



**BS Thesis
in Faculty of Business Administration**

The dichotomy of opportunity in Iceland

Wandari Desi Rosidayati

Supervisor: Dr. Erla S. Kristjánsdóttir, Professor

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School of Social Sciences

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Preface

This thesis is written for BS-degree in International Business and Marketing and submitted in September 2021. The thesis is among the final completions of the 180 ECTS Bachelor of Business Administration from the University of Iceland. The thesis is evaluated at 6 (ETCS) credits. Many thanks to my mentor, Dr. Erla Sólveig Kristjánsdóttir, Professor at the University of Iceland, for providing support, wisdom, and expertise to the writing of this thesis. I would also like to thank the countless friends and family that have provided me with encouragement and advice during this process.

Abstract

Throughout history immigration has played an important role in the economic growth and prosperity of nations. While there are many benefits societies can receive from immigration, many economists claim that the greatest benefit is innovation. This leads to the research question: *Has Iceland provided its immigrants with sufficient opportunity to innovate resulting in successful entrepreneurship?* The motivation and resulting objective behind asking this research question is to identify ways to improve Icelandic society in such a way that entrepreneurship becomes more accessible to immigrants. This thesis provides an overview of how impactful immigrants are for a country's economy, especially by means of innovation and entrepreneurship, emphasizing the importance of the question above. The current situation of entrepreneurship in Iceland was assessed and evaluated to identify opportunities to improve and make entrepreneurship more accessible to the country's immigrants. The assessment was done by analyzing various data and studies relating to the subjects of immigration, entrepreneurship, and economics, both in Iceland and neighboring countries. Key findings included a low percentage of research funding goes to immigrants, immigrants experience friction when trying to integrate with the school system and workforce, and immigrants having limited networks in Iceland. In short, it can be concluded that while Iceland has an impressive track record both in attracting immigrants and innovating, there is little innovation being done by immigrants themselves and many hurdles in the way of those who try. Thus, it is difficult to conclude that sufficient opportunity is being provided to immigrants to become successful entrepreneurs. This situation contrasts that of many neighboring countries and showcases that there is untapped potential for innovation within the immigrant population of Iceland but also a need for improvement amongst much of the processes and infrastructure that facilitate integration into Icelandic society.

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1 Introduction

History has shown that immigration, entrepreneurship, and economic growth are closely intertwined. A common example is the economic growth of the United States in the 20th century. Decades of economic growth has attracted immigrants from all over the world. These immigrants found jobs and over time integrated into the country's culture. Furthermore immigrants and their descendants have played a large entrepreneurial role in the United States history, contributing to economic innovation and expanding labor demand as founders of firms (Azoulay et al., 2020).

Like the United States, over the last decades the economy of Iceland has seen significant growth. The origin of this economic growth can be traced to the fishing and fish processing industries. A combination of free-market reforms and high levels of government intervention created an environment for the fishing sector to flourish. The exponential growth of the fishing sector created many new jobs. The demand for jobs was such that companies needed to look externally to fully meet their needs (Heleniak & Sigurjonsdottir, 2018).

Up until the mid-1990's immigrants and their descendants made up less than 2% of Iceland's population (Heleniak & Sigurjonsdottir, 2018). In 1994 this began to change. Along with the growing fishing industry, Iceland became a part of the European Economic Area. Later in 2001 Iceland joined the Schengen Agreement resulting in a change in immigration laws and creating further opportunity to immigrate to Iceland (Heleniak & Sigurjonsdottir, 2018). During this period, the early 2000's, the Icelandic government was emphasizing larger industrial projects in an attempt to diversify the economy. The strong fishing sector and emerging industries such as energy and aluminum continued to demand more labor than the domestic market could provide. Due to the demand for labor, comparatively higher wages, and legislative changes for immigration by 2009 in result 9% of the population was made up of immigrants or their descendants (Heleniak & Sigurjonsdottir, 2018).

Following the economic recession of 2008, the Icelandic economy took a dive but began to recover in 2011. At this point in time the Icelandic government's attempts to diversify the economy had limited success. However, travel and tourism began to emerge as a significant contributor to Gross Domestic Product (GDP). Since 2011 the travel and tourism sector has continued to grow and by 2019 it accounted for more than 33% of Iceland's GDP (Arionbanki, 2017). To sustain the growth of travel and tourism in Iceland many jobs were created to service visitors to the country and construct infrastructure such as hotels and apartments. By January 2020 immigrants accounted for about 15,2% of the Icelandic population (Hagstofa Íslands, 2020).

Clearly, much like the United States, Iceland has been successful in attracting immigrants. However, there are some stark differences. In the United States immigrants have found entrepreneurial opportunities to such a degree that in 2011 more than 40% of Fortune 500 companies had founders that were first or second generation immigrant (StartupUSA, 2017). At a glance it does not seem like immigrants in Iceland have had this same entrepreneurial impact. All publicly listed companies in Iceland were founded by natives to the country. Additionally, despite significant governmental emphasis on diversifying the economy, about 75% of Iceland's exports can still be attributed to three different sectors: tourism, seafood, and aluminum (Arionbanki, 2017). This lack of diversification despite economic growth could be a symptom to a lack of innovation within the economy (Feldman & Tavassoli, 2015).

The research question of this thesis is: *Has Iceland provided its immigrants with sufficient opportunity to innovate resulting in successful entrepreneurship?* We consider how impactful immigrants can be on the economy by means of innovation and entrepreneurship. By looking at the current situation of entrepreneurship in Iceland we can assess whether there is opportunity to do better in harnessing the human capital and entrepreneurial spirit immigrants can bring to the table.

This thesis will have the following chapters: immigration, entrepreneurship, and economic growth. The thesis attempts to understand the situation regarding immigration, entrepreneurship, and economic growth within Iceland via comparison to neighboring countries. There are five chapters in addition to the introduction. In chapter two the theoretical framework of the analysis is established. In chapter three the

research methodology is explained. Chapter four reveals the results of the analysis followed by a discussion of the results in chapter five. Finally, chapter six provides a conclusion.

2 Immigration

The term immigrant is derived from the latin word “migrare”, which means “wanderer”. It was first coined in the 17th century and referred to non-warlike population movements between nations. In today's day and age, it is commonly accepted that immigration refers to the international movement of people to a destination country to settle as a permanent resident and become a citizen. Tourists, seasonal workers, or other forms of short-term stays do not fall under immigration. With such permanence in mind, it is apparent that immigrants seek to become a part of society within their destination country (Di Giovanni et al., 2015).

Research suggests that immigration generally has beneficial economic effects on the native population of the receiving country. In the United states this economic benefits were found to be true for both the arrival of high-skilled immigrants and low-skilled immigrants (Iregui, 2000). Many studies suggest that eliminating barriers to migration would have profound effects on Gross Domestic Product (GDP). Eliminating these barriers to migration can lead to a reduction in poverty and soften the dilemma many countries in the global north face with aging demographics. There are mixed findings in literature regarding the impacts of immigration on crime. Most research indicates that immigration has positive effects on native workers' health. This is due to native workers being pushed into less physically demanding jobs as a result of immigration (Iregui, 2000).

To understand the motivation behind immigration researchers often refer to the push and pull factor theory of immigration (Europäische Kommission, 2000). This theory refers to various push and pull factors which explain the motivation for an immigrant to leave his country of origin or be attracted to immigrating to a particular destination country. The most common push and pull factor is the desire for economic prosperity and differentials in wage rates between different countries. Other factors can include family reunification, retirement, environmentally induced migration, escape from conflict and many others. Additionally, when evaluating the push and pull

between countries travel time and cost becomes an important factor (Europäische Kommission, 2000). In the case of Iceland there is always a degree of travel time and cost, but wage differentials and job opportunities have been driving forces behind the economic migration to Iceland over the past decades (Europäische Kommission, 2000).

Economic literature often finds innovation and entrepreneurship to be a common trait amongst immigrants, especially those which can be classified as high-skilled. In the United States the impact of immigrants on innovation can be measured by their proportionally higher rate of patents and citations. Furthermore, immigrants start businesses at a higher rate than natives. Further examples in history that point to the efficacy of immigrants in boosting innovation can be the European migration to Argentina, west-east migration during German reunification, Polish immigration to Germany after joining the EU amongst many others (Azoulay et al., 2020).

A critical component to the success of a country receiving the benefits of immigration is the speed and rate of integration and assimilation. An immigrant can be considered integrated when he has adopted common practices and cultural norms from the native culture without diminishing their own (Berry, 2011). Assimilation can then be defined as an immigrant fully assuming the same practices and cultural norms as their own and identifying exclusively as a part of that culture (Berry, 2011). A 2018 study in the American Sociological Review concluded that most immigrants in the United States had fully assimilated within a span of 20 years. Studies in Europe found that assimilation is consistently achieved for second-generation immigrants. There are various factors that can influence the speed of assimilation. Most prominent are the country of origin of immigrants and immigration policies of the host country (Villarreal & Tamborini, 2018).

2.1 Iceland

In January 2020 Immigrants comprised 15,2% of the Icelandic population (Hagstofa Íslands, 2020) and about 7000 immigrants were unemployed at this time making up 40% of all job seekers in Iceland. Furthermore, 25% of these job seekers had university degrees. This is a surge in unemployment amongst immigrants from 2018 figures (Ministry of Social Affairs, 2020).

This jump in unemployment points to immigrants potentially being less entrenched in the local job market than natives and thus being the first to lose their jobs during an economic contraction. Numbers such as the above beg the question: how effective is Iceland in integrating its immigrant population? As previously discussed, effectively integrating migrants is imperative for the host nation to receive the full benefits of immigration (Danzer, 2011).

A study showed that even highly skilled immigrants working in Iceland experienced exclusion, prejudice, and discrimination (Loftsdóttir et al., 2020). Additionally, it found it to be common that highly skilled immigrants are assigned jobs that poorly utilize their education. A common experience amongst high-skilled immigrants in Iceland was that fluency in Icelandic is a denominator of social power in the workplace and that competency in Icelandic is the key to successful integration (Einarsdottir et al., 2018). A lack in Icelandic fluency often leads to a devaluation of the immigrant's skills and education. This devaluation has led to downward mobility, a poor utilization of human capital and a worse rate of integration within this group (Loftsdóttir et al., 2020).

When surveying the landscape of integration amongst immigrants in Iceland it is not only within the job market that there are significant barriers to entry. Students in higher education with diverse ethnic backgrounds have experienced significant and disproportionate struggles in comparison to their peers. Research points to institutions of higher education in Iceland having a poor understanding of the needs of this growing group of their students. Common issues faced by these students include being overlooked by university support systems and curriculum as well as social exclusion and isolation. Non-native students in higher education are often unable to study a major of their choosing and have limited interaction with their peers, both socially and academically. The root cause for most of these issues is language and a lack of Icelandic proficiency. Native students are reluctant to include those they are unable to communicate with in Icelandic and the institutions provide limited support and compromise to those not fluent in Icelandic. These dynamics lead to barriers of entry towards further integration and downward social and economic mobility for immigrants (Samar, 2020).

Similar results to those of higher education can be found when evaluating the integration of immigrants in lower education. A study looking at secondary schools in Iceland found that while parents had positive attitudes towards school language was yet again an issue. Lack of fluency in Icelandic led to parents being unable to participate in their children's school activities and makes assisting them with schoolwork cumbersome. Immigrant children were required to participate in reception programs which aim to teach them Icelandic. Children in reception programs tend to isolate from their peers and fall behind in their other classes. This leads to immigrant students mainly making connections with other immigrants and integration to be a slower and more tedious process (Galinudóttir & Mc Laughlin, 2018).

In 2007 the Ministry of Social Affairs published a document which sets the goal for policy on the integration of immigrants, including immigrant students, into society. The report states that “knowledge of the Icelandic language is the key to Icelandic society and can be a deciding factor in the successful integration of immigrants into Icelandic society”. A large portion of the policy is designated towards the preservation of the Icelandic language. It is clear from both government policy and the experience of immigrants at various stages of society that language is a massive barrier in the way of integrating into society (Ministry of Social Affairs, 2007).

2.2 Entrepreneurship

In essence entrepreneurship is the creation or extraction of value. Frequently entrepreneurship is found in the process of designing, launching, and running a new business (Alvarez & Busenitz, 2001). From the perspective of society, successful entrepreneurship leads to innovation. The result of innovation is the introduction of new goods and services or on improvement upon the goods or services available to a society (Omachonu & Einspruch, 2010). Given these definitions it is not surprising that innovation is a key factor in many economists' models for economic growth and thought to play a leading role in long term economic growth (European Central Bank, 2017).

Many developed countries have identified immigrants as being highly entrepreneurial and therefore important for economic growth and innovation. Many of these developed countries have immigration policies that encourage innovation such as

special visas and flexible entry requirements in an attempt to attract entrepreneurial immigrants (Fairlie & Lofstrom, 2015). Throughout history there are many examples of countries reaping the benefits of such policies.

Recently it was confirmed that over 40% of all Fortune 500 companies in the United States had at least one co-founder that was of immigrant descent (StartupUSA, 2017). Looking further back into history there are many examples of immigrant groups flourishing in their host nation and seeing entrepreneurial success. Jewish immigrants migrating to New York in the early 1900's (Cohen & Freer, 2009). Korean immigrants relocating to Los Angeles in the 1970's (Min, 1990), and Polish immigrants in Germany in the 1990's are but a few examples (Candel-Haug et al., 2018).

2.2.1. Entrepreneurship in Iceland

Iceland has seen its share of successful innovation and entrepreneurship. The International Innovation Index is a global index which measures the level of innovation in a country. This index factors in the business outcomes of innovation and the government's ability to support innovation through public policy. Iceland ranks 9th globally on this index (Gunnarsson, 2020).

There are several successful companies that have been born from innovation in Iceland such as Marel and Össur. Furthermore, there is significant government support from the Ministry of Industries and Innovation through agencies such as Innovation Center Iceland and the Icelandic Center for Research. There are multiple funds available which sponsor research and innovation within Iceland with the Technology Development Fund being the most notable. While there is a high degree of successful entrepreneurship and innovation in Iceland on a per capita basis, this success does not seem to be evenly distributed amongst natives and non-natives. There are no publicly traded companies with immigrant co-founders in Iceland. Furthermore, according to Rannis data gathered during the research of this paper, only 5% of all applicants who receive a grant from the Technology Development Fund have non-Icelandic ethnic backgrounds (Rannís, 2020).

A potential contributing factor to this distribution is the fact that while the Icelandic Center for Research does allow for applications in English, the application forms are not available in English. Furthermore, most resources are only available in Icelandic on the agency's website.

In 2020, Bala Kamallakharan, a prominent figure in the Icelandic entrepreneurial scene and immigrant to Iceland stated that “while the ecosystem in Iceland was starting to see an influx of incredibly talented immigrants, they do not have the local network or access to foundational capital to start building their company from Iceland.” His experience as an investor and entrepreneur in Iceland is that entrepreneurial immigrants in Iceland do not have sufficient resources available to them to be successful in founding a business in Iceland. These financing resources are often behind walls, such as language, and are thus only available to natives. Bala’s theory is that diverse backgrounds are the key to vibrancy of thought and innovation, therefore, he is actively funding immigrant founders in Iceland (BalaInIceland, 2020).

When examining Iceland’s neighbor, Denmark, there are some similarities in differences in approach. Immigrants in Denmark face similar challenges in language and network, especially when it comes to raising capital for investment in their businesses. There can also be significant challenges in understanding regulation and legislation, most commonly for labor laws. However, through public policy, Denmark is ranked as one of the most accessible countries in the world to do business and has over 7000 foreign-owned businesses (Viens, 2019). Additionally, Denmark attracts many immigrant entrepreneurs by means of education. Immigrants in Denmark seeking higher education have found success engaging in international communities of expats and entrepreneurs, leading to strong support networks when undergoing their entrepreneurial journeys (Zhamharyan, 2019).

In comparison to the United States, there seems to be significant room for improvement in Iceland as it comes to public policy enabling immigrant entrepreneurs to succeed in Iceland. In the United States learning the local language is not exclusively emphasized as the prime objective for all immigrants. It is possible that over-emphasis

on the Icelandic language in public policy is creating a hurdle which must first be overcome to achieve success in other pursuits.

2.3 Economic growth

Economic growth is the increase in the production of goods and services within an economy, compared from one period to another. In other words, economic growth measures the rate of change of prosperity for a society. Economic growth is usually measured in either nominal gross domestic product Gross Domestic Product or real GDP. Real Gross Domestic Product is adjusted for inflation. Economic growth is often modeled as a function of physical capital, human capital, labor force, and technology (Investopedia, 2021). Traditionally, economic growth is fundamental in many economists' arguments that immigration is beneficial for society as immigration is considered a driving force behind economic growth. Immigration expands the pool of working age population within an economy, can increase the quality of skilled workers, and bring about innovation. All of these factors impact the inputs of the model for economic growth directly, leading to positive outcomes (Azoulay et al., 2020).

While researchers often study immigrants as workers and public discourse often factors in the benefits of increasing labor supply, it is only recently that the role of immigrants as inventors and entrepreneurs has been emphasized and quantified. This dynamic has led to a common misconception that immigration only contribution to economic growth is bringing cheap labor for domestic companies. While this cheap labor may bring about net growth of Gross Domestic Product (GDP) this may negatively impact low skilled workers of a society (Azoulay et al., 2020). However, this line of thinking does not account for facts found in the United States such as immigrants being disproportionately likely to account for patents or hold degrees in the fields of Science, Technology, Engineering, and Mathematics (STEM). Immigrants are additionally more likely to start firms than native-born individuals. While many of these businesses founded by immigrants have limited growth prospects, there are also many examples of large corporations having immigrant founders. It is in these larger corporations where society truly prospers from providing an environment for immigrant founders to

succeed resulting in economic growth and increases in labor demand (Azoulay et al., 2020).

In the modern era, growth in the Icelandic economy can largely be split into two phases. In the 1990's Iceland undertook extensive free market reforms which led to a boom in economic growth in the following years. The results of these market reforms included investment into manufacturing such as aluminum and hydro-electric power, privatization and foreign expansion of the domestic banks, and an economy that was over-leveraged as a whole (Forbes Media, 2021). The growth of this era ended with the financial collapse in 2008 leading to the next era of economic growth, tourism. In 2010 tourism began to grow exponentially and by 2018 the numbers of tourists visiting Iceland had grown by 400%. Surprisingly, during the eras of significant economic growth there are a limited number of examples of innovation leading directly to growth with a few exceptions coming from the biotechnology and software production sectors (Forbes Media, 2021).

Despite economic growth in Iceland not traditionally being driven by innovation this might not have to be the case moving forwards. There are many traits of the Icelandic economy that make innovation a promising driving force for future economic prosperity. Iceland's population skews much younger than most western countries with comparable economics. Furthermore, Iceland has a tertiary education rate of 33.5% as of 2020 and one of the highest workforce activity rates in Europe, both for males and females (Gislason, 2020). This educated, young, and productive population is also becoming increasingly diverse with the increase in immigration over the last two decades. Measures of technological infrastructure and adoption such as households with internet access, broadband connections per capita, and mobile subscriptions per capita are among the highest in Europe (Gislason, 2020). There are some initial indications that these traits are leading to a more innovative society. New business registrations have become about 12 per 1000 people and research and development expenditures as a percentage of Gross Domestic Product (GDP) are 7th in Europe at 2.08%. There are still a few categories where Iceland underperforms compared to other metrics such as patent applications per capita. These statistics point to that with sound

public policy there is ample opportunity for innovation to grow in Iceland and become an increasingly important contributor to economic growth (Gislason, 2020).

3 Methodology

The purpose of this thesis is to answer the following question: *Has Iceland provided its immigrants with sufficient opportunity to innovate resulting in successful entrepreneurship?* Immigration is shown to be a driving force behind innovation, which in turn is a driving force behind economic growth (Azoulay et al., 2020). If there is a lack of opportunity for immigrants in Iceland to become entrepreneurs, then this demonstrates a significant underutilization of human resources within Icelandic society. Therefore, there is a value to all Icelandic society to further understand the topic of this thesis. If there turns out to be an opportunity to do better regarding immigrants and innovation, society must capitalize on it with appropriate public policy.

This thesis makes use of both descriptive and analytical research methodologies. The analysis done in this thesis lies in a shared domain of economics, business, and anthropology leading to various critical questions. Analytical research methodologies are particularly effective for answering the research question at hand as there are a variety of valuable resources of both facts and statistics regarding immigration and the economy of both Iceland and common countries of comparison such as the United States and Denmark. There is significant available research in the field of immigration and its impact on economic growth, especially within the United States, but there is limited discussion on the topic regarding Iceland. There are some gaps in statistics being available for other countries and not for Iceland. There was quantitative analysis done during the writing of this thesis which leveraged open-source data available by Rannís. The analysis quantified the rate at which immigrants were rewarded funding for Research and Development (R&D) compared to natives in Iceland.

The analysis of this thesis is structured in such a way that initially various literature regarding immigration was reviewed. The driving forces behind immigration are defined and understood, the situation of immigration in Iceland is quantified and compared to case studies of its neighbors (Viens, 2019), and finally the economic impacts of immigration are discussed in relation to Iceland (Azoulay et al., 2020). Next the thesis

focuses on innovation and entrepreneurship, defining these terms and stating how they are measured and can impact an economy (Omachonu & Einspruch, 2010.) The thesis does a deep dive on immigration in Iceland. The Icelandic educational system and workforce is evaluated through the lens of immigrants and the various challenges they face when integrating into society are discussed. These challenges are then put into perspective by tying them to the potential economic impacts a lack of integration can have on society. Finally, the analysis is concluded by giving an overview of economic growth in Iceland. This overview and analysis lead to answering the research question posed by this thesis. Answering the research question helps focus the following discussion of the thesis to potential areas of improvement for Icelandic society which may help make entrepreneurship a more accessible route for immigrants in Iceland.

4 Findings

As previously mentioned, the objective of this thesis follows from the research question and can be summarized as identifying ways to improve Icelandic society such that entrepreneurship becomes more accessible to the immigrants of the country. Two prevalent themes, “opportunity” and “barriers” emerged during the research and analysis for this thesis and will be discussed further below. The first theme, “opportunity”, is that there is clearly an opportunity present to innovate in Iceland. The second theme, “barriers”, is that while the opportunity is present, there are subtle, yet significant barriers presented to immigrants who wish to take part in the entrepreneurial community in Iceland. Then by highlighting the barriers present it is revealed that there is a potential to improve Icelandic society in such a way that entrepreneurship is a more achievable and realistic goal for immigrants and their descendants in Iceland.

4.1 Opportunity

Opportunity to innovate has been present within Icelandic society during modern history. There has been notable innovation within the backbone industries of society such as the seafood industry which has consistently led to the generation of new revenue streams for the companies within the industry (Rebellion Research, 2020).

One such example might be Kerecis, a company which makes use of fish skin and fatty acids in the cellular-therapy and regenerative-tissue markets (Kerecis, 2021). Iceland is renowned for this type of iterative innovation within its backbone industries. Furthermore, there are many factors that contribute to Iceland being a country where there is opportunity to innovate. The population is young, and the tertiary education rate is 33.5%. Measures of technological infrastructure and adoption are also favorable. New business registrations are 12 per 1000 people and research and development expenditures as a percentage of GDP are 2.08%, both ranking highly in Europe. International studies on innovation back up these claims (Gislason, 2020). According to the Global Innovation Index in 2020 Iceland is number 21 on the list of most innovative countries in the world. High scores in the categories of “Institutions”, “Business sophistication”, and “Creative outputs” propel Iceland to the 21st rank. With these

results in mind it is clear that there is opportunity present to innovate (Gunnarsson, 2020).

4.2 Barriers

While there is opportunity present to innovate in Icelandic society, there is a common hurdle for all, and that hurdle is language. Fluency in the Icelandic language presents itself as a common barrier that almost all immigrants come across. The symptoms of this linguistic barrier are found in all areas of society: education, the job market, cultural assimilation, and of course entrepreneurship. As detailed in the Immigrants section of this thesis: Immigrants in Iceland suffer disproportionate struggles at all levels of education (Einarsdottir et al., 2018). Immigrant workers tend to be hired into jobs in which they are both overqualified and overeducated for (Einarsdottir et al., 2018). In both the cases of education and work, previous studies claim that the core reason is language. In the educational sphere younger students are taught Icelandic at the cost of participating in other classes, often leading to social isolation. In higher education there is poor infrastructure and understanding for dealing with immigrant students, often they are prevented with limited options for a degree, namely having to finish studying Icelandic before qualifying for anything else. In the job market immigrant workers feel like their skill sets are watered down by their managers due to not being fluent in Icelandic (Galinudóttir & Mc Laughlin, 2018).

According to Rannis only 5% of all applicants who receive a grant from the Technology Development Fund have non-Icelandic ethnic backgrounds (Rannís, 2020). This figure is quite disproportionate from the 17% of the population with an immigrant background in Iceland (Ministry of Social Affairs, 2020).

In other regions such as the United States or Europe, many studies find that immigrants are more likely to become entrepreneurs than natives (Azoulay et al., 2020). This would suggest that we would expect the distribution of Technology Development Fund grant recipients to skew in the opposite direction. Additionally, while Iceland does perform well in the Global Innovation Index, it's placement at 21st is relatively poor compared to many other global comparison metrics such as the OECD Better Life Index where Iceland is ranked 3rd globally (OECD, 2021). Countries such as Denmark and the

United States both place higher in the Global Innovation Index at 6th and 3rd respectively (Gunnarsson, 2020). Therefore, while there is opportunity to innovate in Iceland, society is likely not making the most of it due to the barriers immigrants can face.

5 Discussion

5.1 Potential Improvement

Based on the results of this thesis there seem to be opportunities to improve the accessibility of entrepreneurship and innovation for immigrants in Iceland. In general, these opportunities could be described as improving the processes around integration into society for immigrant. To empower immigrant entrepreneurs (both first and second generation) it is critical that they can successfully integrate with society as integration plays an important role in enabling immigrants to succeed. Integration is especially relevant to entrepreneurship in both the labor market and school system. These are the areas of society where entrepreneurs can nurture their skills and specialize before beginning their entrepreneurial journey (Danzer, 2011).

It is important to begin looking at elementary schools, which play a pivotal part in integration for the children of immigrants. The degree of isolation and segregation which immigrants experience during their formative years can have a snowball effect on how well they adapt and become a part of society. If schools can improve the processes of how immigrant children are taught Icelandic to catch up with their peers it would have a significant impact on improving the process of integration for those immigrant families and enabling second generation immigrants to succeed as entrepreneurs in the future (Galinudóttir & Mc Laughlin, 2018).

There is room for improvement for higher education as well. Students of immigrant background experience facing a very rigid and uncompromising system when trying to attend university in Iceland. It is a significant hurdle towards integration if immigrants experience higher education as an unrealistic goal and climbing the social and economic hierarchy of Iceland a pipe dream. There is an opportunity for universities to improve their processes and support systems for students of an immigrant background so that they don't feel overlooked by the system. Programs that enable immigrant students socially and help them form bonds with their peers could help immensely in this aspect. Additionally, allocating resources towards accommodating these students could provide

valuable in the long run. While these students may not have high-level Icelandic language skills, allowing them more flexibility in what degree they pursue despite these shortcomings could help a number of skilled specialists or budding entrepreneurs enter the Icelandic job market with less friction and the skills they need to succeed (Samar, 2020).

It is important to look at what can be improved within the Icelandic labor market to better accommodate immigrants and enable their integration into society. It has been documented those immigrants working in Iceland can often experience exclusion and discrimination in such a way that they are assigned roles that poorly utilize their education or skills. Degree of fluency in Icelandic can become a denominator of social power in the workplace and have significant implications on an individual's delegated responsibilities and role. Like for many other forms of discrimination in the workplace there needs to be awareness for this issue and a pressure on employers to avoid this type of discrimination. Having a large quantity of underutilized workers is inefficient for society and stifling for their creativity and innovativeness (Loftsdóttir et al., 2020). Without finding success at their workplace, it is unlikely immigrants would go on to find their own venture in the same field.

Support systems and infrastructure which facilitate innovation in Iceland do little to acknowledge the fact that there are many talented potential entrepreneurs in Iceland of a foreign background. Institutions such as RANNÍS do not even have English translations for many of their fund applications. Taking measures to support immigrant entrepreneurs by making resources and investor networks accessible could have an exponential return on investment if done appropriately.

Given the extensive number of potential improvements that can be done to provide immigrants in Iceland a better opportunity to become successful entrepreneurs it can be concluded that it is unlikely immigrants are currently being given sufficient opportunity to innovate and succeed as entrepreneurs.

5.2 Consideration

There are some important considerations that must be made when evaluating the results of this thesis. The first point to make is that while there is some helpful data and ensuing statistics available for evaluating the state of immigration and entrepreneurship in Iceland, it is still somewhat limited. Further analysis of this topic might include gathering additional data such as what is the rate of business ownership amongst immigrants in Iceland. This is a common metric used in our neighboring countries to gauge the degree of innovation within their immigrant populations and would be helpful for making comparisons. There are many other possible metrics that could be helpful in answering the research question of this thesis. In general, if statistics Iceland classified immigrants or foreigners as a key segment in their data then a more rigorous study of the subject could be made.

The subject of immigration is complex and multi-dimensional. While innovation via immigration is certainly beneficial to society and has been demonstrated to be a successful strategy in other countries it is not the only factor that must be considered. This thesis simplified the analysis by focusing on the dimension of innovation amongst immigrants. Other important factors to consider improving this analysis could be the impact of immigration on native low-skilled workers. Studies on that impact have mixed results in different countries and must thus be considered. Additionally, there are complexities such as the effects of immigration on native culture, crime, public resources and infrastructure, overpopulation to name a few. While immigration is a powerful tool for an economy when utilized correctly it is irresponsible for a country to approach immigration in a naive way and ignore the various complexities to the subject.

6 Conclusion

The purpose of this thesis was to understand whether there has been sufficient opportunity provided to immigrants in Iceland to innovate and become entrepreneurs. The thesis provided an overview of how impactful immigrants are for a country's economy, especially by means of innovation and entrepreneurship. The current situation within entrepreneurship in Iceland was assessed and evaluated to identify ways to improve Icelandic society in such a way that entrepreneurship becomes more accessible to immigrants.

By analyzing various data and studies relating to the subjects of immigration, entrepreneurship, and economics, both in Iceland and neighboring countries, some conclusions can be drawn. In simple terms, while Iceland has an impressive track record both in attracting immigrants and innovating, there is little innovation being done by immigrants themselves (Rannís, 2020). This situation contrasts many neighboring countries and showcases that there is untapped potential for innovation within the immigrant population of Iceland but also a need for improvement amongst much of the processes and infrastructure that facilitate integration into Icelandic society for immigrants. The improvements detailed in the thesis mainly adhere to the education system and labor force of Iceland.

The answer to the research question of this thesis has two parts. The first is that there is sufficient opportunity being provided in Iceland to make innovation and entrepreneurship attractive. The second is that this opportunity that society provides is significantly harder to access for those that are not natively fluent in Icelandic. If extending this research in the future, it would be helpful to conduct a study which attempts to further quantify where the main drop-offs in opportunity are occurring. Such research could help solidify the findings of this thesis that integration, especially in the school system and workplace, plays a key role in setting immigrants up for success and evening out the playing field for opportunities to innovate (Danzer, 2011).

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