labour market tests to reduce the administrative burden, mainly when it is evident that not every local will fill in the occupational shortages. Thus, an individual approach satisfies the labour market test, whereas the shortages list addresses the current occupational demands. In some

instances, it is dependent on the quantity and categories of shortage-listed jobs, such listings can help to streamline the whole recruiting process; however, this is only true for occupations where shortages have been recognised.

Lastly, governments are now trying different systems. For instance, employers are charged a fee for each foreign employee they hire to measure a worker's value to the organisation. (Papademetriou & Sumption, 2011). Researchers who supported this approach implied that paying a premium for a foreign employee is the best way to determine an employer's need for that person. Likewise, many businesses are ready to pay a premium for a faster and more predication admission decision. Thereby, this is one of the ways to avoid the use of caps or complex selection requirements to choose the in-demand or the 'brightest' migrant.

In terms of drawbacks of this approach, it creates a possibility of an employee's exploitation, especially when they are bound to a particular employer and even creates the possibility of illegal immigration, for example, if an employee loses their job. Moreover, this also creates a problem for employers planning to hire employees from abroad as they believe that it is too costly (OECD, 2013). Here, demand-driven system shows the heavy influence on the job market and, more specifically, investigates various occupations, which, as discussed earlier in the literature, has been used by various scholars to identify a highly skilled migrant.

2.1.3.2 Supply Driven

By encouraging human capital accumulation, supply-driven systems are intended to alleviate structural and potential imbalances in the labour market. Highly qualified migrants under these systems are more incline towards applying for a work permit, as it does not require a job offer, while an employment contract may well offer preferential access.

These skill-selective immigration regimes, pioneered by Canada and Australia, seek to attract large numbers of highly skilled migrants. On the one hand, highly skilled immigrants cannot fully utilise their abilities. For instance, many employees who entered Canada under the points system are either unemployed or under an employer (Hawthorne, 2008). The approach has placed greater emphasis on criteria that may predict future success and job placement than on more generic human capital attributes (e.g., prior study or work experience, language abilities, spouse's education attainment) (Cully, 2011). Instead of attempting to foresee the country's future demands correctly, the objective is to prioritise adaptability criteria (Platonova & Urso, 2012). However, according to Facchine and Lodigiani (2014) it has been quite effective in drawing highly skilled migrants. Indeed, according to Boeri et al. (2012),

only this immigration system can genuinely attract and capitalise on human capital in the long run.

Implementing either of the two systems or a combination thus is dependent on policymakers' objectives when resolving long-term inadequacies against short-term labour market shortages (ibid). Regardless of whether a country leans toward a demand- or based approaches, immigration policies tend to have a combination of both demand and supply components as implied by Papadimitriou and Sumption (2013) which he referred to as "hybrid systems".

In practicality, within the EU several countries opt for a more comprehensive migration policy. In contrast, others have targeted specific policies for highly skilled migrants (France, Austria, Germany, Netherlands, Spain, Czech Republic, Ireland, Austria etc. Some countries have opted for a points-based system (Netherlands, United Kingdom, Austria, Slovenia), whereas others have employer-led policies (Estonia, Germany, Ireland, Greece, Italy, Finland, Lithuania, Netherlands, Slovak Republic, France, Spain, Luxembourg, Sweden, Latvia, Belgium, United Kingdom) Lastly, other various approached such as enabling employers to participate actively to create labour market forecast as to analyse specific sector/occupations in which demand exceeds the country's supply (Italy, Greece) (Asari et al., 2014).

2.1.3.3 Hybrid System

Countries have started experimenting with so-called hybrid systems to recognise that neither supply-driven nor demand-driven systems can meet all their talent demands (Papademetriou et al., 2008a). Thus, a hybrid system focuses on the demands of the employers while simultaneously using the supply driven system (points-based system) to differentiate the quality of various potential applicants/migrants (Papademetriou et al., 2008b). In some ways, these addresses both the general migrant traits that policymakers are concerned about and vacancies that employers ought to fulfil.

It aims to merge components of both demand and supply-based system in an innovative manner via using various recruitment streams. For instance, since the 1990's Canada, the United States and Australia chose to increase temporary visa pathways and utilise employer led system. Denmark on the other hand utilise points system as well as demand-based approach via bringing via introducing a new category called "job search" visa which is an instrument of supply driven system (Cully, 2011).

The need for a change in the present immigration selection mechanisms derives from the fact that it does not consider employers' need for a broad range of skills, such as teamwork skills, problem-solving, interpersonal, time management, ability to learn, or networking (Kirrs et al., 2014 and Platonova and Urso, 2012). Furthermore, finding prospective talents is becoming more challenging as employers tend to seek not just skills but potential and attitude (ibid). These qualities are thus difficult to measure via formal qualifications. The best way to deal with these obstacles is for employers to make decisions. However, while private recruiting firms and large corporations utilise a variety of assessment procedures, the small and medium-sized enterprise often tends to lack the resources and expertise to carry out recruitment for foreign employees (Platonova & Urso, 2012)

Hybrid systems take different forms, which, according to Papadimitriou et al. (2008a), are listed below:

1. Utilise both systems simultaneously.
2. Using employment records to assess immigrants to offer a permanent residency.
- 3.. A points system can be used to award job offers or a migrant can be prioritised given that they have a certain pass mark to be eligible for a job
4. As a source, attract foreign students
5. Strengthen the quality of immigrants/applicants via using both points-based and employer selection.

The future of selective migration policies, according to Kirss et al., (2014), lies in hybrid systems and a greater emphasis on (flexible) employer-led recruitment (i.e., flexibility). They also illustrated two suggestions for improving hybrid systems:

- Make selection systems as adaptive and straightforward as feasible. A complex process tends to direct resources toward immigration agents, disadvantaging small enterprises that do not frequently hire foreign workers.
- Use the points-based system on strategic growth sectors. Several countries are already participating in attracting in-demand or skills which can results in long-term growth. hybrid systems can even create specialised industry clusters, for example, the Silicon Valley and the high-tech growth of Bengaluru, which specialises in specific economic sectors.

In terms of "highly skilled" migrants, they often preferred the prospect of permanent residency. Although, many of them start employment by obtaining temporary work permits (which are often renewable). However, OECD countries tend to offer a pathway towards a permanent residency only if the employee decides to stay and carry on working in the destination country. Whereas migrants who arrive in a destination country based on a temporary visa – with no permanency rights are constricted to the prospect of changing the employer which initially sponsored their work visa. Thus, to attract highly skilled migrants, governments tend to provide financial incentives such as economic incentives and tax exemptions to avoid losing out on highly skilled migrants (OECD, 2013)

Thus, this discussion shows how these three approaches namely demand, supply and hybrid system address a country's economic needs or shortages in the labour market. However, imposing inclusionary and exclusionary criteria thus restricts some types of migrants over others. Although, from these three systems, it can be noted how points-based system often demand education levels whereas demand driven system relies on labour shortages which shows government preferences for employees in certain occupations. Thus, overall, starting from human capital approach in defining skills showed that education, occupation, and income has been widely recognised as a proxy for skill which was also confirmed by the academic literature on highly skilled migrants wherein the literature stated how education, occupation and income has been to study highly skilled migrant with certain authors developing databases in making a distinct category for highly skilled migrant (For example, Parsons et al., 2014)

3. Conceptualisation of HSM

3.1 Critical Analysis

With globalisation, the mobility of people, knowledge and ideas is equally important compared to the mobility of trade and capital. Individuals who possess significant intangible assets such as learning, creativity and innovation – with the ability of developing them further into objects or ideas with economic and non-economic value, and their mobility beyond their national borders, build the notion of highly-skilled migration (Solimano, 2008).

On the other hand, the idea itself creates difficulty in terms of quantifying these intangibles and thus the definition of this phenomena. Since there is not a common definition, the diversity of definitions and terms differs from one country to another principally by their legislation e.g., their migration policies or legislative objectives. Nonetheless, there are

various international standards which helps a country build its understanding. Most of the International and academic references to the UNESCO's International Classification of Education (see chapter 2.2.2) and the International Labour Organisation's Standard Classification of Occupations as discussed in (see chapter 2.2.2)

The widely used criteria are thus education, occupation, and income. These criteria are used to identify highly skilled migrants both in academic and policy approaches and thus each one of them will be discussed analysed further in this section below

3.1.1 Education

Education level is one of the most easily accessible international statistics that can be used to measure an individual's skill level. One of the common international standards used to classify diverse levels of education are highlighted in table 1 below. This measure of high-skilled mobility is thus most prevalent in academia which is also evident by the cross-country database of Docquier and Marfouk (2006) (as previously discussed in Chapter 2.1.2).

Therefore, tertiary education (at least stage 1) has since become a crucial criterion in defining a highly skilled.

Table 1: UNESCO’s International Classification of Education

Institution	“Highly Skilled Migrant”	“Mid Skilled Migrant”	“Low/unskilled Skilled Migrant”
UNESCO International Standard Classification of Education (ISCED)¹	Level 5 or 6 of tertiary education -Level 5: Stage one of tertiary education (Bachelor’s and master's degree, requiring a minimum of two years of education) -Level 6: Stage 2 of tertiary education (Doctorate degree level)	low, no higher than lower secondary education. (ISCED Levels 3-4)	extremely low, no higher than completed primary education (ISCED Levels 0-2);

Source: UNESCO 2015

Educational criteria have also been used to assess several factors of various immigrants in the labour market. One of the factors is associated with employee's abilities to integrate into the receiving country. This criterion has also been implied by Becker (1993) when he illustrated the importance of human capital theory and how skills and knowledge attribute towards greater productivity which was also empirically tested and confirmed by Heath and Cheung (2007). While many scholars may be satisfied with the nominal equivalence of qualifications across countries, government-authorities and employers that eventually enable migration often permit entrance as per their acknowledgement of the value of qualifications. Thus, it also matters where a migrant is attaining their qualifications for example, Philippine’s two years of higher education is required to be able to attain higher education in Denmark

¹ UNESCO. (2015). Guidelines for classifying national education programmes and related qualifications [Ebook] (p. 13). OECD, European Union, UNESCO-UIS 2015. Retrieved from https://uis-azr-dev-main-wp1-eus1.azurewebsites.net/wp-content/uploads/documents/isced-2011-operational-manual-guidelines-for-classifying-national-education-programmes-and-related-qualifications-2015-en_1.pdf

(Christopher et al., 2014). Here, the problematic nature of not taking into consideration the differences in education system illustrates that considering education in absolute terms is not ideal and especially for immigrants from third countries given that the differences are larger than countries within Europe for example wherein the education system is regulated, and the European qualification framework makes it easier for people to prove their qualifications

The cut-off applied at tertiary education is contested since it excludes various people particularly with vocational education, for example various health care practitioner and welders. Although both occupations tend to bring in the most immigrants via various labour immigration schemes (Walsh, 2008). Moreover, artists and athletes are also considered as highly skilled however might not necessarily have a tertiary degree which again depending on the country can deter these categories from entering the destination country (Weinar et al., 2020). Therefore, it is essential to understand that using narrow definitions can disregard certain creative class or talent and thus require a flexible approach towards identifying a “highly skilled” migrant.

One of the major barriers that are faced by the migrants is the immigration policies. An example in this context is that in most of the countries that follow the point-based value system is, significant amounts of points are given to the migrants who are highly educated. This will result in a turn of events where the positions that do not require any skill set will be filled by highly educated people, who are not cut for the job. This will eventually climax in the Brain waste of the international talent (Mattoo et al 2008). The long-term effects of Brain waste are that there will be reduction in the stock of human capital in the overall economy.

However, political economics critiques this approach of considering education levels to define 'skill.' Firstly, this approach assumes equivalency across education sources, associating a degree from a very prestige university such as Harvard being equivalent to another tertiary degree from not a highly ranked university. Education is considered the principal benchmark for skill; however, governments' outlook and emphasis on tertiary education diverge significantly.

Under the reasons that worsen the differences, rapid technological changes will secure a prominent place. These changes further devalue the purposes of educational attainment and affect the migrants who will arrive at a much later stage in the host countries. A study conducted by (Beine et al (2007) aim to know whether a migrant has acquired his or her education in a home or a host country by assigning it a proxy, the variable is the migrant's

age. An example of this can be seen in the OECD countries. Where in the year 2000, 0.2% of adults who arrived from Turkmenistan and 81.9% of people who arrived from Guyana were above the age of 22. This goes on to prove that most of the migrant population was educated abroad.

Lastly, having a bachelor's degree does not promise better prospects. The burning glass institute which reports on the future of work and employees sheds a light on how the current demand for a college-educated worker is distorting since it has enabled employers to demand a four-year degree, even for jobs in question historically did not require one. Moreover, in 2017, a paper by Raman co-authored, stated that a degree gap is more prevalent as the growing demand for an employee holding a degree is higher than the actual number of employees working in an organisation with one. For instance, 67% of the job posting for a production supervisor demanded a college degree even though only 16% of the employees working as employed production had one.

3.1.2 Occupation

Other than education, another way for international statistics authorities to record migrants is through their occupation, wherein the OECD provides data on a cross-country basis (Dumont et al., 2007). The data methods global surveys include cross-country statistical data that address specific occupations, such as foreign-born scientists (Franzoni et al., 2012) or doctors (Bhargava et al 2011).

International occupational classifications used to indicate social divisions, but with the as international standards gained importance, such listings now focus on the nature of the work rather than worker characteristics. In 1957, The ILO created the International Standard ISCO (1957), which went through a review three times before its last publication in 2008. The ISCO classifies jobs-based on two dimensions of skills. Diverse levels of skills thus are used as a tool to evaluate the range and complexities of the tasks involved in different occupations.

It was practiced in the previous periods to create standards based on the characteristics of the workers however, in the recent past this practice has been changed. International standards are now being created based on the certain specifications of the job. In 1957, the first International Standard Classification of Occupations was developed. This was reviewed three times and the most recent version was published in 2008. The list has occupations which are clustered together under the concept of Skill level. The skill level according to the ISCO has been measured based on the range and complexity of the duties. The factor of skill

specialisation also defines the field of knowledge that is demanded. Examples can be seen with the range of the tools/machinery that is being asked for and inputs such as the materials used for the production process (Elias, 1997). The main difference between the terms Skill level and skill specialisation is that the former is an account of the formal training and education that makes someone eligible for a job and the latter refers to the type of work that is being done here. The classification of occupations in the ISCO-08 is done in a unique manner. Ten groups are classified into one major group with a unique code given to each code. The major ten groups are shown in table as each group is given a one-digit number it is divided into sub-major groups with a double-digit code and minor groups with 3-digit codes finally there are unit groups with 4-digit codes. These groups are assigned based on skill levels and skill specializations. The first two groups are classified according to skill levels and the second groups are classified as per skill specializations

Every ten major groupings relate to one or more of the mentioned four skill levels/educational levels as per the ISCED, which includes primary, secondary, tertiary or university and graduate degree.), as shown in Table 1. To further simplify skill levels, the following subcategories are listed below

1. Primary: Primary level of education
2. Secondary: It includes both lower, upper education and post-secondary education levels
3. Tertiary or University: This refers to the first stage (short to medium duration)
4. Graduate Education: This refers to beyond the 1st degree.

This establishes a relationship between education and occupational skill definitions. However, the ISCED categories do not imply that educational levels are the only means to acquire skills needed for tasks or responsibility for a given role, as skills could also be learnt via other means as the human capital theory implies for example on the job training or work experience. (Becker, 2009). The classification thus was also emphasized by a joint-initiative by the European Commission and the OECD in the 1995 Canberra Manual which reflects to the domain of science and technology. The initiative highlighted the best international practices which could be used to develop a thorough definition for a higher-skilled but more particularly within the field of Science and Technology across different international settings.

Table 2: ISCO Major Groups to Skills

ISCO-08 major groups	Skill Level
----------------------	-------------

1. Managers, senior officials, and legislators	3+4
2. Professionals	4
3. Technicians and associate professionals	3
4. Clerks 5. Service and Sales workers 6. Skilled agricultural and fishery workers 7. Craft and related trades workers 8. Plant and machine operators, and assemblers	2
9. Elementary Occupations	1
0. Military Occupations	1+4

Source: International standard classification of occupation (2008)

According to the Canberra Manual, there are two distinct groups which are considered as highly skilled for example one with tertiary education in the field of science and technology and the other who are working within the field of science and technology but does not necessarily have the required qualifications (OECD/EUROSTAT, 1995). According to these rules, the Manual suggests occupations which falls under the ISCO major groups 2 and 3 or in sub-groups 122, 123 and 131 should be considered high skilled. Thus, the Canberra Manual was thus an effort which aims to create a common definition for this phenomenon. Although it did go through some criticism such as since the definition of highly skilled was based on the International Standard Classification of Occupation, it merely had a narrow concentration on science and technology related occupations and did not take into consideration the other highly skilled categories such as managers, health care providers, businesses, and teachers.

3.1.3 Income

As previously discussed in the theoretical discussion on “skills” income is one of the criteria often used to measure skills. Wages were included by George Borjas as a proxy for education and skill. He claimed that natives and migrants with comparable skill levels are excellent substitutes for the destination country's labour market Borjas (2005). Borjas argued that

setting an income threshold can evaluate an individual's skill and thus can define a highly skilled migrant. Borjas proposed to set cut-offs at a given income level as he implied that migration movement signify a continuum of wage levels and talents when compared to distinct groups. Anyone who surpasses the cut-off thus can be identified as a highly skilled migrant. Various academics and scholars adopted this idea for example (Ruggles et al., 2010) who created datasets including occupation and salary levels to define a highly skilled migrant. This criterion has also been addressing by highly skilled migration studies. Various policies measures now include an income threshold for example., The European Blue Card which includes education and wage criteria to attract highly skilled migrant (Cerna, 2013; Triandafyllidou and Isaakyan, 2014).

For many economists, the education criterion is relevant because it is easy to explain and predict how skill development affects wages. Wages, according to economists, are indicators of individual competence and reflect skill specificity. General abilities or skills valued broadly and not particular to any organization are transferable and typically yield higher income in the free economy (Iskander, 2018). They are also more likely to be acquired via formal education programs and higher education investments made by various individuals and job seekers instead done by employers. As a result, a more educated worker might expect better income, both justifying and compensating their educational expenditure. Employers, on the other hand, often pay higher income (or a higher premium) to workers with more education as to avoid losing them. Wage differences, according to economists, help to indicate to a worker which broad skill sets are more valued and so steer them towards the appropriate external educational and training. This method has a gendered effect because it fails to account for gender differences in wage contestation. (ibid).

For example, during the mid-2000s, debates over the Tier 2 system in the United Kingdom provide a great example of inconsistencies with the income threshold. Care work was a category which was not classified as 'skilled' after modifications to the labour market test in 2007 since most employees were not paid for more than £7.02 per hour - a fundamental precondition for the Tier 2 test. Consequently, the number of female care workers entering the UK fell from 22,000 to 1005 between 2001 and 2007. (Boucher 2016, p.46). Another example occurred in 2016 when the Tier 2 wage level rose to £35,000 per year. Opponents contended that the modification would prevent women from entering various occupations and disproportionately affect women due to gender wage disparities (Ferguson, 2016). Despite

widespread opposition to these changes, the thresholds were still implemented that year (Boucher, 2019)

Furthermore, such disparities are amplified globally (Cerna and Czaika 2016, 34–36; Kofman, 2014). A gendered effect of this magnitude could be widespread across the European Union. As per Eurostat (2014) 17% gender wage gap already exists. According to Tirandafyllidou and Isaakyan (2016) It is especially pronounced in higher-skilled professions in EU Blue Card admissions. It is thus no surprise that most people with Blue Cards are men (ibid). Thus, considering income as a criterion demonstrates how choosing a cut-off without taking gender norms into account might exacerbate inequality.

Thus, this section fulfils the aims of identifying the criteria and the problems associated with each of them how educational levels differs, occupation being heavily dependent on higher education levels and failing to acknowledge other areas for skill acquisition (for example, work experience) and setting income thresholds without acknowledging gender disparities. To further identify how these criteria exclude diverse types of migrants the next section will provide a brief discussion on some of the categories which have been a point of debate, given the lack of definition of highly skilled migrants or the contested criteria reviewed in the discussion above.

3.1.4 Contested Categories: Students

Most scholars who study migration adhere to the states' perspective of highly skilled migrants. This view continues to shape the definition. The scholarly literature upholds educational, income, and skill requirements as principal factors in labour migration and specifically when addressing or characterising highly skilled migrants. As a result, the debate on highly contentious categories will focus on how students are perceived in highly skilled migration phenomena. Although, it is worth noting that administrative data on highly skilled migrants do not consider crucial factors such as there are different migration channels, and people who come through specialized streams designed for highly skilled tends to exclude several groups such as international students who might even be highly skilled in various sectors or who may travel as skilled refugees; low skilled workers; or as dependants (Weinar and colleagues, 2020)

The OECD in its work on highly skilled migration included a chapter in its publication on international students (Tremblay, 2002). The idea of including students in the category of highly skilled migration was regarded as the prevalent and a logical approach in 2002.

International students, defined as those over the age of 15 crossing international borders to pursue education, caught the attention of countries to design policies to attract these skilled workers. However, as a category, they are not highly skilled migrants, whether assessed by education levels (tertiary degree obtained), relevant expertise, or even when evaluating prior salary. Instead, considering international students as highly skilled migrants represented the prospect of staying in the destination country after graduation as highly skilled immigrants, which was encouraged, among other things, by the International Labour Organization (ibid).

Thus, the prevalent notion was that this group of migrants are skilled because they can in the future might become highly skilled. In addition, a solution where everyone benefits are observed in the case of international students since if they choose to pay at the destination country to pursue their higher education and then work later can, in return, assist the state with talented individuals and increased taxes. Thus, policymakers often perceive international students as “to be” highly skilled migrants, or they could also be viewed as "wanted" migrants. The preference is because they are viewed as someone who can quickly adapt to society and the labour market (Hawthorne, 2010). Indeed, authors such as Cairns (2017) have supported this argument and demonstrated that being an international student raises the chances of becoming highly skilled, especially after the completion of their graduation.

According to Weinar et al. (2020), the knowledge acquired over the last 15 years shows that international students do not often enjoy the status of permanent, highly skilled migrants. This was also brought forward by Mahroum (1999), who argued that international students are more likely to be a passenger than permanent stayers implying that these are the group of people who might stay, return, or may decide to go elsewhere. (Mahroum, 1999).

Several scholars have questioned the efficacy of addressing students' educational achievement regarding skills. According to Skeldon (2018), for instance, argues that all students should be considered highly skilled. He illuminates the diversity of skill levels achievable via formal tertiary education (for example, the range goes from bachelor's degree to PhD level), skill types (soft or technical), and study areas (e.g., social sciences or scientific field). These variances are crucial, and they illustrate the argument stated by Williams (2007) that skills are socially constructed and that it varies from one actor to another.

Authors such as Skeldon (2018) stated that data collection for students as highly skilled migrants is not a straightforward concept since there is no clear distinction set. For example, consider different circumstances such as who is working whilst studying, those in training or

already trained, and students who aim to work after graduation. Therefore, it is impossible to determine when a student becomes a skilled migrant, especially from an administrative standpoint; it is difficult to assess the change in a student's legal status (student visa to a work permit, for instance). The change here is not predictable since students are not guaranteed to land at a highly skilled position, suggesting that some may even go through deskilling or become underemployed.

Raghuram (2013) has addressed this conceptual conundrum that has asserted that migration of students is a crucial aspect of knowledge migration. "Knowledge migrant" is a term used primarily in education and human resource management studies to represent migrants that are highly skilled (Williams and Baláž 2014). In this case, the term 'knowledge' is not conceptualized in a standardized manner. It is instead defined by those involved in the field in which it is being used. For instance, in business management and administration studies, these individuals have the necessary expertise for the specific industry. According to Ackers (2005) scientists, students and researchers are not necessarily labour migrants. Raghuram demonstrates in his 2013 paper that the term such as "knowledge migrant" turn out to be increasingly ambiguous as knowledge becomes essential regardless of the type of migration. It represents migrant selectivity: migrants who lack information face more risks and expenses while migrating.

As the discussion follows, it has been observed that the definitional criteria act as a barrier for potentially highly skilled migrants to a certain extent. This raises the question of whether the traditional dichotomy of "highly skilled" vs "low skilled" is still applicable in the new knowledge economy? Thus, the next section will provide a discussion on the classification of "highly skilled" and "low skilled" to identify whether the criteria discussed above in defining a highly skilled migrant.

3.1.5 The traditional dichotomy of “Highly Skilled” vs “Low Skilled”

Skills are debatable, especially when assessing and classifying them as "high" or "low". Employees of an organization are addressed as skilled if they have attained a certain level of qualification or completed a bachelor's degree or above, or their expected wages or is above the minimum specifications (Cully, 2012). However, every country defines skilled workers differently based on their set criteria for eligibility and the kind of visa required for entry and work permit. Furthermore, cross border movement of labour, the political dynamics, economic experts, and other professionals widely discuss several types of migrants from

different perspectives to categorize them into two groups – highly skilled and low skilled. (Cepla, 2021) Highly skilled workers have an educational background of a minimum of a bachelor's degree and take up occupations within the IT industry, medical field, and scientists (Peri and Sparber 2011). On the contrary, low-skilled workers do not necessarily have a professional education background and undertake occupations (Biffi, 2012) such as construction industry workers, labourers, welders, agricultural land workers, caregivers, and cooks.

Nevertheless, the exact meaning of "skilled" varies from one country to another since each creates its eligibility requirements and visa types. For example, in the United States, the working population migrating from other countries is categorized as highly skilled if they have achieved a minimum of a bachelor's degree (Moriarty, 2020). The rest are categorized as low-skilled. A similar migration system is practised in European countries too. For instance, in Spain, highly skilled workers have a minimum of a graduate degree. (Cepla, 2021). Japan, in hindsight, provides professional visas to applicants looking for jobs in the fields of education, engineering, and business management. These usually require a minimum entry requirement of a doctoral or master's degree.

Despite different countries using various methods and systems to characterize foreign-born in two different workgroups, it tends to have similar occupations within the "high" and "low" categories. For example, in 2014, Canada amended their migration system, and as per the new policy, worker categories are classified based on their wages instead of their skills. The current temporary international worker program in Canada has been categorized into high-wage workers, involving job roles at a pay scale at or above the general regional median wage, and the low-wage workers are the ones with roles at a lower level than the median wage. However, the professions are the same as the earlier migration requirements wherein the international workers were eligible for occupations based on their academic background (formal education). This helps us infer that certain groups of people are more preferred than others because of their educational qualifications.

Moreover, in a few countries, additional schemes were introduced recently for some medium-skill-level professions, such as caregivers. However, only certain countries view medium-skill-level professions as self-sustaining careers on an international level. Because of this international viewpoint, most medium-skilled workers are often categorized within the low-skilled category. They have limited career pathways as they do not fully meet the high-skilled

worker threshold, irrespective of their specialized training and certification. For instance, in Spain's immigration policy, employers do not have many options to decrease the hiring process gaps by recruiting international. Due to such an approach, many overseas workers from the construction and healthcare industries struggle with cross-border movement. They are regarded as low-skilled, despite achieving certifications in their profession. Therefore, they are left with only a few restricted pathways compared to highly skilled professionals. This shows the underlying disparities reflected under this categorization of skilled migrants.

This section thus provides the differences observed between the two groups and how the criteria used to define a highly skilled contradict the low- to the mid-skilled migrant group. The discussion shows the inconsistencies of the criteria, which have been prevalent in the academic and policy domain for an exceptionally long time. Nevertheless, the last section of this chapter is designed to understand the trends in the global labour market, especially within the 21st century. This will further assist the thesis to develop an understanding to understand the link between the criteria's used to define a highly skilled vs its relevance within the current labour market system.

3.1.6 The Global Labour Market in the 21st Century

The last section of this chapter will provide a brief yet detailed understanding of the current trends in the global labour market. These trends will prove whether the current trends align with the “highly skilled” migration tag. The world economy and the labour markets have come under tremendous pressure in the wake of the rapidly advancing technological changes. The technological changes have brought about a transformation in the digital space and new industrial practices and have given birth to the sixth technological order. Education systems and public institutions have also come under the radar when technological changes are considered. According to a paper by (Dass,2011), these challenges faced by all the institutions must be viewed through a different lens: the demographic lens. The demographic features of fertility, marriage rates and migration numbers must be used to understand these changes. The economic crisis in recent times and the pandemic have also had severe causes and effects on these features that will be discussed.

According to the international economic forum, the labour market is changing swiftly and will represent a rising trend even in the future. It is more likely that relevant talents will be prioritized than academic credentials. The Covid-19 phenomena have offered a push for companies to notice an opportunity that can assist alter their employment methods around

this evolving paradigm. In addition, it is anticipated that one billion occupations, or one-third of all jobs globally, will be revolutionized by technology over the next decade. According to the world economic forum's "Jobs of Tomorrow" report, there will be an increase in roles within the data and AI sector with new positions in product development, cloud computing and engineering. These occupations need practical skills that are currently being obtained virtually and do not necessarily demand a college degree. Using a three- or four-year degree as a proxy for employability means reliance on talent with potentially redundant abilities instead of lifelong learners with ever-relevant skills. The world has an over-reliance on college degrees, repelling already vulnerable jobseekers.

Another point of view to this was presented by (Woetzel, 2017), who states that there is a flipside to the rapidly progressing automated industry culture. The pressure of this progression is borne by the IT sector and the Business Process Outsourcing companies. In India, it is believed that by the year 2025, about 3 million people will be employed by IT companies due to the multiple expansionary requirements of the industry.

Understanding the skills composition of the worker, LinkedIn conducted a survey on global trends wherein 92% of recruiting managers and human resource professionals preferred soft skills for example, 89% stated that workers without soft skills shows bad hiring and 80% stated that these skills encourage the growth of the business. The World Economic Forum's Future of Jobs report (2018) also confirms the importance of soft skills such as emotional intelligence, empathy, communication, and creativity representing an individual's unique capabilities. These capabilities are distinct and is not similar as attaining an educational degree.

Moreover, the market for formal education is also changing; The Online education market is expected to reach \$585.48 billion by 2027 from \$269.87 billion (Online Education Market, 2022). There is also now a rapid expansion in the global labour market for online labour, as mentioned in a study by Schwab (2016). The ILO (2017) has supported the above statement in its reports. The studies suggest that rapid growth in the demand for independent and flexible labour can be seen particularly in the digital space where freelancers, micro-entrepreneurship and crowd platforms are in great demand.

The labour market demands have grown tremendously since the last decade, especially with the rise of technology which has changed the traditional pathways of learning and acquiring a skill. Thus, understanding these changes in the labour market provides an impetus to argue

the importance of the criteria used to define a highly skilled since there are other factors which need to be taken into consideration to fulfil the needs of the labour market. Knowing future trends thus helps us to understand how to acknowledge the factors better to identify a highly skilled migrant. Regardless, the next section will discuss the methods used to discuss the relevancy of the current defining criteria's of highly skilled migration in the case of Estonia.

4. Highly Skilled Migration of TCNs in Estonia

Over the years, there has been tremendous growth in Estonia's 'Knowledge Economy,' and to ensure further development, Estonia requires more specialists to address the demands of the labour market. (Turu Uuringute, 2011). However, given that Estonia is a small country with a total population of over 1 million, many Estonians consider foreigners as more of a potential danger to the country and its culture (Eurobarometer Survey, 2018). the major problem is that Estonia's domestic labour force cannot address the labour shortages rising across different industries. Regardless of the advantages provided by the labour market, the education system has failed to produce the required qualified individuals, given the increasing pace of industries developing across various sectors. Thus, in terms of the immigration system, Estonia follows a demand-driven approach to recruiting third country nationals. For third-country nationals, this means that employers have to "pre-select" the foreign worker they want to employ; however, they must first demonstrate that they could not find a local employee to fill in for a given position.

Before proceeding with the analysis, it is essential to acknowledge the two dimensions, i.e., 'internal' and 'external,' in Estonia's immigration policies. (Ortega, 2014) The internal dimension is associated with the national limits, influenced by the process of 'client politics', which assists the country with defining the policy. On the other hand, the external dimension is designed and enforced via the European Union, given the country's commitment to the Aquis Communautaire. In terms of the external dimension, its growth has led the EU to attain more competencies, particularly within immigration policy (Boeri et al., 2012). However, its development is still considered the responsibility of the state Recognizing that immigration policies are still a state-led initiative, the research will concentrate on national policies and relevant Estonian documents and laws, particularly those that provide more relevant information on "highly skilled" migrants.

It is also essential to understand the state's responsibility in managing immigration policies and the actors involved within the domain of migration. Thus, critical stakeholders within the institutional framework are responsible for migration and asylum policies. Their roles and responsibilities are given below:

- The Ministry of Interior: It is the central institution responsible for the development of both migration and asylum policy
- Police and Border Guard Board: The institution holds the responsibility of issuing the temporary residence permit to all migrants entering Estonia.
- The Ministry of Social Affairs: The institution is accountable for the Estonian Unemployment Insurance Fund (EUIF), governs matters associated with the employment of third-country national and, more broadly, oversees the application of the labour policy.
- The Ministry of Culture: This institution oversees the integration of third-country national.
- The Ministry of Economic Affairs and Communications: This institution is responsible for developing policies concerning skilled migration.
- The Ministry of Education and Research: The institution assists the Ministry of the Interior concerning researchers and study migration. (Kirss et al., 2014)

Other supporting agencies include Integration Foundation, Estonian Qualification Authority, Estonian Unemployment Insurance Fund, Enterprise Estonia's "Work in Estonia," International Organisation Migration, European Migration Network and Education and Youth Board.

Thus, the internal and external dimension along with central stakeholders held responsible for migration and integration sets the foundation to further understand their outlook and understanding of "highly skilled" migration which will be discussed further in the following sections below.

4.2 National Policies and Measures for TCN's

Various documents have been analyzed to understand the concept of "highly skilled" migrants in Estonia to address how different institutions define "highly skilled migrants" and their impact on the current legislation. It will help the analysis understand the reasons behind the current definition. Several Institutions define the term "highly skilled" differently

depending on the interests of the institutions, which range from increasing competitiveness to addressing labour market shortages.

On 1st September 2013, the Alien's act added "top specialist/senior specialist". The definition is provided below:

"Senior or top specialist is a foreigner who has professional training or experience in any area of activity, whose employer is registered in Estonia and has agreed to pay the foreigner at least the latest annual average wages in Estonia published by Statistics Estonia, multiplied by the coefficient 2." (The Alien's Act, 2013)

On the other hand, the salary threshold for EU blue cardholders is 1.5 above the annual average gross monthly salary. Moreover, employers are required to pay a minimum of 1.24 for the period of their EU blue card. (The Alien's Act, 2021)

Table 3 List of Occupations and Wages from the Alien's Act

Occupation	Wages	Source
Top Specialist or a supervisor	At least equal to 1.24 times the annual average gross monthly salary	The Alien's Act § 190 ⁷ Specifications of requirements regarding payment of remuneration
Top specialist in natural or technical science	At least equal to 1.24 times the annual average gross monthly salary	The Alien's Act § 190 ⁷ Specifications of requirements regarding payment of remuneration
Top specialist in health service	At least equal to 1.24 times the annual average gross monthly salary	The Alien's Act § 190 ⁷ Specifications of requirements regarding payment of remuneration
Top specialist in Business and Administration	At least equal to 1.24 times the annual average gross monthly salary	The Alien's Act § 190 ⁷ Specifications of requirements regarding payment of remuneration
Specialists in Pedagogics	At least equal to 1.24 times the annual average gross monthly salary	The Alien's Act § 190 ⁷ Specifications of requirements regarding payment of remuneration
Specialist in Business or Administration	At least equal to 1.24 times the annual average gross monthly salary	The Alien's Act § 190 ⁷ Specifications of requirements regarding payment of remuneration
Specialist in the legal, cultural, or social sphere	At least equal to 1.24 times the annual average gross monthly salary	The Alien's Act § 190 ⁷ Specifications of requirements regarding payment of remuneration

Source: The Alien's Act (2021)

The Government Action Plan 2011-2015 outlined the goal of attracting 'qualified foreigners' and 'highly qualified to work and live in Estonia. In this case, highly qualified refers to international students and faculty members. The target group includes both the citizens of the EU and the third-country national wherein the requirements, and the appropriate regulations are provided in the Aliens Act. Nevertheless, the report on "Action Programme of the Government of the Republic 2011-2015" presented two concepts which are direct association with immigration and more specifically addresses the concept and preference of "highly skilled" over "low skilled".

- To increase the economic competitiveness of Estonia, the country will create an environment which is favourable for attracting top specialists and international students. This will, in turn, provide employees with high quality and enable the establishment of excellent research facilities and centres in the country.

- The country will restrict the mass flow of low skilled migrants.

According to the European Migration Network (2013), the two notions addressed above can be viewed as the potential categories which highlight the definitional notion of Estonia's immigration policy. Analysing the first notion of the government action plan as per the institutional approach (Chapter 1.1.3), the terms "top specialists" and "foreign students" are heavily used in the immigration policies as they view international students as potentially "highly skilled" migrant. The second notion of the government action plan the legislation divided the "highly skilled" from "low skilled" via the introduction of paying workers identified in the legislation more than the annual average gross monthly salary.

In addition to this, according to the Entrepreneurship Growth Strategy for the programming period 2014-2020, the report consistently emphasizes the significance of drawing more (highly) qualified workers to Estonia (The Ministry of Economic Affairs and Communication, 2014). Since 2008, the state has partially sponsored the employment of (highly) qualified workers with appropriate international experience. Enterprise Estonia has been one of the crucial actors in carrying out investment promotion, i.e. developing and managing the employee grant scheme, which enables companies to recruit highly qualified workers, mainly sales directors, engineers, managers, directors, researchers etc. They implement the partial compensation of their wages, which depends on the employee's profile (approx. 50% to 70% of employees' salaries) for 26 months (ibid).

Thus, the first notion of the government action plan and the Entrepreneurship Growth Strategy reflects the need to attract highly skilled migrants. It can be associated with the literature on the importance of highly skilled migrants. In the case of Estonia, it is also a country in the race to acquire highly skilled migrants, which can strengthen the 'knowledge economy'. The definition of highly skilled in these documents and their needs, particularly in the rising ICT sector, can provide immense benefits, as discussed previously in the literature (Chapter 2.1.4). This includes increased moving, strengthening knowledge-intensive production sectors, low coordination costs, improving international market access and enhancing the economy's competitiveness.

Moreover, the Ministry of Education and Research adopted an internationalization strategy for Estonian education institutions, which outlines the aim of improving Estonia's higher education in the international higher education market to raise awareness and make the Estonian education system more open and visible. The critical measures highlighted in the document were improving the internationalization of teaching, creating a support system to assist the growth of internationalization, and developing a supportive legal environment. Moreover, the strategic goals also emphasized the need to increase the number of international professors among permanent teaching staff and increase the participation of Estonia students in exchange programmes. (Estonian Higher Education Internationalization Strategy 2006-2015)

This document reflects the importance of hiring international academics since they bring varied benefits such as the experiences of different education systems, specialized expertise in a particular field, diversified background etc. Thus, hiring an international staff can help Estonia fulfil the academic shortages and boost the economy's research productivity.

Therefore, the amendments, which took place in 2013, were thus a part of the consultations and debates between stakeholders and governments of highly skilled migration or as 'clients politics explains (European Migration Network, 2013). The following section will highlight the legislation changes, particularly for short-term and long-term employment, to further understand the laws set for different groups of migrants.

4.3 Regulations

Before acknowledging the flow of migration flow of the “highly skilled,” it is important to understand how the legislation differs for “highly skilled” vs “low skilled” migrants and the restrictions imposed on each of these groups affecting their migratory flow.

5.1.1.1 Short-term Employment

In Estonia, citizens of the European Union do not require any work permit, and the below regulations are therefore only applicable to people from third countries. According to the Ministry of the Interior (2021) third-country nationals ensure the fulfilment of the below-mentioned criteria for eligibility to work in Estonia.

According to Estonia's short-term employment, the country provides short-term work permits to international workers for up to 365 days within a timeframe of 455 days or, in the case of seasonal work, 270 days in 365 days. Employers must mandatorily abide by the payment towards third-country national, i.e., minimum pay rate equal to the Estonian average gross salary. Certain exceptions have been included, such as employees working as a part of start-ups, researchers, seasonal workers, and teachers). In 2016, temporary residents (third-country nationals) residing in Estonia on a short-term basis were authorised to work as agency workers. Also, there is no longer a required permit for third-country nationals from the Estonian Unemployment Insurance Fund (Masso et al., 2021).

Until 2017 the tenure for a short-term work permit was for a maximum period of 6 months. Later it was extended for up to 9 months after 2017. The beginning of 2018 was a year of transformation wherein the duration of the short-term work permit was extended for one year, with an increase observed in various fields of occupation under short-term employment (ibid). Therefore, Estonia had then witnessed a remarkable rise in the entry of third-country nationals for short-term employment (ibid). Prior to the year of transformation, in 2017, another significant development was rolled out by revising the entry restriction criteria and the possible reasons for staying for seasonal work (increasing the stay of seasonal workers to a total of 270 days). Simultaneously, a broad spectrum of measures was executed to curb labour exploitation.

The Alien's Act was amended in May 2020, which allowed the Government to extend the duration of short-term employment in a crisis where third-country nationals could work for a maximum of 730 days in 913 consecutive days (ibid). Unfortunately, the Covid-19 pandemic led to the emergency by shutting down the borders. However, fortunately, this benefitted from a definite extension for short-term workers.

5.1.1.2 Long-term Employment Long-term employment refers to an individual residing in Estonia for more than a period of 12 months. The requirements for Long-term employment include an income threshold (as discussed earlier, in 5.1.1) In Estonia, the immigration quota

represents an annual limit for immigrants (third-country nationals) which is set at 0.1% of Estonia's population. The quota fundamentally regulates temporary residence permits issued for employment and entrepreneurship including those based on an international agreement. The exclusionary criteria set for the immigration quota include citizens of the US, EU member states, Japan, the United Kingdom, Japan, and the European Economic Area. Moreover, it does not include foreigners moving to Estonia to work as a researcher or lecturer, or to study, or foreigners coming to Estonia to live with a close relative or spouse. Also, the immigration quota excludes foreigners with permanent residency, Information and technology employees, start-up entrepreneurs, investors, and top specialists. Lastly, it does not include people requiring international protection under the European Union migration plan. (The Alien's Act, 2021)

However, since 2020, the Ministry of Interior has divided the jobs which will be allocated to the immigration quota. In 2020 out of 1314 residence permit was distributed researched for 28 creative workers, 28 athletes, coaches, referees, and sports official, 10 reserved for foreign nationals coming to Estonia based on foreign agreement and 1258 were spots allocated for foreigners coming to Estonia for employment in other fields out which 650 were allocated for industry, transport, communication, education, warehousing, and healthcare. There are not specific conditions set however as per the exemption list is concerned, the quote indeed highly regulates immigration of workers under the categories of mid to low skilled jobs (ERR, 2021).

5.1.1.3 International Students

According to Study in Estonia (2021), international students no longer require an additional or new work permit if they are studying full time and any occupation or employment, they pursue does not affect their education. Although, lately, discussions on restricting international students working hours to a minimum of 16 hours in a week. However, international students (non-EU) can extend their stay to find employment after their completion of studies for a period of 9 months (if only their university approves). (ERR, 2021) Moreover, since 2020, researchers or international students are now eligible to change their visa status to long term based on Directive 2016/801/EU through visiting the Politsei ja Piirivalveame (PPA). In 2020, a draft proposition for an alteration to the law was prepared, with the target of organising the principles for working in Estonia along with for the giving of a D-visa or home grant for educational purposes. Restricting the opportunities for foreign

students to bring relatives with them is likewise remembered for the proposition. This can be disadvantageous for Estonia in terms of losing its competitiveness. (ibid).

The number of international students coming to Estonia decreased significantly especially due to the Covid-19 crisis wherein the country lost 50% of international students. Moreover, from 2020/2021 due to the severity of the condition and the greater responsibilities on the universities for ensuring the safety of national local students (Masso et al., 2021). This regulation provides an inclusionary and exclusionary criterion for dissimilar categories of migrants which shows the preference for highly skilled migrant who comes under the long-term employment and have been excluded from the immigration quote due to the country's need and reliance on these group of migrants.

4.3.1 Immigration Statistics of TCN's

Since the independence of Estonia, a strict regulation for international migration is observed as Estonia's immigration quota is for long-term employment. The emergence of employment of third-country nationals in Estonia was firstly observed in 2010 as labour shortages started to increase which can be traced to assorted reasons. For example, joining the EU in 2004, there was a spike in outward migration to other EU member states out of which most of the people migrated to Finland. Going forward, the recession of 2008-2009 leading an economic decline that further exacerbated outwards migration, affecting certain sectors such as construction (European Commission, 2020). Thus, these circumstances to a certain extent explain how labour shortages increased Estonia's appetite for third-country migrant workers. A change in the context of migration was observed in 2010, as return migration increased along with the rise of immigration of third-country nationals grew heavily through temporary working schemes.

From the year 2015, Estonia's net migration has been positive even during the Covid-19 pandemic as shown in Table 2. According to a survey conducted by Leppik (2019), the total number of third-country nationals who came to Estonia based on temporary residence permits between 2009-2014 was 16,878 (40% women and 60% men) Majority of the temporary residence permit was issued to family migration (39%) followed by employment (37%), study (21%) and for business purposes (3%). Out of this, (50%) of men came for employment compared to (56%) of women who immigrated for family reasons. The highest share of immigrants arriving in Estonia between 2015-2019 was from Ukraine and Russia (64% of all third countries immigrants). Nevertheless, the types of migrants and their preferences differ across institutions.

The Covid 19 has caused labour shortages, which have led to growing unemployment that were below the equilibrium of the labour market, like 4.4% in 2019, compared to 6.3% in the EU-28 (Masso et al., 2019), and elevated employment rates, such as 80.3% in 2019, compared to 73.9% in the EU-28 (ibid). The tightening of the labour market rose wage pressure, yielding an increase of 7% in the annual growth. Such income growth has been excessively high considering the shift in productivity; as a result, cost competitiveness has been jeopardized, as many companies operate in low-value-added industries. Migration patterns have changed due to the COVID-19-induced recession and Estonia's rising income level (ibid). While labour migration to other EU countries, especially Finland, including almost 2/3 of the emigrants (Tammur et al., 2017), has remained the most important, growing inward migration, mostly from third countries, has become more important (although the latter has remained positive since the mid of 2000s) (ibid).

The reasons for positive net migration include both migration from EU, and third countries and return migration with each weighing approximately 50% wherein return migrant is the parallel reasons for both emigration and immigration. (For an overview of general trends, see e.g., Lauren, 2020) Moreover, in 2019, the total residence permit granted for work was 2,218 along with short-term working registrations amounting to 32,245. The employment rate of third-country nationals was higher (71.4%) than the EU average (58%) and the country's employment rate was 80.2% (Lauren, 2020)

Table 4: Migration Statistics

Year	Immigration	Emigration	Net Migration
2014	3904	4637	-733
2015	15413	13003	2410
2016	14822	13792	1030
2017	17616	12358	5258
2018	17541	10476	7071
2019	18174	12801	5371
2020	16209	12427	3782

Source: Outlook on Migration Statistics (2016-2022)

Short term employment

Estonia has gone through several reforms with its immigration quota and now seems to favour temporary migration, especially when in 2016, restrictions on short-term employment

were lifted. (Lauren, 2018). The number of short-term employment registrations rose consistently over the last few years however, impressive growth can be observed when the registrations increased from only 1782 in 2016 to 32245 in 2019. Although it did fall in 2020 by 31% mainly because of travel restrictions imposed due to Covid-19. The statistics for short-term employment registrations represented 83% men and 17% women. Short-term employment is one of the easiest and quickest ways for employers to recruit third-country nationals since short-term employment does not come under Estonia’s immigration quota (0.1% of the total population) (Kall et al., 2020). Moreover, the employers are obliged to pay at least the Estonian national average wage to short term employees (third-country nationals)

Table 5: Total Number of registrations of short-term employment (2016-2020)

Year	Count
2016	1782
2017	7584
2018	19858
2019	32245
2020	22110

Source: Outlook on Migration Statistics (2016-2022)

Temporary Residence Permit

A temporary residence permit is issued to a foreigner who wants to reside in Estonia. A temporary permit can be issued to a foreigner for study, work, family migration, entrepreneurship or in exceptional cases such as participating via international agreements, criminal proceedings or overriding national interest etc. 90% of the temporary residence permit were issued to “top specialists” between 2018-2020 followed by start-ups and experts/advisors/consultant. This reflects the needs of Estonia’s labour market and the reliance of employers for employees under these occupations. Ukrainian and Russian nationalities are the two major groups of third-country nationals in Estonia. In terms of issuance of temporary residence permit and employment, Ukrainians hold the largest numbers. Ukrainians are more likely work in short-term employment sectors such as manufacturing and construction. Moreover, table 4 shows that majority of the first-time temporary residence permit were acquired by top specialists followed by start-ups.

Table 6: First-time temporary residences permit

Occupation	2018	2019	2020
Top Specialist	228	390	384
Start-up	186	315	232
Expert/advisor/consultant	58	78	53
Researcher	40	42	36
Supervisory	37	26	33
Sport Activities	21	10	18
EU blue card	19	19	9
Nun or monk	18	16	22
Creative Activities	11	7	12
Teacher	7	15	12
Other	2	17	22
Total	1851	2218	2089

Source: Rändestatistika ülevaade 2016-2022

Thus, the analysis on immigration of third country national shows how Estonia has been experiencing increased immigration for both short- and long-term employment. However, it is also important to understand the needs of Estonia's labour market which will be discussed within the next section below.

4.4 Estonia's Labour Market Forecast

According to the OSKA forecast, there are currently 650,000 people in labour which is likely to decline by 42,000 for the ages of 20-64 which will be approximate -6% for the year between 2009-2027. At one point the smaller generations will be the dominant age group to have children and the Estonian birth rate is below 2,1 children per woman thus there will be another smaller decline in births. Therefore, Estonia needs to find ways to work smarter and improve its attraction policies to be able to attract the skilled labour it needs. Since Estonia does not want to lose its culture, it still needs to think how it can improve its market situation now and in the future.

In addition, according to the Estonian Qualification Authority (OSKA) report on "Estonian Labour Market Today and Tomorrow 2019-2027", Moreover, Estonia will require "smart workers" who according to the report are defined as those who are able to develop, manage, implement, and manage technology in different sectors. The report estimated that jobs which

are substituted with technology will decrease in the future and predicted that there will be more growth in sectors such as “personal services” and areas wherein skills such as data analysis, empathy and creativity are required. The report also highlights the fact that the demand for these jobs is in place to replace the population reaching the age of retirement and since the number of young graduates is not sufficient to fill in roles such as developers, speech therapists, nurses, system analysts and engineers. (OSKA, 2021)

Estonia also lacks young graduates in the field of construction, technology, education, production, agriculture etc. Interestingly, the report highlights the growing need for workers with higher education or vocational education or training compared to students with basic or general education since jobs requiring the former levels will decrease in the future. On the other hand, Estonia does not have enough mechatronic technicians, carpenters, trained plumbers, processing staff, caretakers, machine operators and harvests. Lastly, Estonia do not have young people who would pursue occupations such as tailors, bookkeepers, car mechanics or language specialist. According to the report, OSKA recommended that employers must ensure that they provide additional training to their employees so that they could gain the necessary skills. (OSKA, 2021)

As per the definition gathered across different secondary resources, the author took a step further in analysing the current definition of “highly skilled” through conducting interview analysis with relevant institutions and stakeholders. The analysis thus will provide a broader understanding of the term and the determinants used to define them will be applied to validate its relevancy and to assess whether it is a valid model for attracting “skilled” migrants.

5. Findings and Discussion

5.1 Methodology

This section of the thesis will integrate the discussed literature on the criteria used to define a highly skilled migrant, namely education, occupation, and income, to understand its applicability in the case of Estonia. The research design below shows how the criteria will incorporate different elements discussed in the literature (Chapters 2 and 3) are utilised throughout the analysis.

The literature enabled the research to explore how Estonia define a highly skilled migrant, and the thesis used three ways to strengthen the understanding of this phenomenon in Estonia. Firstly, analyse the current strategic documents, for example, the Government

Action Plan, Entrepreneurship growth strategy and internationalisation strategy, to understand how the economy represents its view on the needs of the economy and their identification of a highly skilled migrant. Secondly, to further understand the cause and explanation for the definition of a highly skilled migrant, the author conducted semi-structured interviews with government officials to understand their perspective on the legislation and how they perceive highly skilled migrants. Lastly, to test the applicability of the criteria, the author also decided to use two different data sets, namely police and border guard board and integration survey data (2020). The focus of the analysis and the relevance of using a mixed-method design will be explained below

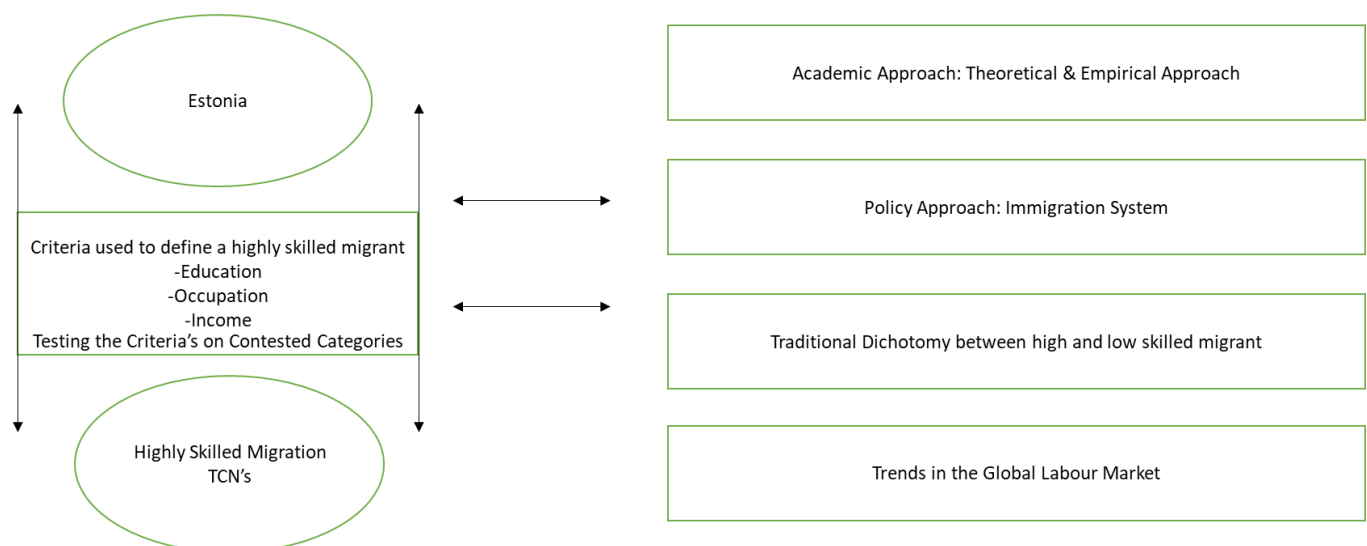


Figure 1: Research Design: Testing the applicability of the identified criteria used to define a highly skilled migrant.

This thesis will concentrate on third-country nationals (TCN) in Estonia. It is a distinct group as compared to EU and Estonian citizens. Third-country nationals were thus selected for several reasons. The first major distinction includes a third-country nationals' entrance into the Estonian labour market. TCNs do not have the same freedom of movement as EU and Schengen Area national to either work, reside or visit in Estonia. As a result, TCNs' entry to the Estonia's labour market differs fundamentally compared to EU citizens since TCNs' are required to go through a procedure of obtaining a residence permit via fulfilling the eligibility requirements. On the other hand, given the flexible mobility of the EU nationals, it is more difficult to collect accurate information on this group of migrants, whereas since the movement of third-country nationals is monitored by the Public and Border Guard, it is easier

to acquire data as well as access the current attraction policies making information more accessible for the analysis section of the research.

Another explanation for this divergence is that TCNs are more substantial in the phenomena of highly skilled migration. In terms of their mobility, migrant movements are more likely to occur from less developing to developed countries, which signifies that, in principle, movement within the European Union (and beyond) will take place from low to high-income countries. Estonia is not highly competitive in comparison to Western European countries and is not very appealing to a substantial amount of EU nationals due to low salaries. Therefore, it is more sensible to focus on attracting highly skilled migrants from countries where Estonia has a competitive edge. As a result, the author feels it is important to distinguish between these two categories and focus this effort on TCNs.

Several methods and sources were used to analyse definition of highly skilled migration of TCN's. The first part of the analysis includes a qualitative method more specifically the use of secondary research as discussed above for gathering information, which enabled the research to synthesize and compile relevant information from government documents, online sources, and official statistics, all of which were available in Estonian and English. The reason for choosing the secondary research method for the first part of the analysis was because the research required relevant and reliable information on how Estonia views highly skilled migration of third country and their importance to Estonia's economy

For the second part of the analysis, this thesis uses a mixed-method approach which consists of both qualitative and quantitative methods. More specifically, the exploratory mixed method design initially starts with phase 1 of collecting qualitative data followed by phase 2 of collecting quantitative data. The final phase includes the integration of both the data for a thorough understanding and in this case, understanding of the phenomena of highly skilled migration. The role of qualitative data is divided into two parts for example, the first part will address the definition of highly skilled migrant and in the second part, qualitative data (interview analysis) will be used to provide support to the quantitative data in a form of an explanation for the trends found in the quantitative data. The research design is highly popular and is applied in research studies including both behavioural and social sciences (Klassen and Burnaby, 1993; Kinnick and Kempner, 1988).

5.1.1 Quantitative Data

Quantitative methods are used which provides a descriptive analysis of the data gathered from the Police and Border Guard Board and Integration Monitoring Survey data (2020) conducted by Praxis, the Baltic Institute of Baltic Studies, Tallinn University, University of Tartu, and Turu-uuringute AS.

The data set from PBGB provides information on the temporary residence permit issued to third-country nationals between 2010 and 2015. The sample size includes 54,666 third-country nationals, including information on distinct groups of migrants, including family, students, working, entrepreneurship, legal income and external contracts, their educational attainment, date of the issuance of residence permit and personal information such as gender and date of birth. For this thesis, information on workers and their educational attainment levels have been identified as the relevant criteria to address the research objectives.

In terms of data limitation, although it was easier to access the data from Police and Border Guard Board, there were some inconsistencies, for example, the data does not differentiate between temporary residence permits issued to third-country national vs residents reapplying for the residence permits for several reasons or could not reapply to renew their residence permit. Moreover, the data set fails to provide information on the applicant's education level as "higher education" does not represent a full university degree. It could range from secondary education to a bachelor's or master's level. Moreover, the data does not include information on specific occupation under various occupational categories for instance "legal, social and cultural" does not specifically represent the exact occupation.

The integration survey data 2020 addresses several economic, social, and cultural aspects of third-country nationals integration into Estonia society. The survey data included much information on the living conditions of third-country nationals. The sample size of this data set includes 3826 respondents, out of which 1759 were EU citizens and 2067 were third-country nationals. This research however only uses data on third-country nationals working in Estonia along with other variables such as their income and occupations.

5.1.2 Qualitative Data

An analysis of semi-structured interviews is followed by the quantitative data. Semi-structured interviews have been proven to be an effective method for collecting comparable and reliable qualitative open-ended information (Galletta, 2013). Semi-structured interviews are deemed important in carrying out the in-depth conversation as it helps the researcher to

analyse the conversation including the superficial answers to develop a multi-layered conclusion (Ritchie and Lewis, 2003). Moreover, the nature of semi-structured interviews provides substantial information of which some may even inspire the generation of new ideas (Deterding and Walter, 2018).

Eight semi-structured interviews with some of the essential actors within the field of immigration in Estonia as discussed previously (chapter 5.1):

- The Ministry of Economic and Foreign Affairs
- The Ministry of Interior
- The Ministry of Education and Research
- Estonian Qualification Authority
- European Migration Network

The interviews provided the research with an interesting discussion on the phenomena of “highly skilled” migration and how Estonia addresses the criteria to define a highly skilled migrant. The interview discussion revolved around highly skilled migration, more specifically related to the criteria for defining highly skilled migration/migrants. The primary aim of the interview analysis was to understand how Estonia's legislation and official documents perceive highly skilled migration and understand the cause and criteria used in defining highly skilled migrants. Studying respondents' responses will further elucidate the current policy framework, what it is based on, composed of, and the interests and expectations of the parties involved. This interview analysis aims to add more to the secondary research conducted in the first part of the analysis. (see Annex 1 for the interview questions)

Thus, combining the primary and secondary data sources aims to address the criteria of defining a highly skilled migrant, including education, occupation, and income, to address the research objectives of its validity in the case of Estonia and provide a generalisable explanation of the importance of the term “highly skilled migration in the 21st century.

The next section will assess Estonia's current legislation, strategic documents, and attraction policies to identify how the current stakeholders and government define a "highly skilled" migrant. The document analysis will thus be combined with the empirical data and interview analysis against the criteria used to define a highly skilled migrant. This will enable the research to gain critical insights into how Estonia's definition of highly skilled differs from the current definition of highly skilled migrants.

5.2. Research Findings

This section of the analysis will integrate the theoretical framework created in Chapter 2 and 3, "definition of a "highly skilled" migrant", using three identified criteria, including education, occupation, and income, to analyse its applicability in the case of Estonia.

Moreover, the analysis in this section will also use the literature discussed under Chapter 2, including immigration systems for highly skilled as previously discussed (chapter 2.1.3) and the impact of highly skilled migrants (chapter 2.1.4) for a thorough understanding of this phenomenon. More specifically, the analysis will use quantitative method through using PBGB register data and integration monitoring survey data (2020) as a means of providing an analysis on how the criteria's identified in the theoretical framework applied to the definition of highly skilled migrant in Estonia. Moreover, qualitative data which consists of semi-structured interview conducted with the government officials are used to support the quantitative data.

Thus, before starting the analysis, the author has identified the differences between the criteria used in the literature to define a highly skilled migrant and how the legislation of Estonia has used these criteria to define a highly skilled migrant. Stating the differences will allow for a better understanding of the term and its validity.

1. Education: As discussed previously, the International Standard Classification of Education represents bachelor's level or above as a criterion to define highly skilled migrants. On the other hand, there are no such—requirements listed in Estonia's legislation.
2. Occupation: There are number of occupations listed under the International Standards of Occupation however Estonia's refers to "top specialists" or "specialists" to define a highly skilled migrant
3. Income threshold: The income criteria is different for different countries but in the case of Estonia, it often refers to paying more than the average (multiplied by 1.24 or 2) which in definition defines a highly skilled migrant.

5.1.1 Education

As discussed earlier in the literature, tertiary education has been one of the criteria to define a highly skilled migrant. Although Estonia does not use education levels to define a highly skilled migrant, the analysis will still use data from PBGB for the years between 2010 and 2015 to identify whether a bachelor's degree (proxied for skill) plays an essential role in defining a highly skilled migrant. The education levels are used against occupations to

understand whether third-country international with bachelor's degree qualifications work in highly skilled occupations per the ISCO categories as discussed previously (chapter 3.1.2) or the occupations classified in the legislation (chapter 4.2). As previously discussed in the academic literature (chapter 2.2.2), tertiary education has been widely associated with highly skilled migrants as (Arslan, 2015 and Docquier and Marfouk, 2006).

The findings from the PBGB data (including a sample of 9,041 third-country nationals) reveal that employees with a bachelor's degree (in Figure 2) who work in a specialist occupation, such as 545 third-country national, were top specialists, and 360 third-country nationals are specialists in natural sciences. This evidence is also reflected in the theoretical literature (chapter 3.1.2) when authors such as (Clemens and Pettersson 2008) study particular occupations classified as knowledge-intensive sectors where there is a need for tertiary education (his study investigated foreign doctors). Thus, the empirical analysis, to a certain extent, supports education attainment for specific sectors but not others which were also discussed in the interviews, for example:

Respondent 1: "Tertiary educational attainment is purely occupational related i.e., medical doctors or researchers, for example, must have a tertiary education as education is at the core of these occupations. In contrast, some sectors, for example, a manager's construction worker, need more practical training or work experience."

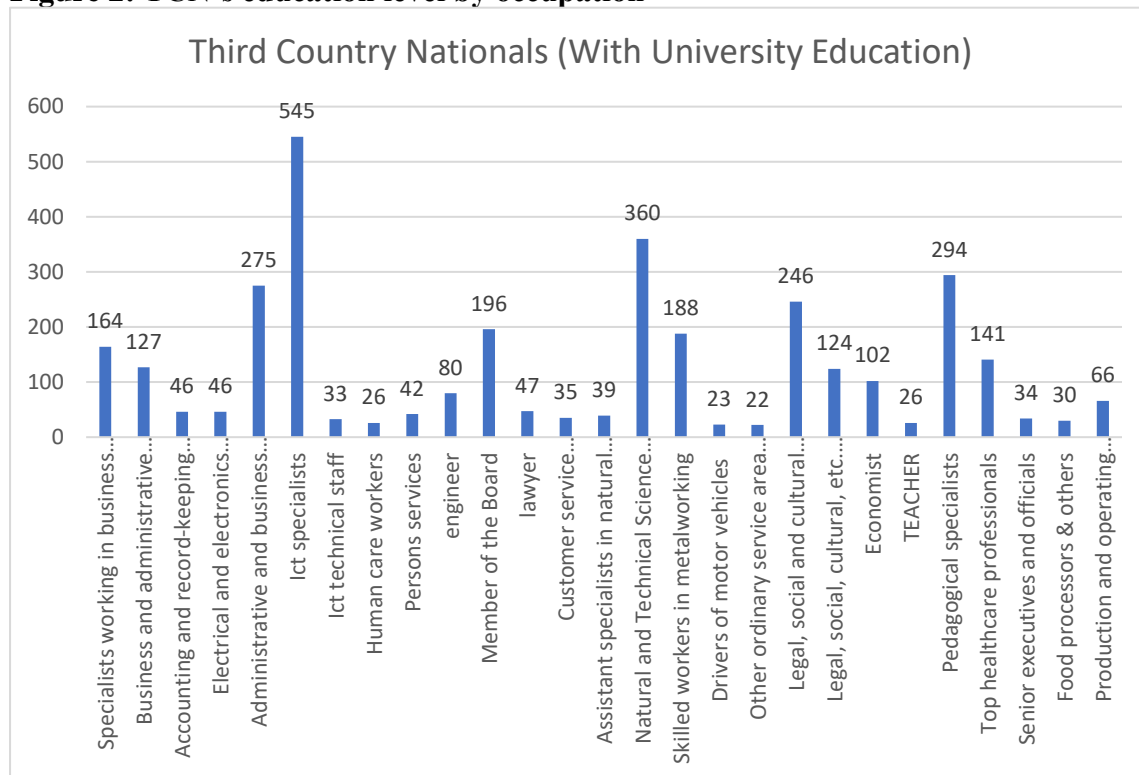
Respondent 3: "Estonia must have a category which goes beyond "highly skilled migrants" for example we need "Super Skilled" migrants with a minimum of PhD education and 10 years of work experience. This will address the shortage of researchers and professionals within the information and communication technology sector. Plus, Education is a reliable criterion to measure skills and knowledge"

However, figure 2 also shows that regardless of third-country nationals possessing bachelor's degrees, they also tend to work in mid-skilled to low skilled positions such as skilled workers in metalworking, ordinary services or food processors and catering. The evidence thus shows that workers, even with tertiary education, go through de-skilling and under employment confirming the study of (Matto et al., 2008) as previously discussed (Chapter 3.1.1).

Furthermore, the author also analysed the outcome for employees without tertiary education as it was evident in the literature that employees who are often skilled are deterred due to a country's emphasis on educational attainment in defining a highly skilled migrant. Thus, to understand the impact of Estonia's legislation which does not provide a criterion for

educational attainment levels in defining a highly skilled migrant. Figure 2 shows the education levels of third country nationals compared to occupation levels.²

Figure 2: TCN's education level by occupation

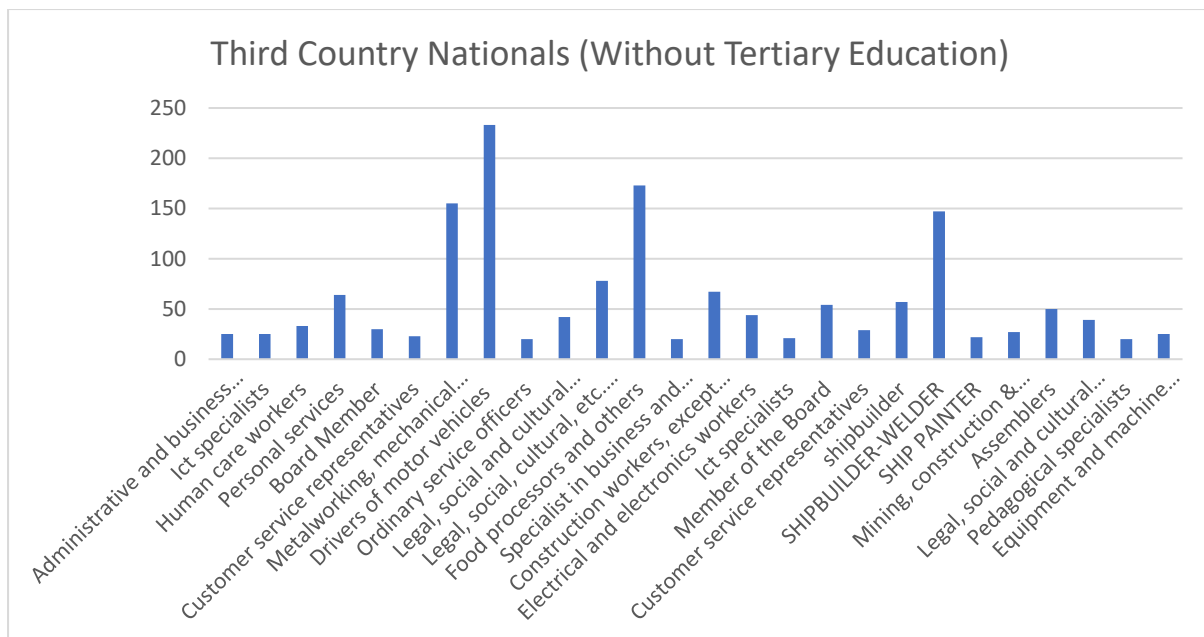


Source: Police and Border Guard Board (2010-2015)

The results thus show that third-country nationals without a bachelor's degree work in occupations classified as both highly skilled and low skilled, which shows how using tertiary education as a criterion to define highly skilled migrants is not relevant. This evidence also proves the efficiency of Estonia's definition of a highly skilled migrant as it does not attach the education levels to define somebody as skilled or unskilled.

Figure 3: TCN's Nationals (Without Tertiary Education)

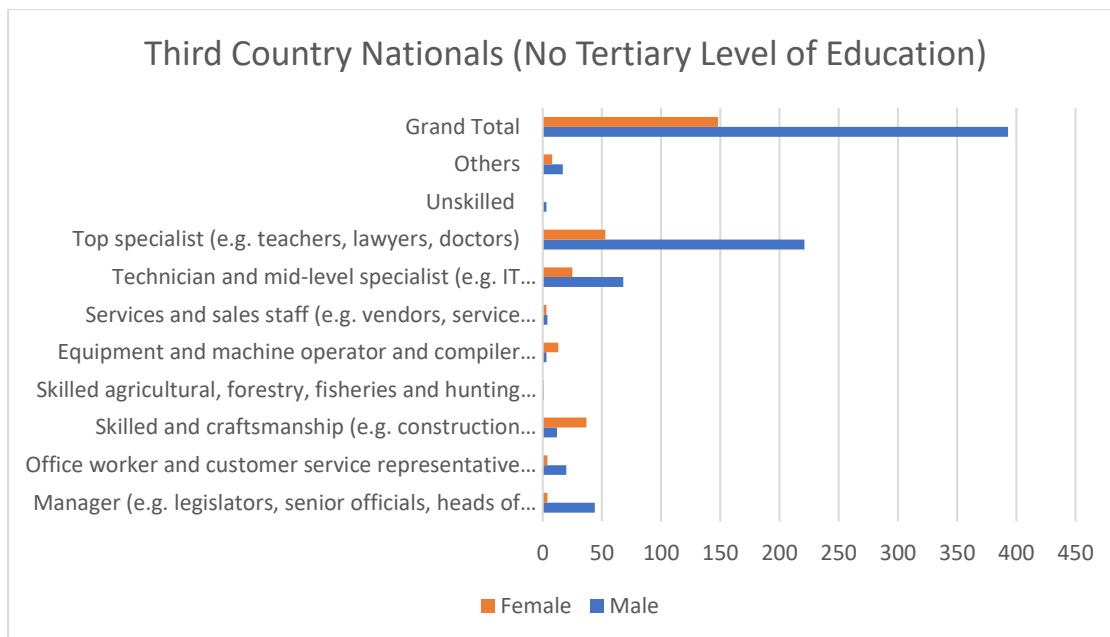
² Third-country nationals working as skilled metalworkers were excluded from this data set as it was one of the top occupations for employees with secondary and vocational education and acted as an outlier given that 1947 third-country nationals were worked under this occupation affecting the overall distribution.



Source: Police and Border Guard Board (2010-2015)

Moreover, the integration monitoring survey data 2020 has been used additionally to see whether the dynamics observed from the PBGB data analysis has been the same since 2015. According to the results as shown in Figure 2, 44% of top specialists have university-level education compared to 22% with no university level of education working in a highly skilled occupation. Therefore, the current definition of "highly skilled" in Estonia and the empirical evidence show how tertiary education is not a valid criterion for defining "highly skilled" migrants. The evidence thus shows that third-country nationals without tertiary education are filling jobs which are considered highly skilled, provided that the third-country nationals have the appropriate "professional experience" and "professional training".

Figure 4: TCN's with "No University Degree"



Source: Integration Monitoring Survey Data (2020)

The primary reason for the lack of education criteria in defining a highly skilled migrant is that Estonia has a demand-driven immigration system, which means that employers take the leading role in selecting and recruiting third-country nationals. Since employers prefer work experience over education levels (Cully, 2012), the empirical evidence thus shows the importance of employees with prior experience and training and their value to Estonia's knowledge economy. The interviewed experts heavily advocated the emphasis on work experience within the field of migration. The following extracts illustrate interviewee's preference for work experience over education are stated below:

Respondent 1: "Having a degree is great, but it does not guarantee everyone a job". It is impossible to make a tool that fits everybody. It works for everybody. One size fits all interests, education is not possible. Education is not the only criterion that describes a highly skilled person. For example, we have a lot of examples of people who are remarkably successful, who did not have the proper education and who managed somehow to get to the point where they are successful, they bring money and bring their countries good reputation" We also have online education, which is another way to learn skills, so it does not necessarily depends on whether you have a university degree" (Estonian Qualification Authority, 2022)

Respondent 2: "The education or higher education is not preliminary. They, for instance, if we are looking for some the expertise, we can look for necessary education plus work years, but we can double the work years instead of just having higher education. So, you can work

to become a skilled professional. For example, the IT sector. You might go to university but instead, you might be working for seven, or eight years and you are already highly skilled. In Estonia, the feeling amongst employers and us is that skills matter a lot more than actual degrees” (Estonian Qualification Authority, 2022).

Respondent 3: “It does not matter what kind of bachelor’s degree you have. We are talking about high skills. There must be in the CV for example what kind of degree or this is important in the science but if we are looking in work market as highly skilled, the most important thing is what you have already achieved. And in a manner of what I told you, to hire a highly skilled specialist in Estonia means that you do not usually take a graduated student. Employers want practical skills, which means work experience” (Integration Foundation, 2022).

In addition, the expansion of online education and the benefits associated with it also shows how the respondents are aware of the changing education system. The interviewee Estonian Qualification Authority heavily advocated for lifelong learning; however, he would not prioritise tertiary education for assessing a highly skilled migrant since, with the rise of globalisation and increased reliance on technology, the education system is changing. Thus the growth in online education, for example, company-based micro-credentials, are also equally relevant and essential. He also referred to the example of refugees and how Estonia is currently assessing the refugees provided their prior experience or prior education levels regardless of lack of documentation. The way to assess these groups includes providing them with specific tasks to ascertain whether they do have the skills or not.

The interview analysis also acknowledges the growing trends in the online education market the literature on the global trends in the labour market (chapter 3.1.6). It has been estimated that the online education market will reach \$585.48 billion by 2027 (Online Education Market, 2022). Thus, the increasing growth within this industry detests the current reliance on current tertiary education and thus requires the need to regulate education which can assist further in including talented and skilled individuals who were once excluded due to the rigidity of the education system. Thus, skilled, and higher education are not similar even if they are correlated. Throughout the industrial revolution and the near future, a skilled workforce needs a mix of education, training and experience which then includes a lot of people including other types of migrants such as students, refugees, dependants etc. typical without a bachelor’s degree.

5.1.2 Occupation

As discussed previously in the background section (chapter 5.1), Estonia's approach towards attracting highly skilled migrants is established on the 'employer-led system'. This allows for a fast and flexible approach for the companies to identify and fulfil the labour shortages and provide autonomy to the employers to engage effectively in the recruitment process.

Interviews with the Ministry of Interior, the Ministry of Economics of foreign affairs, Integration Foundation and heavily referred to the listed occupations in the legislation to define highly skilled migrants in Estonia. However, as previously discussed, the empirical evidence (PBGB data & integration data analysis under “education” of this section (Chapter 5.2.2) represents how the classification of occupation based on either education or income levels fails to define highly skilled migrants.

Estonia has traditionally emphasised education since its population attaining higher education surpassed the EU average. (CEDEFOP, 2020) However, Estonia also lacks workers with practical skills and professional experience, which has led to a shortage of professionals in occupations such as professional services, IT services and health and social care. More specifically, according to the CEDEFOP, the shortage of IT services is due to the lack of skills required by employers since the education system does not equip students with the relevant practical skills. The European Centre for the Development of Vocational Education (CEDEFOP) analysed how Estonia is facing issues with skills mismatch, especially within the categories which, according to the ISCO classification of occupations and Estonia's legislation, will be considered as "highly skilled" occupations. For example, according to the CEDEFOP managers across various sectors and professionals within the field of ICT and research are two of the sectors wherein labour shortages were prevalent in Estonia and both the occupation shortages along with the reasons are explained below.

Over the past several years, business management and administration have been popular courses among students. However, graduates rarely secure employment after finishing their studies. This is due to education not providing training or experience to become a manager. Personal characteristics (e.g. analytical thinking, communication skills, problem-solving, teamwork and ability to motivate other people, confidence, and decisiveness) and work experience are also required. There was a higher demand for managers in various growth sectors such as Information and communication technology; for example, previous work experience within this field is a prerequisite to being hired as a manager. Therefore, students

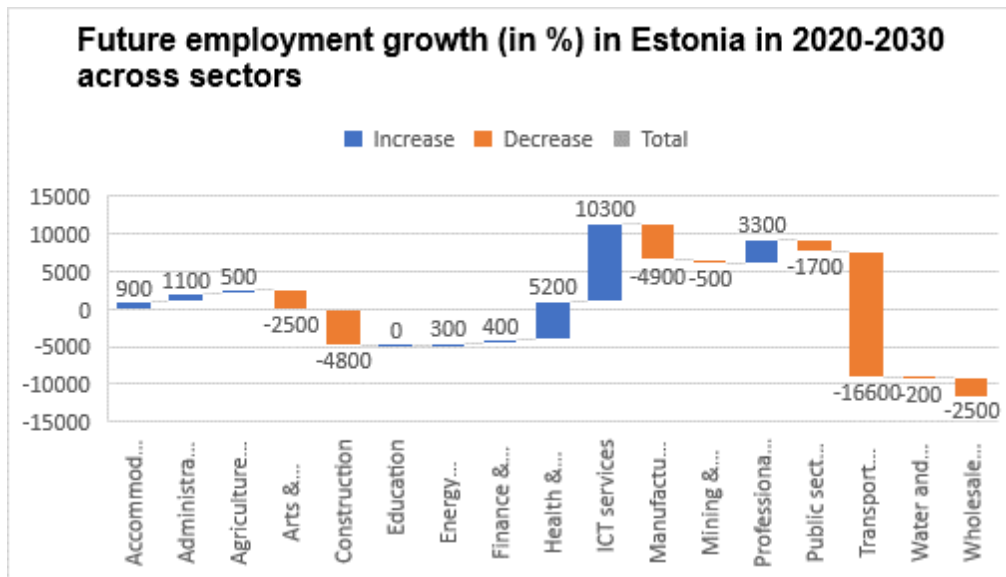
who graduate from university are usually not suitably experienced or skilled to enter management roles. (CEDEFOP, 2016)

Moreover, product development, production managers, and qualified Chief Executive Officers are required within the manufacturing sector. Therefore, in Estonia, people with previous work experience are highly preferred in the labour market. The labour shortages within this sector are not enough experienced workers with the required characteristics. One of the obstacles lies within the education system since graduates entering management positions lack essential skills. (CEDEFOP, 2016)

In addition, the ICT sector is the centre of Estonia's Economic system. The products and services produced via ICT are strongly associated with the growth of other economic sectors. Thus, the demand for IT specialists or professionals is due to the sector's continued growth and the demand for the professionals required in other sectors. Estonia is currently facing shortages of IT professionals as employers cannot find employees with practical skill sets, leading to increased competition between companies. As discussed above, the main reasons are that the education system lacks in providing the graduates with the relevant skills required to enter the labour. Thus, the shortages have also increased across different knowledge-based occupations, such as researchers and teachers in universities, as there are no skilled professionals that can help students develop skills that are in short supply. In addition, hard skills such as data transmission, software development, networks and communication combined with soft skills such as project management and problem-solving are becoming increasingly essential.

The OSKA labour market forecast discussed previously (Chapter 5.1.4), and the conclusions of the future growth of employment by the European Centre for the Development of Vocational Education (CEDEFOP) as shown in figure 5 confirms the need for these occupations. The forecasted growth for occupations such as ICT services and health and professional services shows that they will increase heavily by 2030. Therefore, the relevance of the legislation based on attracting workers based on professional experience and training is a relevant criterion in defining a highly skilled migrant.

Figure 5: Future Employment Growth (in %) in Estonia 2020-2030



Source: The European Centre for the Development of Vocational Education

On the other hand, however, the current legislation partially addresses the labour market shortages since it restricts some occupations more than others, wherein the labour market shortages are rising. The immigration quota was criticised heavily by the Chamber of Commerce, as they implied that Estonia's immigration quota does not decrease the labour shortage but instead exacerbates the issues. The Estonian Chamber of Commerce and Industry representative strongly urges for excluding from the immigration quota, especially in occupations wherein there is a significant labour shortage. For example, he recommended that employees paid more than 1.24 than the national average, such as Engineers, must be removed from the quota. (ERR, 2021)

This is a fundamental problem because businesses in Estonia find it difficult to find an employee with the right knowledge, experience, and skills. The Chamber of Commerce stated that this is a crucial problem since employers are often ready to provide competitive wages and training as they require such employees; however, they cannot do this as there are not enough opportunities. Although there are diverse ways, for example, visas based on employment, seasonal or temporary workers. However, these are often temporary, especially when there is a need to provide a stable environment and, more importantly, a longer-term solution. The state can benefit from a long-term solution via taxes, and providing such opportunities is also encouraging for employees.

The interview analysis also addressed this problem. Estonian Qualification Authority represented the problem with the immigration quota. The organisation explained the need to

remove this quota since it provides "first come, first served", which is problematic as the threshold excludes immigrants required by the labour market. This happened when PPA began accepting applications in December 2018 for residence permits to be granted in 2019. According to a PPA press release, over 1,000 applications had already been submitted within the first few weeks. By 31st December, this total number of residence permits reached 1,300, and by 2nd January, the immigration quota for the year was complete. (ERR, 2021)

According to the Ministry of Interior, they intend to hold few resident permits for artists, people in the field of sports, mentors, and others. Nonetheless, more than 20 were not used in the year 2020. With demand for laborers being higher than the immigration quota for the following year, the chamber is uncertain why these places are reserved for creative works as opposed to engineers. With respect to the allocation of residence permits, limiting the issuance of residence permits will affect the state as they would have earned a few hundred thousand additional euros each year through imposing taxes on labour assuming that all the allotted number of residence permits had been utilized.

Moreover, labour shortages are not stationary, and the labour shortage forecast for the year 2016-2022 represents a different picture. The table below indicates the number of people working in various occupations compared to the future needs. Asari, Massing and Luik (2015) identified the current supply of labour as shown in Table 6 within five years and forecasted the needs of the labour market until 2022. Although the pattern shows that the needs for all categories are higher than the current supply, the categories that are suffering the most include mid-skilled to low-skilled workers. For example, a gap can be seen for "the drivers of motor vehicles and machinery", which represents a considerable gap between the immigrants working in the sector (405) vs the need (11200).

Table 7: Labour Market Forecast 2013-2022

Occupation	Total Immigrants (2009-2014)	Labour Market Needs (2013-2022)
Managers	44	6300
Top specialist in natural and technical sciences	908	4200
Top healthcare professionals	504	3000
Top specialist in pedagogy	628	4600

Intermediate specialists in business and administration	176	9500
Personal Services	291	5000
Sellers	32	6200
Personal Care Workers	55	2900
Horticulture and agricultural workers	3	1800
Construction workers except for electricians	522	5200
Skilled workers in metalworking, and mechanical engineering.	1949	5800
Equipment and machine operators	79	4300
Workers in craft industries	219	3600
Drivers of motor vehicles and mobile machinery	405	11200
Cleaners	2	4300
Auxiliary Catering Workers	9	1200
Mining, construction, manufacturing, and transport workers	34	1400
Garbage trucks and unskilled workers	1	4500

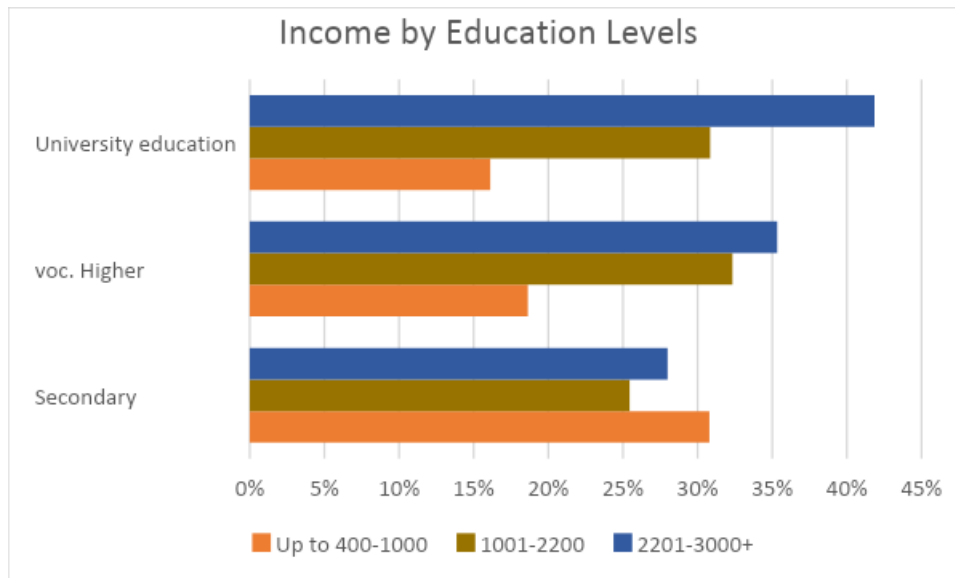
Source: Adapted from the study by (Asari, Massing and Luik, 2015)

5.1.3 Income Criteria

As discussed previously (chapter 3.2.3), Borja (2005) provided income level as one of the criteria used to measure highly skilled migrants. He suggested developing thresholds at a certain income level to better distinguish between highly skilled from low or unskilled. Anyone who meets the applied cut-off threshold will be identified as a highly skilled migrant. The integration monitoring survey analyses the level of education and income levels of third-country nationals in Estonia. To test this hypothesis, the integration monitoring survey analyses the level of education and income levels of third-country nationals in Estonia. According to the results in Figure 6, regardless of having a university degree, there are third-country nationals without tertiary education earning above the average income, which in the

year of this survey data (2020) was around 1,448 euros. Again, income is not a relevant criterion when assessed with education levels. Also, it disproves the notion that a worker with higher education can expect higher wages (Iskander, 2018).

Figure 6: Income by Level of Education



On the other hand, and as discussed earlier, Estonia’s definition of highly skilled includes two criteria, i.e., occupations associated with an income level and a lack of a supply-driven system in place (points-based system). It attracts migrants via a demand-driven approach wherein the employer is solely responsible for recruitment. Therefore, Estonia’s legislation favours setting an income threshold (Borja’s (2005) definition of highly skilled) to filter highly skilled from low skilled migrants, which is an efficient system compared to other countries. For example, the Canadian system uses education and income to divide the two categories as previously discussed (Chapter 3.1.5). The interviews also supported the income threshold to attract highly skilled migrants; extracts from the interviews are highlighted below:

Respondent 1: “You must hire with a higher salary higher wage, and that wage is already so high that once the employee once really wants that specialist he probably or she knows best, who to hire. I have counted that it must be something about over 5000 euro per month to hire that kind of high specialists that you need. So, this means that this is necessary for that company. And on that level state does not interfere with that selection process because this is a free market. Once the employer can pay such amount of money every month, they can make the decisions because this amount needs to be brought back in profit” (Integration Foundation, 2022)

Papademetriou (2008) mentioned how demand-driven approaches assist countries with an inadequate supply of labour and thus using income criteria distinguishes between “highly skilled” from “skilled” migrant. The income threshold also protects the jobs and salaries of the natives and in return, these highly skilled workers contributed to the growth of the economy as well as Estonia’s ‘Knowledge Economy.’ Nonetheless, the literature has argued with employers being the sole decision-maker often avoid hiring as they believe that it is too expensive (OECD, 2013). Estonia's legislation supports a demand-driven immigration system, and so do the interviewees as they implied:

Respondent 2: “I do know that Information and Communication Technology, ICT is a sector of our national economy, which has been in a bad need for, let us say, additional workforce force. Some years ago, one amendment to the migration legislation has been introduced so in a way for these, these people, which were seen as an additional workforce for the ICT sector, so they were included in the community or let us say highly skilled migrants. And to a certain extent, these people have significantly added to our ICT sector. So, allocating an income for these highly skilled migrants addresses the needs of Estonia’s economy and filters talented people from less talented migrants.” (Ministry of Interior, 2022)

5.1.4 Contested Category: Students

The OECD countries value students for two reasons: ‘knowledge creators’ or ‘source of economic gains for education institutions’ (OECD, 2012, p.64) via transforming into labour migrants. Identified in the literature (Chapter 3.1.4) there four views on students, are seen as either knowledge migrant and labour migrant, defined as beneficial for a country state in terms of economic gains, can be either a passenger, (tend to have temporary mobility or permanent stay). Based on the previous discussion on national policies for defining a highly skilled migrant in Estonia as discussed previously (Chapter 4.2). It is a given that Estonia sees students as “highly skilled,” and the “Estonian Research, Development, and Innovation strategy 2007-2013” also reflected how essential it is to prioritise the attraction of students and individuals (as stated in the report “foreign talent”) with tertiary education. The report mentions the need to ease access for foreigners to “study and work” at higher institutions. The strategic document also emphasizes how the influx of international students may indicate and endorse the quality and competitiveness of Estonian education.

Moreover, the need for international students has also been reflected in the labour market forecast report by the Estonian Qualification Authority, implying that Estonia lacks young

graduates in construction, technology, education, production, and agriculture. The report also highlights the growing need for workers with higher education or vocational education or training compared to students with primary or general education since jobs requiring the former levels will decrease in the future reflecting the potential for students becoming labour migrants. (Labour Market Forecast 2019-2027).

Arguments for students becoming labour migrant also includes Estonia prioritising internationalisation efforts of higher education via focusing on master's and PhD levels has provided beneficial outcomes for Estonia. According to an alumni survey by Rootalu (2020), it was revealed that from 2005 to 2016, the total average share of international students residing in Estonia to work post-graduation increased from 21% to 26%. (Moreover, within the eleven years, it has been observed that international students' share was highest (41%) in technical fields, followed by Information and technology (38%) followed by production (35%) and only (24%) in social sciences. Also, international student showed higher tendency to work while they study, especially students from Africa.

In addition to this, for the years 2019-2020, 80% of African alumni stayed in Estonia for employment. International students studying ICT, manufacturing, construction, engineering, business, and law are highly likely to work whilst they study in Estonia. Approximately two-thirds of them were within the field of ICT continued to work during the academic year between 2019 and 2020. Moreover, construction, engineering, manufacturing and information communication and technology graduates tend to stay and work in Estonia. (Rootalu, 2019, Rootalu et al., 2021)

In terms of the geographical locations of these international degree students, many of the international students come from Finland (1140), Russia (447), Nigeria (325) and Ukraine (254). One of the priorities has been attracting quality talent and being selective in recruiting international students. In terms of enjoying economic gains, Estonia only partially addresses them. For example, to attract large numbers of international students, one of the conditions has been giving them a possibility for free studies, i.e. offering them tuition waivers. This is in no way financially beneficial for the university but helps to achieve the two other goals: supporting quality and staying in employment in Estonia, bringing the best graduates to the Estonian labour market.

Moreover, for example, this may influence a talented Ukrainian to choose Tartu rather than an American university. Valk (2020) also implied that when a university pays for the two-

year programme with public money, they are most likely to get it back in a month if a graduate finds employment within the IT sector and earns a monthly income of 2,000 euros. However, if they get the average salary, it might take a few months to get it back in taxes.

6. Conclusion

This thesis aimed to analyse and conceptualise highly skilled migration and identify the criteria used to define a highly skilled migrant and its usefulness in academic debates, policy discussions and in international migration.

The thesis begins with a discussion on the benefits of highly skilled migration, discussed in the academic literature on migration and international immigration policies. The theoretical analysis and discussion on highly skilled migrants from both the academic and policy spectrum provided some critical insights in identifying the criteria such as education, occupation and income, which, as per the literature, shows widely accepted criteria for defining a highly skilled migrant.

Identifying these criteria led to a further critical analysis which highlighted various inconsistencies. For example, educational criteria revealed that a migrant does not have to be skilled to be educated. The definition of tertiary education differs from one country to another, along with education requirements to consider someone as highly skilled. For example, artists or athletes do not necessarily need to obtain a bachelor's degree or workers' years of experience. However, a lack of education does not mean they are not skilled. Moreover, the changes in the labour market have also created different pathways to obtain skills, such as online courses, on the job training and self-learning.

Occupation as the second criteria also represented some fundamental problems, such as the international standards classification of occupation is combined with a level of education, which in today's generation can represent some inconsistencies as the rigidity of this leads to incorrectly identifying a skilled occupation. As discussed in the global trends of the labour market, some occupations are now being replaced with automation. The change shows the volatility in the labour market. Moreover, every country has its list of occupations to which they identify as somebody who is a highly skilled migrant; however, this again differs from one country to another and is often linked with the level of education. For example, nurses in Ukraine are considered highly skilled regardless of their level of education; however, as per Estonia, a nurse must have a higher qualification level. Thus, listing occupation to define a highly skilled is not ideal.

Moreover, especially when countries list skilled occupations based on shortages. This is not a good approach since shortages for occupations are not stagnant and can change. For example, Covid-19 showed the importance of essential workers wherein the demand for mid-to-low skilled was higher than the highly skilled.

Lastly, the income criteria showed some inconsistencies, too, as setting an income threshold is not ideal. It was represented by the example of the tier 2 system in the UK, wherein setting income thresholds to define a highly skilled excluded female workers created gender disparities. Moreover, this has also been observed with the EU blue card, wherein most EU blue card holders are men.

After critically analysing these components, the thesis addressed the contested categories from which students were studied and identified as one type of migrant affected by these criteria. It was revealed that some authors define international students as potential highly skilled and some do not, as they believe that they do not have the relevant knowledge or the expertise. The discussion then led to exploring the dichotomy of highly skilled vs low skilled as studying students as a category provided an impetus for how highly skilled are differentiated from other groups and why. The traditional dichotomy of highly vs low skilled migrants revealed that these criteria have several problems; it tends to create an exclusionary zone for people who might already be highly skilled but lack one or the other criteria to be identified as a highly-skilled. Finally, the author investigated the labour market trends to identify the current needs and structural changes in the labour market and discussed whether they are addressed by the current criteria. The global market trend revealed how the rise of technology is changing the employment sector, wherein the non-traditional pathway to obtaining skills is growing. For example, with the rise of online education and labour, new roles and opportunities do not reflect the occupational categories. The rise in skills-based migration also reflected how the once deemed valid criteria are heavily contested.

After amalgamating all the information, the thesis studies the case study of Estonia. Estonia does not fully abide by the criteria identified in the literature; for example, despite having a highly qualified workforce, the Alien Act (legislation) does not provide education as a criterion to define a highly skilled migrant. Moreover, none of the previous research has addressed the conceptualisation of highly skilled migrants in Estonia (although few studies have used this term to research the phenomena of highly skilled migration but without any critical assessment or exploration of the term to show how the term really fits their research).

Thereby, to fulfil the research gap and identify the usefulness of the criteria identified in the literature, the thesis further analyses Estonia's immigration climate by studying the regulation, the flows, and the national policies to identify how they define them as highly skilled migrants.

The thesis provided a theoretical discussion on the definition of "highly skilled migrant" in Estonia via analysing the country's strategic documents, legislation, and expert interviews that revealed the efficiency of Estonia's immigration system to a certain extent. For further understanding of the criteria, Public and Border Guard Board registry data 2010-2015 was used along with the integration survey data 2020 to assess the term's efficiency through linking the identified criteria from the theoretical framework namely education, occupation, and income,

Estonia has a specific niche, particularly its reliance on the 'knowledge economy'. Thus, the economy strives to hire migrants specialising in fields as 'top specialists'. Thus, it justifies their need to list these occupations in their legislation and an income threshold that only allows migrants with crucial expertise. The lack of educational criteria in their legislation reflects their preference for work experience. Therefore, Estonia is a brilliant case study that shows that education or, more specifically, tertiary education does not characterise someone as highly skilled. Other factors influence individuals to become specialised in their occupation, and work experience is one of them. Although there are some policy recommendations, for example, to improve the flow of international students, Estonia needs to design a policy concerning these groups of migrants, including attractive prospects since international students are earning less than the natives. In simpler terms, even though Estonia recognises international students as potentially highly skilled migrants, they do not provide the same incentives they offer to someone whose entry into Estonia is based on their employment. For example, a top specialist earns more than the average; however, even if international students have a similar experience, they will still be paid less. Thus, in such a case, international students who become 'highly skilled' will look for better opportunities elsewhere. They will hope to receive extra benefits for their expertise—ignoring the importance of international students as potential highly skilled migrants can further lead to de-skilling or unemployment.

Moreover, differences are observed in how a country characterises someone as skilled; for example, Estonia requires a nurse to have formal education compared to Ukraine, wherein

work experience ought to be an essential criterion in defining whether someone is skilled. These differences create difficulty for already skilled migrants. Therefore, it will be ideal for countries to develop international agreements on a specific occupation. For example, the international council, which provides a framework for general nurses, tends to provide global education and international standards. Therefore, the example can provide the basis for creating a framework on either a global or regional framework that considers the skills composition for a particular occupation rather than identifying which education levels are required.

Estonia invalidates the current definition of a highly skilled migrant presented in the academic literature as the nation's use of the criteria revealed inconsistencies. The case of Estonia presents some key insights which can be used to construct a new definition. Therefore, the term "Highly Skilled" is not relevant within the age of the knowledge economy. Thus it must be studied further to acknowledge whether the global market needs "highly skilled" or simply "skilled migrant".

Furthermore, here are some criticisms that academics policymakers must acknowledge before conducting future research on immigration:

- Academic scholars need to be extremely cautious while using criteria such as education as a proxy for skill or to define a highly-skilled migrant since it does not necessarily equate to skill and varies from one sector to another.
- Scholars must acknowledge the current and future trends in skill acquisition to build a sector-specific framework which eliminates the problem of excluding potential skilled migrants based on traditional criteria such as education.

The term "highly skilled" does not necessarily differentiate from skilled migrant, and this term's political stance often represents a preference for one type of migrant more than the other.

- Classifying occupations in immigration policies often do not acknowledge that labour market changes are not stagnant and thus require all types of migrants.

Finally, this thesis has identified how a change is required in the academic literature within the field of highly skilled migrants and the policy domain. The time has come to acknowledge the flexible approach towards skills and recognising talent, which comes from being highly educated and from other sources that the US has identified as "STARS" skills

attained through alternative routes. This is a highly substantial part of today's world. Many migrants go through various phases, including their tendency to up-skilling either via attaining higher education in a destination country, working in multiple occupations or self-learning. Thus, this thesis provides a fundamental base on transforming the traditional definition of identifying a particular group of "highly skilled" migrants to deconstruct this phenomenon into "skilled migrants". The change will benefit economies that deter low to mid skills migrants since their numbers are exceedingly high in every economy. Their categories have also been changed to "essential workers". Every country needs to ask how they can utilise migrants to strengthen their competitiveness to move forward. Being restrictive and selective in this process means a loss to both immigrants and the destination country.

List of Sources

1. Aghion, P., Cai, J., Dewatripont, M., Du, L., Harrison, A., & Legros, P. (2015). Industrial policy and competition. *American Economic Journal: Macroeconomics*, 7(4), 1-32. [Accessed 29th April 2022]
2. Alavi, H., & Khamichonak, T. (2015). Immigration of Highly-Skilled Workers to Estonia: Current Trends and Legislative Framework/Imigrácia Kvalifikovanej Pracovnej Sily Do Estónska: Súčasné Trendy A Právny Ráмец. *EU agrarian Law*, 4(2), 7-14. <https://www.sciendo.com/article/10.1515/eual-2015-0008> [Accessed 25 April 2022].
3. Ark, T. V. (2021). The Rise Of Skills-Based Hiring And What It Means For Education. *Forbes*. <https://www.forbes.com/sites/tomvanderark/2021/06/29/the-rise-of-skills-based-hiring-and-what-it-means-for-education/?sh=3f221cdc4fa7> [Accessed 25 April 2022].
4. Arslan, Cansin, Jean-Christophe Dumont, Zovanga Kone, Yasser Moullan, Caglar Ozden, Christopher Parsons, and Theodora Xenogiani. "A new profile of migrants in the aftermath of the recent economic crisis." (2015). <https://doi.org/10.1787/1815199X> [Accessed 29th April 2022]
5. Aydemir, A., & Borjas, G. J. (2007). Cross-country variation in the impact of international migration: Canada, Mexico, and the United States. *Journal of the European Economic Association*, 5(4), 663-708. <https://www.jstor.org/stable/40005079> [Accessed 29th April 2022]
6. Bannykh, G., & Kostina, S. (2021). Global trends in employment changes and their impact on professionalisation. In *SHS Web of Conferences* (Vol. 92). EDP Sciences. <https://doi.org/10.1051/shsconf/20219207007>
7. Beach, C. M., Green, A. G., & Worswick, C. (2007). Impacts of the point system and immigration policy levers on skill characteristics of Canadian immigrants. In *Immigration*. Emerald Group Publishing Limited. [https://doi.org/10.1016/S0147-9121\(07\)00009-X](https://doi.org/10.1016/S0147-9121(07)00009-X)

8. Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago press. [Accessed 29th April 2022]
9. Beine, M., Docquier, F., & Rapoport, H. (2007). Measuring internationalal skilled migration: a new database controlling for age of entry. *The World Bank Economic Review*, 21(2), 249-254.
https://www.researchgate.net/publication/31190072_Measuring_Internationalal_Skilled_Migration_A_New_Database_Controlling_for_Age_of_Entry [Accessed 29th April 2022]
10. Bhargava, A., Docquier, F., & Moullan, Y. (2011). Modeling the effects of physician emigration on human development. *Economics & Human Biology*, 9(2), 172-183.
<https://doi.org/10.1016/j.ehb.2010.12.004>
11. Blitz, B. K. (2010). Highly skilled migration. In *Oxford Research Encyclopedia of International Studies*. [Accessed 29th April 2022]
12. Borjas, G. J. (1987). *Self-selection and the earnings of immigrants* (No. w2248). Country Bureau of Economic Research. <https://www.jstor.org/stable/1814529> [Accessed 29th April 2022]
13. Borjas, G. J. (2005). The labor-market impact of high-skill immigration. *American Economic Review*, 95(2), 56-60. <https://doi.org/10.1257/000282805774670040> [Accessed 29th April 2022]
14. Borjas, G. J., & Doran, K. B. (2012). The collapse of the Soviet Union and the productivity of American mathematicians. *The Quarterly Journal of Economics*, 127(3), 1143-1203. 10.3386/w17800 [Accessed 29th April 2022]
15. Boucher, A. (2016). Gender, migration and the global race for talent. In *Gender, migration and the global race for talent*. Manchester University Press. 10.7228/manchester/9780719099458.001.0001 [Accessed 29th April 2022]
16. Boucher, A. and Cerna, L., 2014. Current Policy Trends in Skilled Immigration Policy. *Internationalal Migration*, 52(3), pp.21-25.
<https://www.luciecerna.com/uploads/5/1/2/5/5125288/boucher-cerna.pdf> [Accessed 29th April 2022]
17. Boucher, A. K. (2020). How ‘skill’ definition affects the diversity of skilled immigration policies. *Journal of Ethnic and Migration Studies*, 46(12), 2533-2550.
<https://www.tandfonline.com/doi/full/10.1080/1369183X.2018.1561063> [Accessed 25 April 2022].

18. Bouvier, L. F., & Simcox, D. (1995). Foreign-born professionals in the United States. *Population and Environment*, 429-444.
<https://www.jstor.org/stable/27503417>
19. Brücker, H., Docquier, F., & Rapoport, H. (2012). *Brain drain and brain gain: The global competition to attract high-skilled migrants*. Oxford University Press.
[https://www.researchgate.net/publication/296901609 Brain Drain and Brain Gain The Global Competition to Attract High-Skilled Migrants](https://www.researchgate.net/publication/296901609_Brain_Drain_and_Brain_Gain_The_Global_Competition_to_Attract_High-Skilled_Migrants) [Accessed 29th April 2022]
20. Bulat, A. (2019). 'High-Skilled Good, Low-Skilled Bad?' British, Polish and Romanian Attitudes Towards Low-Skilled EU Migration. *Countryal Institute Economic Review*, 248(1), R49-R57. <https://doi.org/10.1177/002795011924800113> [Accessed 29th April 2022]
21. CEDEFOP. (2022). *Strengthening skills anticipation and matching in Estonia* (p. 27). Luxembourg: Publications Office of the European Union, 2020. Retrieved from https://www.cedefop.europa.eu/files/4183_en.pdf
22. Cepla, Z. (2021). Skills mix: foreign-born workers bring more than university degrees to high-income countries. <http://hdl.voced.edu.au/10707/591376> [Accessed 25 April 2022].
23. Cerna, L. (2013). The nature of policy change and implementation: A review of different theoretical approaches. *Organisation for Economic Cooperation and Development (OECD) report*, 492-502. 20a
<https://www.oecd.org/education/ceri/The%20Nature%20of%20Policy%20Change%20and%20Implementation.pdf> [Accessed 29th April 2022]
24. Cerna, L. (2013). Understanding the diversity of EU migration policy in practice: the implementation of the Blue Card initiative. *Policy studies*, 34(2), 180-200.
<https://doi.org/10.1080/01442872.2013.767587> [Accessed 29th April 2022]
25. Chaloff, J., & Lemaitre, G. (2009). Managing highly-skilled labour migration: A comparative analysis of migration policies and challenges in OECD countries.
<https://doi.org/10.1787/225505346577> [Accessed 29th April 2022]
26. Chaloff, J., & Lemaitre, G. (2009). Managing highly-skilled labour migration: A comparative analysis of migration policies and challenges in OECD countries.
<https://doi.org/10.1787/225505346577> [Accessed 29th April 2022]

27. Clemens, M. A., & Pettersson, G. (2008). New data on African health professionals abroad. *Human Resources for Health*, 6(1), 1-11. <https://doi.org/10.1186/1478-4491-6-1> [Accessed 29th April 2022]
28. Coulombe, S., & Tremblay, J. F. (2009). Education, productivity and economic growth: a selective review of the evidence. *Internationalal productivity monitor*, (18), 3. https://www.researchgate.net/publication/227580071_Education_Productivity_and_Economic_Growth_A_Selective_Review_of_the_Evidence [Accessed 29th April 2022]
29. Cully, M. (2011). Managing labour migration in response to economic and demographic needs. In *Paper presented at internationalal dialogue on migration 2011*. <https://www.iom.int/sites/g/files/tmzbd1486/files/jahia/webdav/shared/shared/mainsite/microsites/IDM/workshops/economic-cycles-demographic-change/Session-3-Mark-Cully.pdf> [Accessed 29th April 2022]
30. Cully, M. (2012). More than additions to population: the economic and fiscal impact of immigration. *Australian Economic Review*, 45(3), 344-349. <https://doi.org/10.1111/j.1467-8462.2012.00693.x> [Accessed 29th April 2022]
31. Czaika, M., & De Haas, H. (2013). The effectiveness of immigration policies. *Population and Development Review*, 39(3), 487-508. <https://doi.org/10.1111/j.1728-4457.2013.00613.x> [Accessed 29th April 2022]
32. Czaika, M., & Parsons, C. R. (2017). The gravity of high-skilled migration policies. *Demography*, 54(2), 603-630. <https://doi.org/10.1007/s13524-017-0559-1> [Accessed 29th April 2022]
33. Czaika, M., & Toma, S. (2017). Internationalal academic mobility across space and time: The case of Indian academics. *Population, Space and Place*, 23(8), e2069. <https://doi.org/10.1002/psp.2069> [Accessed 29th April 2022]
34. Czaika, M., 2018. *High-skilled Migration: Drivers and Policies*. [https://books.google.co.uk/books?hl=en&lr=&id=aXFGDwAAQBAJ&oi=fnd&pg=PP1&dq=Czaika+\(2018\)&ots=bt0Z_4Vw4L&sig=A3FbmacmFewURq1tw1bKSu2XtE0#v=onepage&q=Czaika%20\(2018\)&f=false](https://books.google.co.uk/books?hl=en&lr=&id=aXFGDwAAQBAJ&oi=fnd&pg=PP1&dq=Czaika+(2018)&ots=bt0Z_4Vw4L&sig=A3FbmacmFewURq1tw1bKSu2XtE0#v=onepage&q=Czaika%20(2018)&f=false) [Accessed 29th April 2022]
35. Deterding, N. M., & Waters, M. C. (2018). Flexible coding of in-depth interviews: A twenty-first-century approach. *Sociological methods & research*, 50(2), 708-739. <https://doi.org/10.1177/0049124118799377> [Accessed 29th April 2022]

36. Docquier, F., & Marfouk, A. (2006). International migration by education attainment, 1990–2000. *International migration, remittances and the brain drain*, 151-199. [Accessed 29th April 2022]
37. Docquier, F., Lowell, B. L., & Marfouk, A. (2009). A gendered assessment of highly skilled emigration. *Population and Development review*, 35(2), 297-321. <https://doi.org/10.1111/j.1728-4457.2009.00277.x> [Accessed 29th April 2022]
38. Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., ... & Shriver, T. P. (1997). *Promoting social and emotional learning: Guidelines for educators*. Ascd. <https://eric.ed.gov/?id=ED414020> [Accessed 29th April 2022]
39. Ermicioi, N., Liu, M. X., & Murphy, D. (2021). Digital Badges as an Agile Pathway: Implementing Graduate-Level, Micro-Credential Programs to Reskill the IT Workforce. In *Proceedings of the EDSIG Conference ISSN* (Vol. 2473, p. 4901). [Accessed 25 April 2022].
40. Espenshade, T. J., Usdansky, M. L., & Chung, C. Y. (2001). Employment and earnings of foreign-born scientists and engineers. *Population Research and Policy Review*, 20(1/2), 81-105. <https://www.jstor.org/stable/40230299> [Accessed 29th April 2022]
41. Eurobarometer, S., & Wave, E. (2018). Standard Eurobarometer 89 Spring 2018. *European Commission*. [Accessed 29th April 2022]
42. European Centre for the Development of Vocational Training. 2016. *Estonia: Mismatch priority occupations*. [online] Available at: <https://www.cedefop.europa.eu/en/data-insights/estonia-mismatch-priority-occupations> [Accessed 25 April 2022].
43. European Commission (2022). *ATTRACTING HIGHLY QUALIFIED AND QUALIFIED THIRD-COUNTRY COUNTRYALS IN THE EUROPEAN UNION*. [ebook] Estonia Academy of Security Sciences and Migration Studies, pp.19,20,65,66,67,68,6,70,72,73,74. Available at: https://digiriul.sisekaitse.ee/bitstream/handle/123456789/197/EMN_ENG.pdf [Accessed 25 April 2022].
44. European Commission. (2018). *European Migrations Dynamics, drivers, and the role of policies*. <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC109783/kjna29060enn.pdf>
45. EUROSTAT. (2022). Retrieved 16 May 2022

46. Facchini, G., & Lodigiani, E. (2014). Attracting skilled immigrants: An overview of recent policy developments in advanced countries. *Countrysal Institute Economic Review*, 229, R3-R21. <https://doi.org/10.1177/002795011422900102> [Accessed 29th April 2022]
47. Föbker, S., Imani, D., Nipper, J., Otto, M., & Pfaffenbach, C. (2016). Translocal life and integration of highly-skilled migrants in Germany. *Erdkunde*, 109-124. <https://www.jstor.org/stable/24893169> [Accessed 29th April 2022]
48. Franzoni, C., Scellato, G., & Stephan, P. (2012). Foreign-born scientists: mobility patterns for 16 countries. *Nature biotechnology*, 30(12), 1250-1253. <https://doi.org/10.1038/nbt.2449> [Accessed 29th April 2022]
49. Fuller, J. B., & Raman, M. (2017). Dismissed by degrees: How degree inflation is undermining US competitiveness and hurting America's middle class. *Accenture, Grads of Life, Harvard Business School*. <https://www.hbs.edu/managing-the-future-of-work/Documents/dismissed-by-degrees.pdf> [Accessed 29th April 2022]
50. Galletta, A. (2013). Mastering the semi-structured interview and beyond. In *Mastering the semi-structured interview and beyond*. New York University Press. <https://doi.org/10.18574/9780814732953> [Accessed 29th April 2022]
51. Genova, E. (2017). 'Between a rock and a hard place': Bulgarian highly skilled migrants' experiences of external and internal stereotypes in the context of the European crisis. *National Identities*, 19(1), 33-51. <https://doi.org/10.1080/14608944.2015.1136609> [Accessed 29th April 2022]
52. Giulietti, C., & Wahba, J. (2013). Welfare migration. In *Internationalal handbook on the economics of migration*. Edward Elgar Publishing. <https://www.elgaronline.com/view/edcoll/9781845426293/9781845426293.00036.xml> [Accessed 29th April 2022]
53. Gropas, D. and Triandafyllidou, D., 2014. *European Immigration: A Sourcebook*. 2nd ed. [ebook] Available at: <https://books.google.co.uk/books?hl=en&lr=&id=rbijBgAAQBAJ&oi=fnd&pg=PR11&dq=Triandafyllidou+and+Gropas,+2014&ots=C4RDFKdVZz&sig=qXprEn4DVwf6O0hGWudEhXmPG5Y#v=onepage&q=Triandafyllidou%20and%20Gropas%2C%202014&f=false> [Accessed 29 April 2022].
54. Hagan, J. (2016). *Defining Skill: The Many Forms of Skilled Immigrant Labor*. American Immigration Council.

<https://www.americanimmigrationcouncil.org/research/defining-skill-many-forms-skilled-immigrant-labor> [Accessed 29th April 2022]

55. Hagan, J. (2022). *Defining Skill: The Many Forms of Skilled Immigrant Labor* [Ebook]. American Immigration Council. Retrieved 25 April 2022, from Turnovsky, S., & Wang, Z. (2022). The Effects of Globalization on Skilled Labor, Unskilled Labor, and the Skill Premium. *Open Economies Review*.
<https://doi.org/10.1007/s11079-022-09666-6>. [Accessed 29th April 2022]
56. Hagan, J., Demonsant, J. L., & Chávez, S. (2014). Identifying and measuring the lifelong human capital of “Unskilled” migrants in the Mexico-US migratory circuit. *Journal on migration and Human Security*, 2(2), 76-100.
<https://doi.org/10.1177/233150241400200202> [Accessed 29th April 2022]
57. Hagan, J., Lowe, N., & Quingla, C. (2011). Skills on the move: Rethinking the relationship between human capital and immigrant economic mobility. *Work and occupations*, 38(2), 149-178. <https://doi.org/10.1177/0730888410397918> [Accessed 29th April 2022]
58. Hagan, J., Lowe, N., & Quingla, C. (2011). Skills on the move: Rethinking the relationship between human capital and immigrant economic mobility. *Work and occupations*, 38(2), 149-178. doi: [10.1177/0730888410397918](https://doi.org/10.1177/0730888410397918) [Accessed 29th April 2022]
59. Hagan, Jacqueline. (2015) "Skills of the Unskilled." In *Skills of the Unskilled*. University of California Press, 2015. <https://doi.org/10.1525/9780520959507> [Accessed 29th April 2022]
60. Haque, M. M. (2008). Give Us Your Best and Brightest: The Global Hunt for Talent and Its impact on the Developing World. DOI:[10.2307/20031931](https://doi.org/10.2307/20031931) [Accessed 29th April 2022]
61. Harvey, W. S. (2008). Strong or weak ties? British and Indian expatriate scientists finding jobs in Boston. *Global networks*, 8(4), 453-473.
<https://doi.org/10.1111/j.1471-0374.2008.00234.x> [Accessed 29th April 2022]
62. Hawthorne, L. (2008). The growing global demand for students as skilled migrants.
63. Helbling, M., & Kriesi, H. (2014). Why citizens prefer high-over low-skilled immigrants. Labor market competition, welfare state, and deservingness. *European Sociological Review*, 30(5), 595-614. <https://doi.org/10.1093/esr/jcu061> [Accessed 29th April 2022]

64. Hercog, M., & Sandoz, L. (2018). Highly skilled or highly wanted migrants? Conceptualizations, policy designs and implementations of high-skilled migration policies. *Migration Letters*, 15(4), 453-460. <https://doi.org/10.33182/ml.v15i4.534> [Accessed 29th April 2022]
65. Human Development Report 2016/2017. (2022). Foreword by the President. Retrieved 16 May 2022, from <https://www.2017.inimareng.ee/en/foreword-by-the-president/>
66. IBS (2022). Monitoring the integration of Estonian society 2020 | IBS. [online] Available at: <<https://www.ibs.ee/en/projects/monitoring-the-integration-of-estonian-society-2020/>> [Accessed 25 April 2022]
67. IBS (2022). Various Trainings and Events to Introduce Estonian Labour Market to Postgraduate Students from Third Countries | IBS. [online] Available at: [Various Trainings and Events to Introduce Estonian Labour Market to Postgraduate Students from Third Countries | IBS](#) [Accessed 25 April 2022].
68. [Immigration Quota for 2022 is 1,311 | Eesti Kaubandus-Tööstuskoda](#) [Accessed 29th April 2022]
69. International Labour Organisation. (2022). How to Facilitate the Recognition of Skills of Migrant Workers [Ebook] (2nd ed., pp. 12, 13, 15, 17). Retrieved 25 April 2022, from https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---migrant/documents/publication/wcms_748721.pdf. [Accessed 29th April 2022]
70. Iredale, R. (2000). Migration policies for the highly skilled in the Asia-Pacific region. *International Migration Review*, 34(3), 882-906. <https://doi.org/10.1177/019791830003400309> [Accessed 29th April 2022]
71. Iredale, R. (2001). The migration of professionals: theories and typologies. *International migration*, 39(5), 7-26. <https://doi.org/10.1111/1468-2435.00169>
72. Iskander, N., & Lowe, N. (2018). Immigration and the politics of skill. In *The New Oxford Handbook of Economic Geography* (pp. 519-536). Oxford University Press. 10.1093/oxfordhb/9780198755609.013.24 [Accessed 29th April 2022]
73. Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field methods*, 18(1), 3-20. [Accessed 29th April 2022]
74. Janta, H., Ladkin, A., Brown, L., & Lugosi, P. (2011). Employment experiences of Polish migrant workers in the UK hospitality sector. *Tourism Management*, 32(5),

- 1006-1019. <https://doi.org/10.1016/j.tourman.2010.08.013> [Accessed 29th April 2022]
75. Kerr, S. P., Kerr, W., Özden, Ç., & Parsons, C. (2017). High-skilled migration and agglomeration. *Annual Review of Economics*, 9, 201-234.
<https://dash.harvard.edu/handle/1/32062563> [Accessed 29th April 2022]
76. King, R. (2013). Theories and typologies of migration: An overview and a primer. Malmö University, Malmö Institute for Studies of Immigration, Diversity and Welfare (MIM).
https://www.researchgate.net/publication/260096281_Theories_and_Typologies_of_Migration_An_Overview_and_A_Primer [Accessed 25 April 2022].
77. Kirss, L., Kuusk, K., Rozeik, H., & Haaristo, H. S. (2014). Countryal policies for internationalal talent attraction and retention in Estonia. *Praxis Center for Policy Studies. Tallinn, Estonia*. [Accessed 29th April 2022]
78. Kofman, E. (2014). Towards a gendered evaluation of (highly) skilled immigration policies in Europe. *Internationalal Migration*, 52(3), 116-128.
<https://doi.org/10.1111/imig.12121> [Accessed 29th April 2022]
79. Lauren, A. (2020). *Rände- ja kodakondsuspoliitika aastaraport 2020*. EMN Estonia.
<https://www.emn.ee/wp-content/uploads/2020/10/raport-2020-eraldi.pdf>
80. Leppik, M. (2018). Kutse-ja kõrgharidusõpingud lõpetanute edukus tööturul 2016. *Haridus-ja Teadusministeeriumi aastaanalüüs*. [Accessed 29th April 2022]
81. Lewis, J., Ritchie, J., Ormston, R., & Morrell, G. (2003). Generalising from qualitative research. *Qualitative research practice: A guide for social science students and researchers*, 2, 347-362. [Accessed 29th April 2022]
82. Libaers, D. (2014). Foreign-Born Academic Scientists and Their Interactions with Industry: Implications for University Technology Commercialization and Corporate Innovation Management. *Journal of Product Innovation Management*, 31(2), 346-360. <https://doi.org/10.1111/jpim.12099> [Accessed 29th April 2022]
83. Liu-Farrer, G., Yeoh, B. S., & Baas, M. (2021). Social construction of skill: An analytical approach toward the question of skill in cross-border labour mobilities. *Journal of Ethnic and Migration Studies*, 47(10), 2237-2251.
<https://doi.org/10.1080/1369183X.2020.1731983> [Accessed 29th April 2022]
84. Lowell, B. L. (2005). Policies and regulations for managing skilled internationalal migration for work. *United Country's, Mortality and Migration Section of the Population Division/DESA*, 1-21

- https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/unpd_egm_200507_p03-llowell.pdf [Accessed 29th April 2022]
85. Lulle, A., Janta, H., & Emilsson, H. (2021). Introduction to the Special Issue: European youth migration: human capital outcomes, skills and competences. *Journal of Ethnic and Migration Studies*, 47(8), 1725-1739.
<https://doi.org/10.1080/1369183X.2019.1679407> [Accessed 29th April 2022]
86. Lundquist, K. J., & Trippel, M. (2013). Distance, proximity and types of cross-border innovation systems: A conceptual analysis. *Regional studies*, 47(3), 450-460.
<http://hdl.handle.net/10.1080/00343404.2011.560933> [Accessed 29th April 2022]
87. Madziva, R., McGrath, S., & Thondhlana, J. (2016). Communicating employability: The role of communicative competence for Zimbabwean highly skilled migrants in the UK. *Journal of International Migration and Integration*, 17(1), 235-252.
<https://doi.org/10.1007/s12134-014-0403-z>
88. Mattoo, A., Neagu, I. C., & Özden, Ç. (2008). Brain waste? Educated immigrants in the US labor market. *Journal of development economics*, 87(2), 255-269.
DOI10.1016/j.jdeveco.2007.05.001 [Accessed 29th April 2022]
89. Mau, S., Gülzau, F., Laube, L., & Zaun, N. (2015). The global mobility divide: How visa policies have evolved over time. *Journal of Ethnic and Migration Studies*, 41(8), 1192-1213. <https://doi.org/10.1080/1369183X.2015.1005007> [Accessed 29th April 2022]
90. Michael, R. B., Newman, E. J., Vuorre, M., Cumming, G., & Garry, M. (2013). On the (non) persuasive power of a brain image. *Psychonomic bulletin & review*, 20(4), 720-725. [Accessed 29th April 2022]
91. Ministry of Education and Research. (2015). *Estonian Higher Education Strategy, 2006–2015*. Tallin. Retrieved from
<https://planipolis.iiep.unesco.org/sites/default/files/ressources/estonia-higher-education-strategy-2006-2015.pdf>
92. Ministry of Interior, 2022. *Overview of Migration Statistics 2016-2020*. [ebook] The Ministry of the Interior and the Estonian Contact Point for the European Migration Network. Available at: Ministry of Culture
<https://www.kul.ee/media/3267/download> [Accessed 25 April 2022].
93. Moroşanu, L., King, R., Lulle, A., & Pratsinakis, M. (2021). ‘One improves here every day’: the occupational and learning journeys of ‘lower-skilled’ European

- migrants in the London region. *Journal of Ethnic and Migration Studies*, 47(8), 1775-1792. <https://doi.org/10.1080/1369183X.2019.1679411> [Accessed 29th April 2022]
94. Nathan, M. (2014). The wider economic impacts of high-skilled migrants: a survey of the literature for receiving countries. *IZA Journal of Migration*, 3(1), 1-20. <https://doi.org/10.1186/2193-9039-3-4> [Accessed 29th April 2022]
95. Nathan, M. (2014). The wider economic impacts of high-skilled migrants: a survey of the literature for receiving countries. *IZA Journal of Migration*, 3(1), 1-20.
96. Nathan, M., & Lee, N. (2013). Cultural Diversity, Innovation, and Entrepreneurship: Firm-level Evidence from London. *Economic geography*, 89(4), 367-394. <https://doi.org/10.1111/ecge.12016> [Accessed 29th April 2022]
97. Nowicka, M. (2014). Migrating skills, skilled migrants and migration skills: The influence of contexts on the validation of migrants' skills. *Migration Letters*, 11(2), 171-186. <https://doi.org/10.33182/ml.v11i2.237> [Accessed 29th April 2022]
98. OECD. (2012). *Better Skills, Better Jobs, Better Lives A Strategic Approach to Skills Policies*. OECD. Retrieved from https://www.oecd-ilibrary.org/education/better-skills-better-jobs-better-lives_9789264177338-en
99. Oecd-ilibrary.org. 2022. *International Migration Outlook 2020*. [online] Available at: <https://www.oecd-ilibrary.org/sites/9df3e2e8> [Accessed 25 April 2022].
100. Ortega Prudencia, L., 2022. *Highly-skilled migration: Estonia's attraction policy and its congruence with the determinants of 'talent mobility'*. Masters. University of Tartu. [Accessed 29th April 2022]
101. Ortega, F., & Peri, G. (2014). The aggregate effects of trade and migration: Evidence from OECD countries. In *The socio-economic impact of migration flows* (pp. 19-51). Springer, Cham. https://link.springer.com/chapter/10.1007/978-3-319-04078-3_2 [Accessed 29th April 2022]
102. OSKA, 2022. *OSKA study "Estonian Labour Market Today and Tomorrow 2019-2027"*. [online] OSKA. Available at: <https://oska.kutsekoda.ee/wp-content/uploads/2020/05/OSKA-study-%E2%80%9CEstonian-Labour-Market-Today-and-Tomorrow-2019%E2%80%9D.pdf> [Accessed 25 April 2022].
103. Palmer, J. R., & Pytlikova, M. (2015). Labor market laws and intra-European migration: The role of the state in shaping destination choices. *European Journal of Population*, 31(2), 127-153. DOI:[10.1007/s10680-015-9341-5](https://doi.org/10.1007/s10680-015-9341-5) [Accessed 29th April 2022]

104. Pandya, S., & Leblang, D. (2012). Deal or no deal: Explaining the rise of international venture capital investment. *University of Virginia, Charlottesville*.
105. Papademetriou, D. G., & Sumption, M. (2011). Rethinking points systems and employer-selected immigration. *Washington DC: Migration Policy Institute*.
[https://www.researchgate.net/publication/265075086_Rethinking_Points_Systems_and_Employer- Selected_Immigration](https://www.researchgate.net/publication/265075086_Rethinking_Points_Systems_and_Employer-Selected_Immigration) [Accessed 29th April 2022]
106. Papademetriou, D. G., Somerville, W., & Tanaka, H. (2008). Talent in the 21st-century economy. *Talent, Competitiveness and Migration: The Transatlantic Council on Migration*, 215-65. [Accessed 29th April 2022]
<https://www.migrationpolicy.org/sites/default/files/publications/Talent.pdf>
107. Parsons, C., Rojon, S., Samanani, F., & Wettach, L. (2014). Conceptualising international high-skilled migration. <https://ora.ox.ac.uk/objects/uuid:3f6bc719-b395-4c12-9e17-181c270573f7> [Accessed 29th April 2022]
108. Parsons, Christopher, Sebastien Rojon, Farhan Samanani, and Lena Wettach. "Conceptualising international high-skilled migration." (2014).
109. Parutis, V. (2011). White, European, and hardworking: East European migrants' relationships with other communities in London. *Journal of Baltic Studies*, 42(2), 263-288. <https://doi.org/10.1080/01629778.2011.569074> [Accessed 29th April 2022]
110. Peri, G., & Sparber, C. (2011). Highly educated immigrants and native occupational choice. *Industrial Relations: a journal of economy and society*, 50(3), 385-411. <https://doi.org/10.1111/j.1468-232X.2011.00643.x> [Accessed 29th April 2022]
111. Platonova, A., & Urso, G. (Eds.). (2012). *Migration, employment and labour market integration policies in the European Union (2010)*. International Organization for Migration. [Accessed 29th April 2022]
112. Portes, A. (1995). Economic sociology and the sociology of immigration: A conceptual overview. *The economic sociology of immigration*, 1-41. [Accessed 29th April 2022]
113. Puur, A., Sakkeus, L., Tammur, A., Tammaru, T., Maasing, H., Asari, E. M., ... & Annist, A. Estonian Human Development Report 2016/2017 Estonia at the Age of Migration EHDR 2016/2017 Immigration and Integration.
<https://2017.inimareng.ee/en/immigration-and-integration/> [Accessed 29th April 2022]

114. Puur, A., Sakkeus, L., Tammur, A., Tammaru, T., Maasing, H., Asari, E. M., ... & Annist, A. Estonian Human Development Report 2016/2017 Estonia at the Age of Migration EHDR 2016/2017 Immigration and Integration.
<https://2017.inimareng.ee/en/immigration-and-integration/> [Accessed 29th April 2022]
115. Regets, M. (2001). Research and policy issues in high-skilled international migration: A perspective with data from the United States. *Innovative people: Mobility of skilled personnel in countryal innovation systems*, 243-260.
<http://dx.doi.org/10.2139/ssrn.285424>. [Accessed 29th April 2022]
116. Research Market. (2022). Global Online Education Market (2022 to 2027) - by User-type, Provider, Technology and Region. Retrieved 15 May 2022, from <https://www.globenewswire.com/news-release/2022/02/03/2378224/28124/en/Global-Online-Education-Market-2022-to-2027-by-User-type-Provider-Technology-and-Region.html> [Accessed 29th April 2022]
117. Riigikogu. The Aliens Act (2013). Estonia. [Accessed 29th April 2022]
118. Rootalu Sõstra and Raitviir,. (2019). *Välisüliõpilaste majanduslik mõju*. Retrieved from https://www.stat.ee/sites/default/files/2021-01/valistudengid_raport2020.pdf
119. Rootalu. (2021). What has happened to those who have lost their jobs in accommodation and catering in the coronary crisis?. Retrieved 15 May 2022, from <https://www.stat.ee/et/uudised/mis-saanud-koroonakriisis-majutuse-ja-toitlustuse-alal-too-kaotanutest/> [Accessed 29th April 2022]
120. Ruggles, S., Alexander, J. T., Genadek, K., Goeken, R., Schroeder, M. B., & Sobek, M. (2010). Integrated public use microdata series: Version 5.0 [Machine-readable database]. *Minneapolis: University of Minnesota*, 42.
https://scholar.google.com/scholar?hl=en&as_sdt=0,5&cluster=9646199598653889208 [Accessed 29th April 2022]
121. Skeldon, R. (2018). High-skilled migration and the limits of migration policies. *High-skilled migration: Drivers and policies*, 48-64.
https://books.google.ee/books?hl=en&lr=&id=RPhJDwAAQBAJ&oi=fnd&pg=PA48&ots=kqgMoweSDx&sig=s1cE4Zh5M-Sq4alOYjh_gr8xfLU&redir_esc=y#v=onepage&q&f=false [Accessed 29th April 2022]

122. Solimano, A. (Ed.). (2008). *The internationalal mobility of talent: Types, causes, and development impact*. Oxford University Press on Demand. [Accessed 29th April 2022]
123. Solimano, A., 2008. *The Internationalal Mobility of Talent: Types, Causes and Development Impact*.
[https://books.google.co.uk/books?hl=en&lr=&id=PIYVDAAAQBAJ&oi=fnd&pg=PR5&dq=Solimano+\(2008&ots=fyvJIIpJ3A&sig=HR7MTergd1GLIRaqL6bs1O-c6TU#v=onepage&q=Solimano%20\(2008&f=false](https://books.google.co.uk/books?hl=en&lr=&id=PIYVDAAAQBAJ&oi=fnd&pg=PR5&dq=Solimano+(2008&ots=fyvJIIpJ3A&sig=HR7MTergd1GLIRaqL6bs1O-c6TU#v=onepage&q=Solimano%20(2008&f=false) [Accessed 29th April 2022]
124. Tan, E. (2014). Human capital theory: A holistic criticism. *Review of educational research*, 84(3), 411-445. <https://doi.org/10.3102/0034654314532696>
125. Triandafyllidou, Anna, and Irina Isaakyan. (2014). "EU management of high skill migration." <http://hdl.handle.net/1814/34706> [Accessed 29th April 2022]
126. Turnovsky, S., & Wang, Z. (2022). The Effects of Globalization on Skilled Labor, Unskilled Labor, and the Skill Premium. *Open Economies Review*.
<https://doi.org/10.1007/s11079-022-09666-6> [Accessed 29th April 2022]
127. Valk. (2022). Aune Valk: What kind of international students we need and why. Retrieved 15 May 2022, from <https://ut.ee/en/content/aune- Valk-what-kind-international-students-we-need-and-why> [Accessed 29th April 2022]
128. Vargas-Silva, C. (2016). Highly skilled migrant workers and the UK business cycle. *Population, Space and Place*, 22(5), 457-470.
<https://doi.org/10.1002/psp.1867> [Accessed 29th April 2022]
129. Walsh, J. (2008, December). Navigating globalization: Immigration policy in Canada and Australia, 1945–2007 1. In *Sociological forum* (Vol. 23, No. 4, pp. 786-813). Oxford, UK: Blackwell Publishing Ltd. <https://doi.org/10.1111/j.1573-7861.2008.00094.x> [Accessed 29th April 2022]
130. Wickramasinghe, A. A. I. N., & Wimalaratana, W. (2016). Internationalal migration and migration theories. *Social Affairs*, 1(5), 13-32.
https://www.researchgate.net/publication/312211237_INTERNATIONALAL_MIGRATION_AND_MIGRATION_THEORIES [Accessed 29th April 2022]
131. Widmaier, S., & Dumont, J. C. (2011). Are recent immigrants different? A new profile of immigrants in the OECD based on DIOC 2005/06.
<https://www.oecd.org/migration/49205584.pdf> [Accessed 29th April 2022]

132. Wiley, T. G. (1993). Discussion of Klassen & Burnaby and McKay & Weinstein-Shr: Beyond assimilationist literacy policies and practices. *TESOL quarterly*, 27(3), 421-430. [Accessed 29th April 2022]
133. Williams, A. M. (2006). Lost in translation? International migration, learning and knowledge. *Progress in Human Geography*, 30(5), 588-607.
<https://doi.org/10.1177/0309132506070169> [Accessed 29th April 2022]
134. Zaiceva, A. (2014). The impact of aging on the scale of migration. *IZA World of Labor*. <https://wol.iza.org/uploads/articles/99/pdfs/impact-of-aging-on-scale-of-migration.pdf> [Accessed 29th April 2022]

Non-exclusive licence to reproduce thesis and make thesis public

I, Alvira Asif Ali Khan, (personal code:49810100056) herewith grant the University of Tartu a free permit (non-exclusive licence) to the work created by me “Defining Highly Skilled Migrant: Is the term still relevant in the “New Knowledge Economy”: The Case of Estonia”, supervisor [Kristjan Kaldur MA]

reproduce, for the purpose of preservation, including for adding to the DSpace digital archives until the expiry of the term of copyright.

to make the work available to the public via the web environment of the University of Tartu, including via the DSpace digital archives until the expiry of the term of copyright

I am aware of the fact that the author retains the rights specified in p.1;

I certify that granting the non-exclusive licence does not infringe other persons ‘intellectual property rights or rights arising from the personal data protection legislation