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MASTER THESIS

Effects of Labor Migration on Entrepreneurial Intentions: A Case Study on The Fintech Industry in Lithuania.	**Darbo jėgos migracijos poveikis verslininkystės ketinimams: Lietuvos „Fintech" sektoriaus atvejo tyrimas**

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INTRODUCTION

(Abdurakhmanova & Abdurakhmanov, 2019) describe a labor migrant as a person who moves within their home country or overseas to pursue work. Labor migrants may also refer to the work of working-age migrants who, during a particular time, were part of their home country's employed or unemployed labor force (Ayalon & Rapolienė, 2021). Mostly, they do not have plans to stay permanently in the region or country where they obtain employment.

In recent years, Lithuania has focused on creating favorable conditions for fintech innovation and attracting fintech start-ups. The number of fintech firms in the country started to be recorded only from 2013, with 45 enterprises operating at that time. By the end of 2022, the number had increased to 263 (Invest Lithuania, 2022), indicating more than five times increase. The field of fintech has been globally researched in terms of interactions between fintech companies and traditional banks. (Taujanskaitė & Kuizinaitė, 2022), also studied fintech regulation and security. In recent years, there have been several studies on factors impacting the growth of fintech (Haddad & Hornuf, 2019; Khatun & Tamanna, 2020; Slazus & Bick, 2022; Taujanskaitė & Kuizinaitė, 2022). They studied elements that affect the fintech sector globally. The knowledge provided mainly focused on development concerns globally.

Research aim: this research aims to understand the effects of being a labor migrants on one's entrepreneurial intentions.

The fintech industry in Lithuania is becoming the largest fintech hub in Europe (Invest Lithuania, 2022). There are many migrants that take part in the development of the fintech industry in Lithuania. Therefore, for this research, we will try to understand how being a migrant affects one's entrepreneurial intentions in regard to fintech workers.

The research question for this study is "How does being a labor migrant impact one's entrepreneurial intentions?" The decision to use fintech as an example for this study was made in light of the fact that Lithuania now has the most attractive fintech market in all of Europe and has lately strengthened its efforts to support the growth of new companies and draw in foreign direct investment. This offers a chance to investigate the connection between entrepreneurial intentions and labor migration in the context of a developing and vibrant industry. Also, looking at the link in the context of Lithuania shows the unique opportunities and limits that labor migrants face in an economy that is still growing. Ultimately, the results from this study will be useful for decision makers. This study gives a deep

understanding of the entrepreneurial intentions of labor migrants and how their intentions are influenced by other factors.

Research objectives:

1. To investigate the relationship between labor migration and entrepreneurial intentions
2. To understand how someone being a labor migrant affects their individual skills in terms of confidence, entrepreneurial knowledge, and attitudes towards entrepreneurship.
3. To understand how other factors such as push and pull, business challenges and opportunities affect people entrepreneurial intentions.

Research methods: The research used both primary and secondary data analysis. The primary data will be questionnaire-based surveys. The main research instrument is the questionnaire-based survey. Secondary data analysis will serve more as a background and contextual picture. Linear regression, multiple linear regression, and PROCESS linear regression were used.

The novelty of the research lies in the focus on the entrepreneurial intentions of international people in Lithuania's fintech industry. The study aims to examine the attitudes and perceptions of these individuals towards living in Lithuania and starting a business in the country. Although entrepreneurial intention does not always result in actual entrepreneurship, it is considered an important factor to study as it provides insights into the advantages and disadvantages that need to be taken into consideration when formulating policies and regulations. The results of this research will add to what is already known in the field and give policymakers and others in the fintech industry in Lithuania useful information.

The level of exploration in this research is mainly exploratory. This means that the primary objective of the research is to gather sufficient data and information to gain a better understanding of the relationship between labor migration and entrepreneurial intentions. The research will use both primary and secondary data collection methods, such as surveys and literature reviews, to gather information about the experiences and environments of migrants in Lithuania. The research aims to provide new insights into the impact of labor migration on the fintech industry and to evaluate the factors that increase migrants' entrepreneurial intentions.

1. CONCEPTUAL AND MEASUREMENT INSIGHTS OF THE EFFECTS OF LABOR MIGRATION ON ENTREPRENEURIAL INTENTIONS

In this section, the concepts of entrepreneurial intentions and labor migration will be examined separately, and also the relationship between them. Additionally, this section will examine the measurement scales for both entrepreneurial intentions and labor migration.

1.1. The concept of entrepreneurship and entrepreneurial intentions

According to (Sabah, 2016), entrepreneurship requires the practice of identifying or generating opportunities, analyzing them, and capitalizing on them. Individuals must be prepared to discover and create opportunities in order to succeed in this process. When compared to other factors such as demographic and trait characteristics, entrepreneurial intention is often recognized as the most important element in predicting entrepreneurial action. This is because, like other strategic choices, entrepreneurship is a planned activity. As a consequence, intention models have received a lot of attention in the entrepreneurial literature, with a lot of cognitive research concentrating on them. In today's culture, the role of entrepreneurs in wealth creation is becoming more significant. Examining entrepreneurial intention is a good strategy for understanding possible entrepreneurial activity. According to Bird (Zhang et al, 2015) entrepreneurial intention is a state of mind that drives persons toward reaching a goal or target. Those who aspire to establish a company are more likely to succeed. Examining entrepreneurial intention is therefore a fruitful technique to investigate real entrepreneurial activity.

Antoncic and Hisrich (2000) studied the idea of entrepreneurship in Slovenia and the United States in their study. They looked at the elements that influence entrepreneurial intentions (intrapreneurship) in these two nations. They discovered that while external factors like availability of resources and government support affect entrepreneurial intentions, personal traits like education and past experience are more important in predicting entrepreneurial intentions. Hameed et al. (2020) found that people who had higher degrees of entrepreneurial traits, such as innovativeness and risk-taking, were more likely to have entrepreneurial intentions. It has been known that self-efficacy is a strong determinant of entrepreneurial goals (Omar, 2019). According to Omar (2019), individuals with higher self-efficacy are likely to look for entrepreneurial opportunities and to keep fighting despite the challenges. Self-efficacy also plays an important role in shaping other traits, such as creativity, innovation, and risk-taking (Omar, 2019). The author also found that social capital plays an important role in shaping entrepreneurial intentions. Social capital refers to the capital resources and connections that a person possesses. Moreover, one of the personal traits is technological

knowledge. Berger et al. (2021), found that integration of digital technologies creates new opportunities for entrepreneurship. They suggest that the increasing importance of digital skills may lead to changes in the profile of entrepreneurs, with those who possess these skills being more likely to have entrepreneurial intentions.

The effectiveness of governmental initiatives designed to encourage regional entrepreneurship is examined by Fotopoulos and Storey (2019). They discovered that, because of entrepreneurship's complexity and dynamic character, these strategies frequently fall short of producing the expected benefits. They suggest that a more comprehensive strategy that considers the unique circumstances and requirements of every location may be more successful in fostering entrepreneurship. Cultural and societal norms, as well as economic and policy-related issues, have also been discovered to impact entrepreneurial intentions. For instance, (Trung et al., 2018) discovered that the economic and policy contexts of Vietnam and Poland affected the amount of entrepreneurship among students in both countries. Gandhi and Raina (2018) researched the idea of social entrepreneurship. They studied many elements of this entrepreneurship and the limitations that can prevent its development. They make the case that social entrepreneurship has the ability to alleviate social and environmental challenges while simultaneously creating economic value, and they list a number of elements that can help social entrepreneurial enterprises succeed.

In terms of policy-related aspects, Fotopoulos and Storey (2019) discovered that public policies intended to promote regional entrepreneurship may have different degrees of success in promoting entrepreneurial activity, with some policies being more effective than others. (Bacq & Lumpkin, 2021) discovered that the COVID-19 pandemic had a significant impact on the capacity of social entrepreneurs to continue functioning, showing the need of addressing the external environment when analyzing entrepreneurial objectives.

Hameed et al. (2020) looked at the connection between entrepreneurship and voluntary international migration in order to determine if migrants are more likely to become entrepreneurs. They discover that a higher chance of entrepreneurship among migrants is connected with particular personality qualities, such as risk-taking and proactiveness. Entrepreneurial intentions and migration attitudes of students in Vietnam and Poland are studied by (Trung et al., 2018). They discover that these Entrepreneurial intentions and attitudes are shaped by a combination of environmental and individual variables, including education and resource availability. The consequences of Brexit on the migration choices of young Poles and Lithuanians in the UK are researched by (Klimavičiūtė, et al.,

2020). They discovered that Brexit has strengthened the changing nature of these migrants' choices, with many deciding to leave the UK owing to uncertainty about their future prospects there.

Figure provided by Omar, 2019 is a great figure describing the relationship between individual factors, external factors, and entrepreneurial intentions.

Figure 1.

Entrepreneurial Motivation Model.
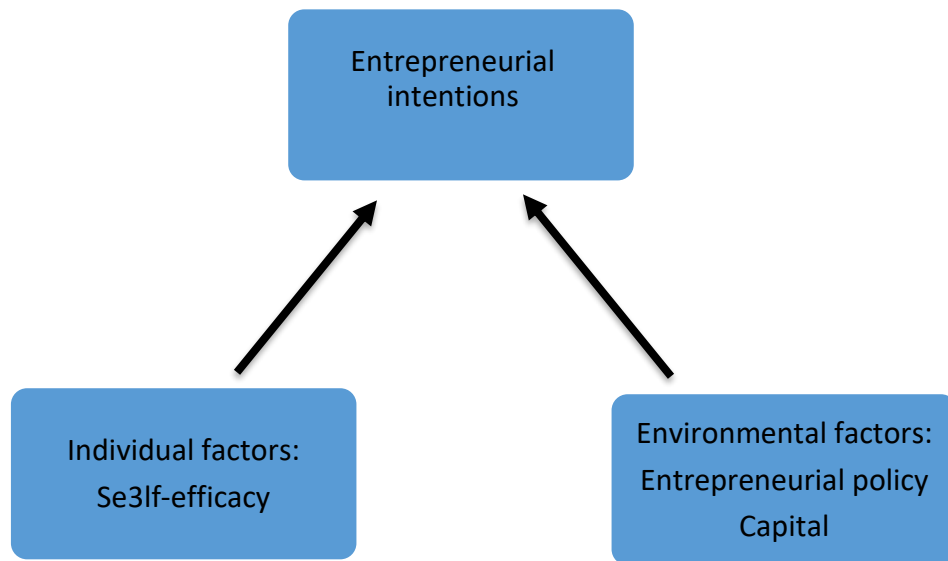
Source: (Omar, 2019)

Conclusion

In conclusion, the discussed literature emphasizes the significance of entrepreneurial intention as a key predictor of entrepreneurial action. Entrepreneurship involves identifying and capitalizing on opportunities, and individuals with the intention to establish a business are more likely to succeed. Personal traits such as education, past experience, innovativeness, risk-taking, self-efficacy, social capital, and technological knowledge play crucial roles in shaping entrepreneurial intentions.

1.2. Measuring entrepreneurial intentions

Section 1: Approaches to measuring entrepreneurial intentions

Several study methodologies have been employed to assess entrepreneurial intentions. Some studies (e.g., Hameed et al., 2020) used established measures to evaluate entrepreneurial intentions or related aspects, like the Entrepreneurial Orientation scale and the Entrepreneurial Self-Efficacy scale. Some studies (Trung et al., 2018) employed qualitative methods in addition to or in conjunction with quantitative methods, such as open-ended survey questions and in-depth interviews. Some studies (e.g., Antoncic and Hisrich, 2000) utilized student samples, whilst others (e.g., Hameed et al., 2020) used samples of working adults or entrepreneurs. Some studies (e.g., Antoncic and Hisrich, 2000; Hameed et al., 2020) included samples from other nations or cultural contexts, allowing for comparisons and possibly insights into cross-cultural differences in entrepreneurial aspirations.

According to Antoncic and Hisrich's (2000) research, the authors compared entrepreneurial attitudes in Slovenian and American transition economies by means of a survey. Hameed et al. (2020) utilized a similar survey to examine the entrepreneurial personality traits of voluntary international migrants. (Klimavičiūtė, et al., 2020) interviewed young Polish and Lithuanians in the United Kingdom to assess how Brexit influenced their migration decisions. (Trung et al, 2020) utilized a survey to evaluate the entrepreneurial motivations and migratory views of Vietnamese and Polish students.

Section 2: Variables and indicators for entrepreneurial intentions

From the researched literature, the indicators of entrepreneurial intentions that can be tracked from secondary sources (such as national and international statistical databases) include:

1. Number of entrepreneurs in a particular country or region;

2. Industry sectors with the highest number of entrepreneurs;

3. Age, gender, and education level of entrepreneurs;

4. Legal status of entrepreneurs (such as sole proprietors, partnerships, or corporations).

From the researched literature, the indicators of entrepreneurial intentions that can be measured using primary research methods (such as surveys or interviews) include:

1. Motivations for starting a business (such as job opportunities, financial independence, or personal fulfillment);

2. Perceived benefits and challenges of entrepreneurship;

3. Attitudes towards risk and uncertainty;

4. Confidence in one's ability to start and run a successful business (entrepreneurial self-efficacy);

5. Intentions to start a business in the near future;

6. Attitudes towards innovation and creativity.

Conclusion:

Different research methods have been used to measure entrepreneurial intentions, including established measures or scales such as the EIQ and TPB as well as qualitative methods such as in-depth interviews. The number of entrepreneurs in a specific location, the industrial sectors with the largest number of entrepreneurs, and the age, gender, and level of education of entrepreneurs are secondary source indicators of entrepreneurial intentions. Motivations for establishing a business, perceived rewards and challenges of entrepreneurship, attitudes toward risk and uncertainty, and confidence in one's abilities to start and operate a successful firm are indicators of entrepreneurial intentions that may be examined using primary research methods. The EIQ and TPB give a deeper understanding of particular characteristics that drive entrepreneurial ambitions, such as attitudes, subjective norms, and beliefs. To get a comprehensive understanding of entrepreneurial intentions and their influence on individual and social results, it is necessary to comprehend these indicators and the methodologies used to quantify them.

1.3 The concept of labor migration

Section 1: Definitions and conceptualizations of labor migration

Labor migration is a complicated and comprehensive term involving the movement of individuals for employment purposes from one location to another (Abdurakhmanova & Abdurakhmanov, 2019; De Haas, 2005; De Haas, Castles, & Miller, 2019). It is influenced by a variety of push and pull factors, such as economic opportunities, political instability, and demographic shifts, and by international organizations and policy frameworks (De Haas, 2005; De Haas et al., 2019). Positive and negative effects of labor migration on people and communities are possible, with

gender and language competency playing a crucial role in the experiences of labor migrants (Friberg, 2013, 2016). Significant variation exists in the experiences of labor migrants in receiving countries (Trung et al, 2020).

Migration can be divided into two main groups, internal and external migration. Internal migration is when people relocate inside the country. External migration is when a person crosses a border (Abdurakhmanova & Abdurakhmanov, 2019; De Haas, 2005). In this study we will mainly focus on the external migration. External migration can also be divided by two, immigration and emigration. Immigration is when a person enters a specific country (Lithuania in our research). Emigration is when a person leaves a country. (Abdurakhmanova & Abdurakhmanov, 2019; De Haas, 2005).

In the context of this research, the focus is on external immigration (excluding return migrants), with a particular focus on the fintech industry in Lithuania.

Section 2: The determinants of labor migration

International organizations and policy frameworks have an impact on labor migration, according to (De Haas, Castles, and Miller, 2019). They argue that despite challenges and opposition, a of organizations like the International Labor Organization and the Global Forum on Migration and Development, have a substantial influence on the management and control of labor migration. According to (De Haas, Castles, and Miller, 2019), these organizations face many oppositions and challenges. However, they have played a fundamental role in shaping the regulations, and the promotion of protection of migrants' rights. They suggest it is important to understand the role of these organizations before making any policy.

According to (Bauer & Zimmermann, 2018), labor migration affects individuals and communities in both positive and negative ways. Although it may open up new opportunities and increase wealth, it can also lead to vulnerability and social and economic exploitation. Moreover, in their 2015 study on labor migration, (Gurieva & Dzhioev, 2015) highlight the difficulties experienced by migrant workers, such as discrimination, exploitation, and a lack of access to social safeguards. They contend that tackling these issues is essential to advancing migrant workers' rights and well-being.

Gruzevskis (2007) looked at the significance of labor migration in Eastern Europe and emphasized the notable increase in labor emigration from countries like Lithuania after the collapse

of the Soviet Union. He contends that the impacts of labor migration, including brain drain and remittances, have been mixed for these countries. However, he also claims that free labor migration has a negative impact in the short term and in the long run, all countries should benefit from these migration patterns. For the example of Lithuania, he mentioned that the country faced short term consequences such as decrease in production, and savings. The emigration of skilled labor can also cause brain drain. However all these consequences will fade away when the country becomes strong again, and more benefits will rise. For example brain drain can be compensated by return migrants and foreign direct investments. The decrease of savings and production can be compensated by migrants sending money back home. The author also suggests that language barriers, family obligations are important factors that restrict labor migration.

Conclusion

To conclude, a key topic that emerges from the literature on labor migration is its complexity. Additionally, there are different variables that affect the choice to move, as well as the experiences and effects of labor migration. Push and pull factors, such as economic opportunities, political instability, and demographic changes, are frequently cited as drivers of labor migration (Baas, 2019). These factors can influence the decision to migrate, as well as the destination and duration of the migration (Abdurakhmanova & Abdurakhmanov, 2019).

Table 1.

Push and pull factors.

Source country	Costs of moving	Destination country
"Push" factors	Transport costs Dangers of the voyage Time of travel Lost income during move	"Pull" factors

Continuation of Table 1.

famine poverty low wages unemployment overpopulation high taxes discrimination religious persecution civil war violence and crime forced military seervice social immobility	Formal exit barriers	Formal entry barriers	high wages employment property rights personal freedom economic freedom law and order peace religious freedom educational opportunity social mobility low taxes family reunion
"Stay" factors	exit visa exit tax prohibition imprisonment penalties on family	entry visa quota prohibition imprisonment fines	"Stay away" factors
family ties friendships social status cultural familiarity employment property familiarity certainty political privileges			language barriers cultural barriers discrimination low social status unemployment low wages lack of political rights unfamiliarity uncertainty war crime

Source: (Bodvarsson and Van den Berg 2013).

The push and pull variables that influence migration, as well as how these factors interact with other factors like social networks and language competency in the decision-making process for migration, are shown in Table 1 by (Bodvarsson & Van den Berg, 2013). The graph illustrates how various variables interact and affect the choice to immigrate.

The regulation and administration of labor migration have been significantly shaped by international organizations and policy frameworks, including the International Labor Organization and the Global Forum on Migration and Development (De Haas, Castles, & Miller, 2019). However, there have been issues and complaints with these frameworks as well (De Haas, Castles, & Miller, 2019). The impacts of labor migration on individuals and communities can be both positive and negative. On one hand, labor migration can provide access to new opportunities and higher wages. On the other hand, it can also lead to social and economic vulnerabilities and exploitation (Bauer & Zimmermann, 2018; Gurieva & Dzhioev, 2015).

The literature research on labor migration led to the conclusion that it is a complicated and comprehensive concept that involves people moving from one location to another in search of employment. It is influenced by global organizations and policy frameworks and pushed by a variety of push and pull forces, including economic possibilities, political unrest, and demographic shifts. The effects of labor migration on people and communities can be both good and harmful. The effects of labor migration on sending countries can be both favorable and unfavorable, and the experiences of labor migrants in receiving countries might differ greatly.

1.4 Measuring labor migration

Measuring labor migration is a crucial aspect of understanding this complex phenomenon and its impacts. This literature review aims to explore the various approaches and methods used in the measurement of labor migration, as well as the challenges and limitations of these approaches.

Section 1: Approaches to measuring labor migration

According to De Haas (2005), secondary data analysis is the most common and most used way to measure labor migration. This method, however, does not capture the full dynamics of labor migration. He suggests that primary data, such as surveys, can provide more information. Similarly, Gruzevskis (2007) suggests that while secondary data analysis might be cost effective, it cannot capture all patterns of labor migration, especially the informal and unregistered numbers. Moreover, in the study done by Hameed et al. (2020), they used social media to measure migration and claimed that social media (Facebook and WhatsApp) provide more insights about the experience and motivation for migration. However, since it is a survey, they also highlight the bias of the respondents.

Section 2: Challenges and limitations of measuring labor migration

Several authors highlight the challenges and limitations of measuring labor migration. De Haas, Castles, and Miller (2019) argue that the lack of standard definitions and classifications of labor migration can make it difficult to compare and analyze data across different contexts and periods. They suggest that harmonizing definitions and classifications would improve the accuracy and usefulness of labor migration data.

Friberg (2013, 2016) discusses the challenges of measuring informal and irregular forms of labor migration, which are often not captured by official statistics. She suggests that alternative data sources, such as media reports and civil society organizations, can provide valuable insights into these forms of labor migration, but may be subject to biases and limitations.

Section 3: Variables and indicators for measuring labor migration

Indicators of labor migration that can be tracked from secondary sources (such as national and international statistical databases) include:

1. Number of migrants in a particular country or region
2. Countries of origin and destination of migrants
3. Age, gender, and education level of migrants
4. Reasons for migration (such as economic, social, or political)
5. Legal status of migrants (such as documented or undocumented)

Indicators of labor migration that can be measured using primary research methods (such as surveys or interviews) include:

1. Motivations for migration (such as job opportunities, family reunification, or personal development)
2. Perceived benefits and challenges of migration
3. Social and economic integration in host country
4. Intentions to stay in host country permanently or return home
5. Impact of migration on well-being (such as income, education, and health)

Conclusion:

Traditional approaches, such as population data and population registers, may give important information. However, emerging methods, such as household, sample surveys, and social media data, can provide more thorough and precise data. Nevertheless, these methodologies have disadvantages, such as the possibility of bias and the difficulty of identifying informal and irregular forms of labor movement. Qualitative approaches, such as interviews and focus groups, may give rich and complex data on the experiences of labor migrants; nevertheless, they are susceptible to researcher bias and may not be representative of the larger migrant community. In addition, the absence of common definitions and classifications of labor migration may make it challenging to compare and interpret data across contexts and time periods. When evaluating labor migration, it is crucial to analyze the advantages and disadvantages of various methodologies and to use numerous methods to get a deeper knowledge of this complicated issue.

1.5 The analysis of the relationship between labor migration and entrepreneurial intentions in the scientific literature

It has been discovered that a number of study constructs are crucial for comprehending the connection between labor migration and entrepreneurial intentions. Individual skills like education, talents, and social networks are among them (Antoncic & Hisrich, 2000). A study by (Trung et al, 2020) found that migrants may be more likely to engage in self-employment or entrepreneurship as a means of adjusting to new environments or as a means of overcoming economic and social uncertainties. Suggesting that the context in which labor migration and entrepreneurship occur may also be significant. However, some studies have emphasized the difficulties that immigrants may have in following their entrepreneurial objectives, such as prejudice, unfavorable working conditions, and a lack of possibilities for professional growth (Ayalon & Rapolien, 2021; Gandhi & Raina, 2018).

In terms of the impact of labor migration on entrepreneurial intentions, the literature suggests that it can both facilitate and hinder these intentions. For example, labor migration may provide individuals with new opportunities and networks that can support entrepreneurship (De Haas, 2005), but it may also expose migrants to exploitation and discrimination, which can hinder entrepreneurial ambitions (Ayalon & Rapolienė, 2021).

Previous research on the connection between labor migration and entrepreneurial intentions have identified many relevant study constructs, including:

1. Push and pull factors: are the different economic, social, and cultural aspects that might affect a person's decision to migrate, as well as the place they choose to go and how long they stay there. The possibility of beginning a business or adjusting to new situations are examples of pull forces, whereas push factors include economic opportunity, family responsibilities, and cultural beliefs;

2. Individual characteristics: These relate to the unique traits of labor migrants, such as education, talents, and social networks, which may have an influence on their entrepreneurial goals. These variables have been found to be significant predictors of migrant entrepreneurs' desire to start their own businesses and their success;

3. Social capital is the term used to describe the networks and resources that people might use to further their entrepreneurial aspirations. Previous studies have demonstrated that social capital may play a significant role in predicting migrant entrepreneurs' success, particularly in the setting of underprivileged areas;

4. Challenges and opportunities: These refer to many challenges and opportunities that immigrants may encounter when pursuing their entrepreneurial ambitions, such as prejudice, unfavorable working conditions, and little chances for professional progression. Previous studies have emphasized how crucial it is to solve these problems in order to support the success of immigrant entrepreneurs.

Conclusion

Push and Pull factors have been considered as important antecedents to labor migration (De Haas, 2005). These factors do not affect entrepreneurial intentions directly but they do play a role in shaping the individual skills of migrants. People decide to migrate because of various push and pull factors. During the course of migration, people's individual skills change. According to Antoncic and Hisrich (2000), education, talents, and social networks are some of the individual skills that have a significant impact on entrepreneurial intentions. Research has shown that push and pull factors can change the individual skills of migrants, and in turn, these changes can impact their entrepreneurial intentions (Friberg, 2013, 2016). For example, a study by Trung et al. (2020) found that migration can lead to changes in education, skills, and social networks, which can increase the likelihood of entrepreneurship. This study highlights the moderating role that push and pull factors play between labor migration and individual characteristics. The literature suggests that individual characteristics play a direct role in shaping entrepreneurial intentions (Antoncic & Hisrich, 2000). Research has demonstrated that education, skills, and social networks are significant predictors of the desire to start a business and the success of migrant entrepreneurs (De Haas, 2005). Thus, it can be concluded that individual characteristics are directly connected to entrepreneurial intentions. Studies have also indicated that challenges and opportunities can moderate the relationship between individual characteristics and entrepreneurial intentions (Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018; Omar, 2019). These challenges and opportunities, such as prejudice, unfavorable working conditions, and limited opportunities for professional growth, can either facilitate or hinder the pursuit of entrepreneurial ambitions. While these challenges and opportunities can help shape the entrepreneurial intentions of migrants, they are not considered determinants for increased entrepreneurial intentions. Social capital, or the networks and resources that individuals use to further their entrepreneurial aspirations, can also play a role in shaping entrepreneurial intentions (De Haas, 2005). However, like challenges and opportunities, social capital is not considered a determinant for increased entrepreneurial intentions. Instead, it acts as a moderator between individual characteristics and entrepreneurial intentions

2. THE RESEARCH METHDOLOGY TO MEASURE THE EFFECTS OF LABOR MIGRATION ON ENTREPRENEURIAL INTENTIONS

Introduction

From the beginning to the end of the research, the research has five stages. The following stages are the research stages, and their explanation as well:

1. Literature review: To start, a review of the existing research was done in order to pinpoint knowledge gaps and guide the research questions and hypotheses. Finding and analyzing pertinent academic papers, publications, and other sources of data on self-employment, labor migration, and the fintech sector in Lithuania was part of this process;

2. Research methodology: The following phases entail choosing the study's sample, the research design, data gathering procedures, and data analysis methodologies. The research design, the sample population to be investigated, the data collection procedures, and the statistical tools to be applied to the data analysis were all part of the research methodology;

3. Data collection: Information on the fintech sector in Lithuania will be gathered. A survey will be used to gather information on the fintech sector, including information on staff characteristics and entrepreneurial intentions. To acquire thorough and reliable data on the industry, the survey will be given to a representative sample of international people in Lithuania who work in or are associated with the fintech sector;

4. Data analysis will take place after collecting the data. For the analysis, t-test, ANOVA, and multiple regression analysis will be used.

5. Finally, after the analysis is completed, the results will be presented in a structured and organized manner.

Figure 2.

Research stages

Given that we have discussed the literature review in the previous section, now we are in the second section in which we determined the research design of this research.

2.1 Research Framework and Hypotheses Development

People are influenced by both pull and push factors when deciding to migrate (De Haas, 2005). Once a person chooses to migrate, other variables (individual characteristics, social capital, business challenges, and entrepreneurial opportunities) might affect their entrepreneurial intentions. According to studies, individual characteristics vary when they migrate (Trung et al., 2020), thus in this study, we'll focus on the qualities that are associated with entrepreneurial goals (entrepreneurial self-efficacy, entrepreneurial knowledge and skills, attitudes towards risk and uncertainty, and attitudes towards innovation and creativity). Entrepreneurial goals are directly influenced by individual characteristics (Antoncic & Hisrich, 2000). The association between personal traits and entrepreneurial goals might be moderated by opportunities and challenges (Ayalon & Rapolien, 2021; Gandhi & Raina, 2018). Entrepreneurial intentions can also be moderated by "social capital," which refers to the networks and resources that people use to further their entrepreneurial goals (Omar, 2019).

Figure 3. Conceptual model of relationship between labor migration and entrepreneurial intentions.
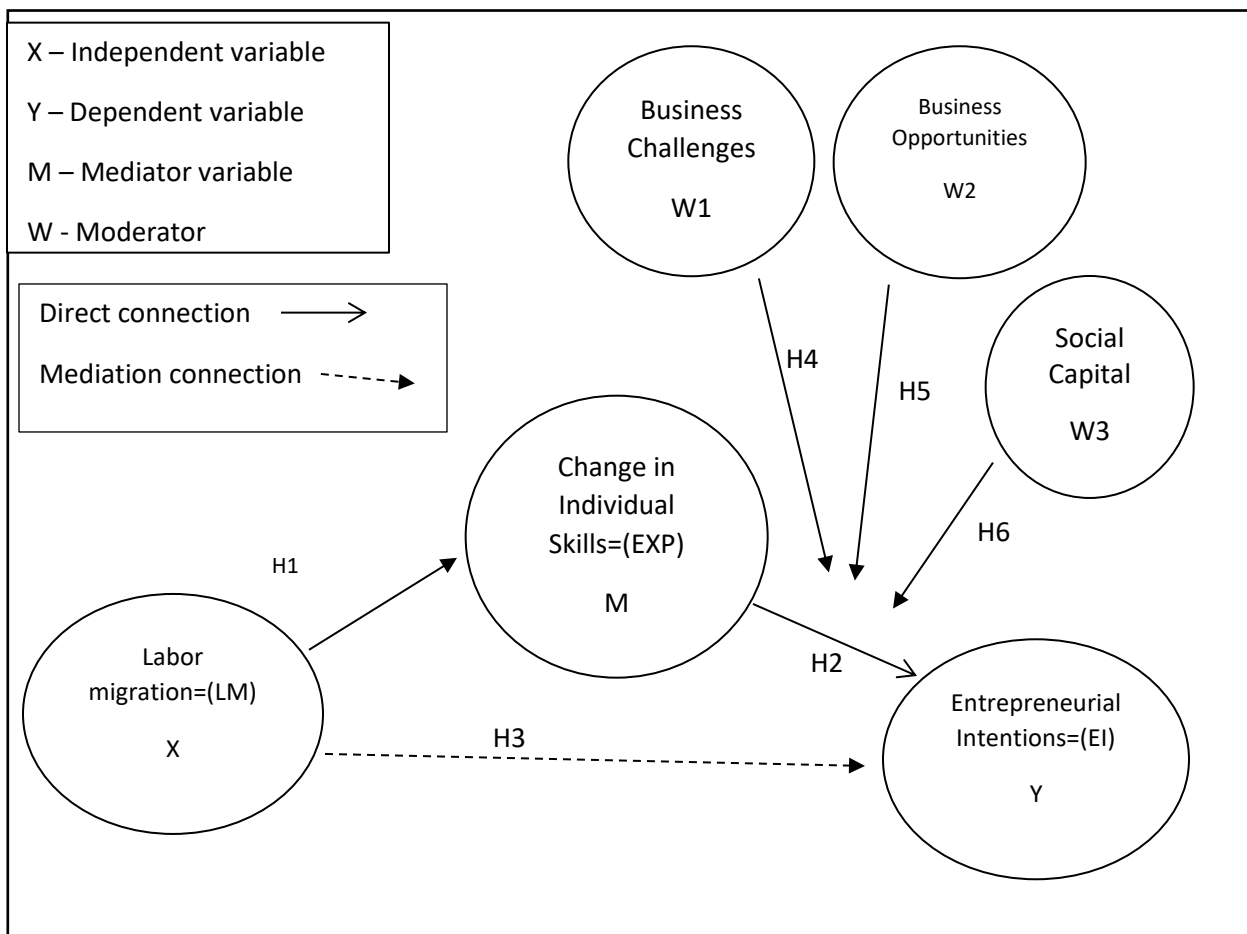
It seems that this is the most proper model for the research because it represents the connection between labor migration and entrepreneurial intentions, and explains how these two are connected. It represents in detail all the factors included in this connection. Moreover, all the arguments provided are also supported by references from the literature review. Therefore it makes it stronger in theory. Moreover based on the literate analysis, appropriate hypotheses were created based on the research framework.

During the literature review, it was found that people migrate because of multiple push and pull factors (De Haas, 2005; Barsson and Van den Berg, 2013). We will choose this as the basis for the research. Regarding entrepreneurial intentions, it was found that individual skills are directly connected to entrepreneurial intentions (Omar 2019). Additionally, there are some outside forces that affect the individual skills, and in return, it will affect entrepreneurial intentions (Antoncic & Hisrich, 2000). Thus to connect the phenomenon of migration, and the phenomena of entrepreneurial intentions, we need to find a common factor between each other. That factor is individual characteristics. It was also found that people's individual skills change during the course of migrating and starting to live in new places (Trung et al., 2020). Therefore, the connection goes like this, labor migration → individual characteristics → entrepreneurial intentions

H1: Labor migration positively influence the change in individual skills.

H2: Change in individual skills positively influences entrepreneurial intentions.

H3: Individual skills mediates the relationship between labor migration and entrepreneurial intentions.

Therefore, we will need to measure the change of individual skills of a person when they migrate in regard to their entrepreneurship skills.

Moving forward, according to other studies, there are a variety of challenges and opportunities that affect one's entrepreneurial intentions. These problems and possibilities may either help or impede the pursuit of entrepreneurial goals, but they are not regarded as predictors of entrepreneurial aspirations. Lack of finance, legal processes, lack of a support network, and a language barrier, for example, have all been proven to have a detrimental impact on entrepreneurial goals (Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018). Government subsidies, a thriving startup ecosystem, a supportive community, and mentoring and training programs, on the other hand, have been proven to

favorably affect entrepreneurial goals (Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018). Furthermore, it has been shown that social capital, which refers to the networks and resources that people utilize to pursue their entrepreneurial objectives, has a favorable effect on entrepreneurial intents. Overall, these results imply that, although individual attributes are essential, external variables such as difficulties and opportunities, as well as social capital, may also have an impact on entrepreneurial intentions. However, we have to make notice that the availability of these variables either work in favor or against increasing entrepreneurial intentions. Therefore, proper hypotheses were set keeping this idea in mind. The mentioned challenges, opportunities, and social capital should work as a mediator between individual skills and entrepreneurial intentions.

H4: Business challenges negatively moderate the relationship between individual skills and entrepreneurial intentions.

H5: Business opportunities positively moderate the relationship between individual skills and entrepreneurial intentions.

H6: Social Capital positively moderate the relationship between individual skills and entrepreneurial intentions.

Given we have now established all factors included in the research, we will present the variables included in the research model. The following table will include the variables, and their explanation

2.2 Questionnaire design and Measurement Scales

The survey questions were created to measure the components that were analyzed and developed in the literature review. The components include labor migration, entrepreneurial intentions, and individual skills. The variables were identified from the literature review, and the survey used two main measurement scales to measure these variables. The EIQ, and Five Big Personality Traits Scales were used.

Table 2.

Constructs of the questionnaire

Variables	Description	Measurement	References

Continuation of Table 2.

Push factors:
  1. PS1
  2. PS2
  3. PS3
  4. PS4
	How often do you feel that the following factors caused you to migrate in the first place?
	  1. Lack of job opportunities in home country
	  2. Low income in home country
	  3. Political instability in home country
	  4. Poor living conditions in home country
		Five-point Likert-type statements from strongly agree to strongly disagree
		
		Variables were taken from Barsson and Van den Berg, 2013.
		
		It is important to note that each of these items is variable.
		
		It is believed that one item per variable is enough. In other words, it is not necessary to use a measurement scale because the item has a straight answer, like yes/no. The answer depend on people's experience rather than opinion.
			De Haas, 2005; Barsson and Van den Berg, 2013

Pull factors:
  1. PL1
  2. PL2
  3. PL3
  4. PL4
  5. PL5
	How often do you feel that the following factors attracted you to Lithuania?
	  1. Job opportunities in Lithuania
	  2. High income in Lithuania
	  3. Political stability in Lithuania
	  4. Good living conditions in Lithuania
	  5. Education
		Five-point Likert-type statements from strongly agree to strongly disagree
		
		Variables were taken from Barsson and Van den Berg, 2013.
		
		It is important to note that each of these items is variable.
		
		It is believed that one item per variable is enough. In other words, it is not necessary to use a measurement scale because the item has a straight answer, like yes/no. The answer depend On people's experience rather than opinion.
			Bodvarsson and Van den Berg (2013) (Table 1)

Continuation of Table 2.

Labor migration: 1. LM	1. My decision to migrate was mainly based on similar factors presented before	five-point Likert-type statements from strongly agree to strongly disagree Variables/items were taken from Barsson and Van den Berg, 2013	Bodvarsson and Van den Berg (2013) (Table 1)
Individual skills: 1. EXP1 2. EXP2 3. EXP3 4. EXP4 5. MEI	1. To what extent do you consider yourself to be confident in starting and running a business after your exposure to new opportunities and experiences? 2. How much do you think your exposure to different business environments has improved your knowledge and skills related to starting and running a business? 3. How much has your exposure to different markets and customers affected your level of creativity and willingness to try new ideas in business? 4. To what extent have the push and pull factors influenced your motivation to start a business? 5. My entrepreneurship skills were developed during the course of relocation	For EXP1, EXP2, EXP3, and EXP4, five-point Likert-type statements from 'Completely', 'A lot', 'Somewhat', 'A little', 'Not at all'. The Big Five Personality Traits Scale was used here. The naming of the items were changed in order to measure the needed items. The names of the items were found in Judge & Bono, 2001; Trung et al., 2020). For MEI, five-point Likert-type statements from strongly agree to strongly disagree	Judge & Bono, 2001; Trung et al., 2020
Challenges on entrepreneurial intentions: 1. CHA1 2. CHA2 3. CHA3 4. CHA4 5. CHA5	How strongly do you agree or disagree that the following challenges stop you from pursuing entrepreneurial ambition? 1. Lack of access to finance 2. Legal procedures 3. Language barriers 4. Lack of a support network 5. There are other challenges	Five-point Likert-type statements from strongly agree to strongly disagree Variables were taken from Ayalon & Rapolien, 2021; Gandhi & Raina, 2018 It is important to note that each of these items is variable.	Ayalon & Rapolien, 2021; Gandhi & Raina, 2018

Continuation of Table 2.

Opportunities for entrepreneurial intentions: 1. OPP1 2. OPP2 3. OPP3 4. OPP4 5. OPP5	How strongly do you agree or disagree that the following opportunities motivate you in your entrepreneurial ambition? 1. Availability of government grants for small businesses 2. A thriving startup ecosystem 3. A supportive community of entrepreneurs 4. Access to mentorship and training programs. 5. There are other opportunities	Five-point Likert-type statements from strongly agree to strongly disagree Variables were taken from Ayalon & Rapolien, 2021; Gandhi & Raina, 2018 It is important to note that each of these items is variable.	Ayalon & Rapolien, 2021; Gandhi & Raina, 2018
Social Capital: 1. SC	1. Having strong network and contacts increase my entrepreneurship ambitions	Five-point Likert-type statements from strongly agree to strongly disagree Variables were taken from (Omar, 2019) It is important to note that each of these items is variable.	(Omar, 2019; Ayalon & Rapolien, 2021; Gandhi & Raina, 2018)
Entrepreneurial intentions: 1. EI1 2. EI2 3. EI3 4. EI4	1. I intend to start my own business in the future 2. I am confident in my ability to start and run a successful business 3. I believe I have the skills and knowledge necessary to start and run a successful business 4. I am willing to take the risks necessary to start and run a successful business	Five-Point Likert-type statements from strongly agree to strongly disagree. Based on the EIQ measurements scale.	Y. W. Chen and F. Linan

2.3 Data collection

Secondary data analysis involved collecting information that has already been gathered by others, such as government statistics, industry reports, or online databases. The collected data was used as a background for understanding the trends.

Survey research: in order to get accurate and detailed information about the relationship between labor migration and entrepreneurial intentions, a survey-based questionnaire has been conducted. Entrepreneurial intentions cannot be measured by secondary data alone, and a primary data collection is required. The survey was given to a sample of international people who work in or are connected to the fintech industry. Survey research, combined with established scales, is an

effective complement to secondary data analysis because it allows for the collection of detailed and accurate data on specific variables of interest, such as entrepreneurial intentions

2.4 Data analysis

After the data has been collected, we will firstly set up the data in order to be used in SPSS program. This includes changing the data into numeric order. After that we will clean the data from any missing values. We will also determine whether we need to remove the outliers from the data. Before starting with the hypothesis testing, we will create a report on the demographic of the respondents that include the gender, age, education achievement, the department the work in, and Lithuanian language proficiency. Additionally, we will create descriptive statistics report that will discuss the mean, mode, median, standard deviation, skewness, and kurtosis.

Since we created a survey that is based on mainly two measurements scales, we will need to check the validity of the questionnaire and the reliability of the constructs. The proper test will be determined once the data is collected. However, the most common tests are factor analysis for validity, and Cronbach's alpha for reliability.

Moving to the hypothesis testing, firstly, we will need to determine whether the data will be parametric (follow a normal distribution) or non-parametric. If the data will be parametric, then we can use regression and PROCESS in SPSS. If the data will be non-parametric, then the proper analysis will be checked depending on the data.

The regression equation will be $Y = \beta0 + \beta1 + \beta2 + \varepsilon$

In this equation:

Y = Entrepreneurial Intentions

$\beta0$ = *the constant term*

$\beta1$ = Labor migration➔ Change in individual skills x [Change in individual skills➔Entrepreneurial Intentions + External Factors (Business Opportunities) – External Factors (Business challenges)]

$\beta2$ = (Labor migration➔ Entrepreneurial Intentions)

ε = *error term*

2.5 Selection of respondents and sample characteristics

Sample Size: According to data from Invest Lithuania, there are approximately 5900 workers in the fintech industry in Lithuania, of which it is estimated that 30% are migrants. Invest Lithuania, 2021). Based on the Paniotto formula (Valackienė, 2007), the sample size is 326 participants. Paniotto formula (Valackienė, 2007),

$$n = \frac{1}{\Delta^2 + 1/N}$$

n = sample size = 5900

A = sample error = (0.05)

N = the size of the studied whole = 5900 * 0.3 = 1770

The participants will be chosen from different age groups. Both men and women can participate in the survey. And the only criteria is that people who will participate need to be migrants, and are related to the fintech industry. The survey will be distributed through co-working places, events, and online pages.

2.6 Quality of the data and limitations

To ensure the quality of the research:

Ensure that the sample is representative; cleaning the data after conducting the survey to test for any outliers; using the appropriate statistical test to ensure quality of the result; do necessary assumptions test before doing any analyses.

The data collected for this study could bring several limitations to the analysis:

Since the data will be collected from surveys, it might be biased depending on the answers of participants. To overcome these biases, it is important to insure the whole representative; lack of participation, even though it was already planned on where to distribute the survey and whom to contact, it is always better to be aware of the required sample size.

3. THE EFFECTS OF LABOR MIGRATION ON ENTREPRENEURIAL INTENTIONS

A survey was conducted online to collect data on the effects of labour migration on entrepreneurial intentions. The survey was sent out in English. The survey questions were created to measure the components that were analyzed and developed in the literature review. The components include labour migration, entrepreneurial intentions, and individual skills. The variables were identified from the literature review, and the survey used two main measurement scales to measure these variables. The EIQ, and Five Big Personality Traits Scales were used.

To ensure random selection and to reach the most respondents, the survey was sent out through multiple channels and platforms. The researcher first used LinkedIn to distribute the survey. Using the Sales Navigator feature of LinkedIn, the researcher was able to filter out people who are connected to fintech and in Lithuania. The researcher then filtered out people who are international by first checking their names, and then asking them whether they are locals or foreigners. Another way of conducting the survey was by attending events that are related to fintech. The researcher attended events held by Rockit, Invest Lithuania, International House Vilnius, and Startup Lithuania. The researcher sent the survey to people who fit the sample's characteristics and asked them to kindly participate in the survey.

The SPSS program was used to make the analysis. First, the data was presented in an Excel spreadsheet. For the questions that had a 5 Likert scale question, where the options are (strongly agree, agree, neutral, disagree, strongly disagree). These options were converted to a 5 point scale, with 5 being "strongly agree", and descending until 1 as "strongly disagree". Other questions that had options (completely, a lot, somewhat, a little, not at all), the data was also converted to a 5 point scale, with 5 as "completely", and descending until 1 as "not at all". The data was also checked for missing values, ensuring that the analyzed data did not have any missing values. Few respondents had missing values, and these responses were deleted from the data. The data was checked to remove any duplicates, errors, or inconsistencies.
Furthermore, the data was organized and labelled in SPSS.

The data that had constructs with multiple items was summed up in SPSS to make one total item. This applies to the construct "change in individual skills", and 'entrepreneurial intentions'. The other sets of variables are not considered construct because they test different topics. For example, each push factor variable test different ideas. One of the push factors is lack of finance, which measures the financial situation. The other variable is political instability, this measures the political

situation. Thus, these variables measure two different things. This also applies to pull factors, business challenges, and business opportunities.

Regarding the outliers, it was decided to include all outliers. As we are measuring people's opinions and experiences, someone might have different opinion and experience than the rest, and removing the outliers will cause a shift in the results of the data. Moreover, all the hypotheses testing were done twice. One with the outliers, one without the outliers. It was found that robust of outliers is not significant to the results. The results can change with 0.05 degrees only.

3.1 Sampled population demographic data

Table 3.

Demographic information about the sampled population

Definition	Total	Percentage (%)
Gender		
Male	176	54.4%
Female	137	42.4%
Prefer not to say	10	3.1%
Age		
18-24 years old	145	44.9%
25-30 years old	130	40.2%
30-40 years old	44	13.6%
41+	4	1.2%
Time in Lithuania		
Less than a year	28	8.7%
1-3 year	81	25.1%
3-10 years	172	53.3%
More than 10 years	42	13%
Educational achievement		
Less than high school	4	1.2%
High school diploma/GED	9	2.8%

Continuation of Table 3.

Some college, but no degree	8	2.5%
Bachelor's	210	65%
Master's	84	26%
Professional degree	1	0.3%
Doctorate degree	7	2.2%
Department		
Human resource	23	7.1%
Finance	70	21.7%
Marketing	37	11.5%
Sales	56	17.3%
Operations	36	11.1%
Information Technology	28	8.7%
Customer service	20	6.2%
Other	53	16.4%
Lithuanian proficiency		
A1	118	36.5%
A2	77	23.8%
B1	43	13.3%
B2	14	4.3&
C1	23	7.1%
C2	48	14.9%

There were 323 participants in the survey, with 54.5% being male and 42.4% being female, the other 3.1% preferred not to reveal their gender. The age of respondents was determined based on 4 groups, 18-24 years old, 25-30 years old, 30-40 years old, and 41+ years old. The group age of 18-24 years old was the highest participants percentage with 44.89%, then followed by the age group of 25-30 years old with 40.25%

Living period in Lithuania was also measured by four groups, less than a year, 1-3 years, 3-10 years, and more than 10 years. The highest 53.25% of the respondents are living in Lithuania with a period of 3-10 years. The second highest period was 1-3 years with 25.08%.

Participants' educational achievements were also collected. The survey had options where people could select their highest achievement. In the picture, you will see the options. However, 65.02% of respondents have a BA degree. Following it, 26.01% of participants have a MA degree.

Moreover, the survey asked about people's level of Lithuanian language based on Common European Framework of Reference for Languages (CEFR) (A1, A2, B1, B2, C1, C2). The highest percentage of respondents chose the option A1, with 36.53%. The second highest level was A2, with 23.84%. While 14.85% of the participants speak Lithuanian proficiently (C2).

3.2 Sampled population descriptive statistics

Moving forward to the descriptive statistics, the first group that was analyzed is the push factors, or the factors that influence people to migrate in the first place. In order to understand what are the factors that influenced people's decision to migrate these variables were measured. We will not include these variables in the hypothesis testing but it will help us understand and make suggestions if needed.

Table 4.

Descriptive statistics from the sampled population

Descriptive Statistics					
Items	Mean	Median	SD	Skewness	Kurtosis
Lack of job opportunities in home country (PS1)	3.21	3	1.3	-0.29	-01.1
Low income in home country (PS2)	3.36	4	1.2	-0.403	-0.87
Political instability in home country (PS3)	3.56	4	1.3	-0.636	-0.86
Poor living conditions (PS4)	3.15	3	1.3	-0.124	-1.13
Job opportunities (PL1)	3	3	1.1	-0.2	-0.8
High income (PL2)	2.7	3	1	0.013	-0.73
Political stability (PL3)	3.4	4	4	-0.65	-0.09
Good living conditions in Lithuania (PL4)	3.55	4	1	-0.7	0.08

Education (PL5)	3.99	4	1	-1	0.57

Continuation of Table 4.

Given me the confidence (EXP1)	3.6	4	1.2	-0.64	-0.4
Improved my knowledge about entrepreneurship (EXP2)	3.76	4	1.1	-0.83	0.45
Increased my willingness to take risks in business (EXP3)	3.52	4	1.2	-0.5	-0.66
Increased my innovation and creativity (EXP4)	3.9	4	1	-0.8	0.198
Lack of finance (CHA1)	3.79	4	0.918	-0.912	0.790
Legal procedures (CHA2)	3.25	4	1.173	-0.429	-0.757
Lack of a support network (CHA3)	3.67	4	1.071	-0.681	-0.158
Language barrier (CHA4)	3.18	3	1.287	-0.145	-1.083
Governmental subsidies (OPP1)	3.48	4	1.15	-0.49	-0.47
A thriving startup ecosystem (OPP2)	3.85	4	1	-0.8	0.056
A supportive community (OPP3)	4.05	4	0.9	-1.05	1.2
Mentorship and training programs (OPP4)	3.64	4	0.9	-0.83	0.256
Entrepreneurial intentions (EI1)	4.07	4	1.1	-1.2	0.81
Confidence (EI2)	3.84	4	1.08	-0.94	0.30
Skills and knowledge (EI3)	3.68	4	1.25	-0.76	-0.41
Taking risks (EI4)	3.69	4	1.25	-0.66	-0.554

The mean is around 3.5 for PS2 and PS3. Variable PS1 has a value of 3.21 and PS34 has a mean value of 3.15. The median for PS1 and PS4 is 3, while for PS2 and PS3 is 4. Mode for PS1 and PS2 is 4. For PS3 is 5, which means the choice of 'strongly agree' was the most chosen choice for this variable. The standard deviation is, more or less, one degree, which suggests that the choice between from 'strongly agree' to 'strongly disagree' can deviate by one degree, given that there are 5 degrees since it is a 5 points scale. From the skewness, we see that the PS1, and PS4 have values around 0, which is almost symmetric, this suggests the data is normally distributed. While PS2, and

PS3, have around negative 0.5, which means that the data is more right-skewed. However, for all variables, the kurtosis is closer to 0, which means that the data is distributed around the mean. This indicates that the data is normally distributed, and will be easier to analyze using statistical tests that assume a normal distribution.

The next group of variables is the pull factors, or the factors that influence people to come to Lithuania. From the table below, we see that the education factor has the highest value of 4, and variables PL3, PL4, and PL5 have mean around 3.5. After that PL1 with a mean of 3. Lastly, 'high income' has the lowest with a mean of 2.72. This means that the highest number of people came to Lithuania for educational purposes. We also see a clear pattern that most people do not choose Lithuania for economic reasons, PL1, and PL 2 have lower mean values. However, Lithuania's political and social conditions are attractive to people; x̄ of PL3, PL4, and PL5 is around 3.5. The median and mode for PL1 and PL2 is 3. While for the other variables, the median and mode are 4. The standard deviation is around 1, which means the choice can deviate by one degree. From the skewness, we see that the PL1, and PL2 have values around 0, which is almost symmetric; this suggests the data follow the normal distribution skewness level. While PL3, PL4, PL5, and PL6 < -0.5, which means that the data is more right-skewed. From the kurtosis analysis, it seems that the PL1 and PL2 might not be normally distributed and it is more spread further than the mean, as their values are around -1. While PL3, PL4, and PL5 have a normal distribution kurtosis, and the spread of the data around the mean is the same as the spread of normal distribution.

Moving forward to the individual skills variables. These variables were set to measure the extent to which labour migration changes individual skills. There were 4 items that are connected to individual skills. It is nice to see that the mean for all variables is closer to 3.5-4, which suggests that on average people's individual skills do indeed change during the course of migration. The median and mode is 4 for all variables, this indicates that the choice 4 = agree, splits the data into half, and the most chosen option. We see that the choice can deviate by one degree from the standard deviation. Looking at the Skewness, all of the variables are right skewed, as their value is between (-0.5 – -0.9). Kurtosis shows that the data for EXP1, and EXP4 follow the normal distribution Kurtosis, value of kurtosis is between 0 – 0.2. While for the other variables, EXP2, EXP3, Kurtosis is around -0.5, this suggests that the data has fewer extreme values than the normal distribution. It also suggests that the data is distributed around the mean.

The fourth set of variables is about the challenges that might affect entrepreneurial intentions. These variables were measured in order to test whether these challenges make any influence on people's entrepreneurial intentions. It looks like the variable 'lack of finance' has the strongest influence on people's entrepreneurial intentions, with a mean of 3.79. Then comes 'the lack of a support network' with a mean of 3.67. Legal procedures comes in third place with a mean of 3.25, and language barrier is the last with a mean of 3.18. This means that people consider lack of finance and lack of support network important challenges that affect their entrepreneurial intentions. While legal procedures and language barrier challenges have lower influence on their entrepreneurial intentions. Median and Mode for almost all variables is 4. The standard deviation is almost one degree as well. From the Skewness data, for CHA1, and CHA3, the skewness is closer to -1, which suggests that data is greatly skewed to the left. We see CHA2, CHA4, have a negative skewness on the left side, however the values are higher than -0.5 (CHA2, CHA4,>-0.5), which suggest that the skewness degree is moderate. From the kurtosis values, we see that variables, CHA1, CHA2, and CHA4 have values between -0.75 – -1, which means that the data is distributed around the mean, with fewer outliers. While for CHA3, the kurtosis is -0.15 which means the distribution of the data follow the normal distribution.

The next group is the opportunities variables, these variables were measured in order to find whether their opportunities have any type of influence on entrepreneurial intentions. We notice the mean values for these variables are clearly higher degrees than the other sets of variables. The highest variable is 'A supportive community' with a mean of 4.05. The second highest variable is the 'Mentorship and training programs' with a mean of 3.9. Then followed by 'A thriving start-up ecosystem' with a mean of 3.85. The value of median and mode of these variables is 4. From the skewness data, the skewness of all variables is equal or lower than 0.5, which means that this data is moderately rightly skewed. The kurtosis shows that the data for variables OPP1, OPP2, and OPP4, is moderately spread around their mean; the kurtosis value of these variables is between +0.5 and -0.5. However, for the variables, OPP3, it shows that the data has a higher peak than a normal distribution; the kurtosis for this variable is 1.2 means.

The last group for the descriptive is the items for the entrepreneurial intentions. For this construct, the mean is around 3.5-4 for all items, which is similar to the change in individual skills items. The highest mean is about the intention to start a business, which shows that people are eager to start their own business. However, we see slight decrease between the mean of the intention item,

and other items. This suggests that people do indeed have some intentions but they are not yet willing to take the actions. The standard deviation is one for all items as well. Skewness is similar to the change in the individual skills, all items have negative values. This means that all of the items are right-skewed. This means that people's choices were mostly between 'Neutral', 'Agree', and 'Strongly Disagree. Kurtosis shows a relatively high value for the entrepreneurial intentions, which means that the distribution is more peaked around the mean, with more outliers. This should be normal as the mean and mode support the conclusion that people in general have higher entrepreneurial intentions. While the kurtosis for EI2 is moderately peaked with 0.302. EI3 and EI4 have negative kurtosis which suggests that the distribution is flatter than normal distribution.

3.3 Validity analysis

To test the validity of the study, a Factor analysis was used in SPSS. The validity was tested via multiple tests. We started with KMO to assess the sampling adequacy, the score of KMO was 0.721. It is suggested that the score of KMO should be higher than 0.5 in order to accept the validity. Therefore, we can say that the KMO is satisfactory for approving the validity of the study.

The second test we looked at is the Bartlett's Test, the p value is equal to 0.000 (P = 0.000). This suggests that the results are significant. Bartlett's Test shows the correlation between the variables in the study. Since the score is significant, then we can assume that the results from factor analysis were sufficient to approve the validity of the study.

Table 5.

Survey validity KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,721
Bartlett's Test of Sphericity	Approx. Chi-Square	3241.391
	df	132
	Sig.	,000

3.4 Reliability test

We have used one a construct to measure the change of people's individual skills during the course of migration. In order to test the reliability of this construct we conducted a reliability analysis test. The construct's reliability is acceptable as Cronbach's alpha value 0.769 (α=0.769), 0.8. N = 323.

Table 6.

Cronbach`s Alpha for Individual Skills

Reliability Statistics	
Cronbach's Alpha	N of Items
.769	4

The other construct we needed to test the reliability for is the entrepreneurial intentions. α=0.754), 0.8. N = 323, which tells that the internal consistency of the variables is acceptable.

Table 7.

Cronbach`s Alpha for Entrepreneurial Intentions

Reliability Statistics	
Cronbach's Alpha	N of Items
.753	4

For measuring labor migration, we used the explained variables before, and there was no specific scale used in these questions. So we check the internal consistency between all the variables, and the Cronbach's Alpha shows 0.7 (a=0.699. N= 11) which suggest the reliability is acceptable.

Table 8.

Cronbach`s Alpha for Labour Migration

Reliability Statistics	
Cronbach's Alpha	N of Items
,699	11

3.5 Analysis of Demographic Differences in the Evaluation of Model Constructs

The difference between the answers from different groups of demographic answers were also analyzed. Having this information will help us understand more how each set of groups answered. For example we can understand what the difference between male is and females in regard to the chosen constructions. We can also understand how age is connected to our constructs.

In order to test whether the answers from different groups of demographic data differ in regard to the chosen constructs, we have used the Mann-Whitney U Test, and Kruskal-Wallis test. We used Mann-Whitney U test for the variables that have two groups, which is the gender variable in our research.

Table 9 below shows the gender variable, we see that males have a higher mean rank in change in individual skills, and entrepreneurial intentions. This suggests that males are more likely to engage in entrepreneurial activities than females.

Table 9.

Gender Demographic Differences in the Evaluation of Model Constructs

Constructs	Mean Rank		P value
	Male	Female	
Labor migration	162.89	149.43	0.191
Change in individual skills	164.7	135.55	0.004
Entrepreneurial intentions	173.74	135.5	<0.001

Moving forward, we used Kruskal-Wallis test for the variables that have more than two groups, and these variables include (Age, Living period in Lithuania, Educational achievements, Career department, and Lithuanian language proficiency)

Table 10 below shows the information about the age variable. We see that the p value for all three constructs is less than 0.05, which suggests that different age groups answered differently to these constructs. We see the age group of 25-30 years have the Mean Rank for all the constructs, suggesting this age group might be the most active or engage in entrepreneurial intentions, the age group that follows is the 30-40 years.

Table 10.

Gender Demographic Differences in the Evaluation of Model Constructs

Constructs	Mean Rank				P value
	18-24	25-30	30-40	41+	
Labor migration	162.5	171.63	139.89	71	0.045
Change in individual skills	133.18	187	151.34	70.6	<0.001
Entrepreneurial intentions	137.28	194.6	149.74	133.38	<0.001

Table 11 below shows the information about the Living period in Lithuania variable, there is no statistically significance difference between the variables change in individual skills and entrepreneurial intentions. However we see that p value for labor migration is 0.007, which is significant. We see that the group of 3-10 years have the higher mean for the labor migration, the second group is '1-3 years'. This might suggest that people started to come to Lithuania 10 years ago, which is relatively the same time when the fintech industry started to bloom in Lithuania.

Table 11.

Living period Demographic Differences in the Evaluation of Model Constructs

Constructs	Mean Rank				P value
	Less than a year	1-3 years	3-10 years	More than 10 years	
Labor migration	120.3	169.44	172.19	133.69	0.007
Change in individual skills	128.13	147.14	165.38	156.6	0.160
Entrepreneurial intentions	138.64	164.34	168.96	144.57	0.325

Table 12 below shows the information about the educational achievement variable. We see statistically significance difference in the entrepreneurial intentions construct, the highest the professional degree, followed by Master's and then Bachelor's. However for the professional degree, there was only one respondents, this is not enough to make any conclusions. Though, we can understand that people who did BA, and MA have a higher entrepreneurial intentions. Most of respondents were also BA or MA graduate, therefore, the data might be skewed to these groups as well.

Table 12.

Educational achievement Demographic Differences in the Evaluation of Model Constructs

Constructs	Mean Rank							P value
	Less than high school	High school diploma/GED	Some college, but no degree	Bachelor's degree (e.g. BA, BS)	Master's degree (e.g. MA, MS, MBA)	Professional degree (e.g. MD, JD, DDS)	Doctorate degree (e.g. PhD, EdD)	
Labor migration	135	162.5	133.88	170.94	146.35	217	120.6	0.313
Change in individual skills	68.5	83.06	146.79	157.20	164.11	275	177.8	0.063
Entrepreneurial intentions	76.75	54	167	165.66	167.24	276	153.93	0.007

Table 13 below shows the information about the career department variable. As for the groups, we can see that there is a statistically significant difference for change in individual skills and entrepreneurial intentions. However there does not seem to be significant difference in the labor migration. This might suggest that the type of work account for people's entrepreneurial skills and intentions. Moreover, positions in sales, operations, and information technology has the highest mean ranking in regard to both change in individual skills and entrepreneurial intentions.

Table 13.

Career department Demographic Differences in the Evaluation of Model Constructs

Constructs	Mean Rank								P value
	Human resource	Finance	Marketing	Sales	Operations	Information technology	Customer service	Other	
Labor migration	156.7	151.88	154.49	179.48	181.24	167.55	143.9	155.25	0.06
Change in individual skills	149.89	128.62	131.65	175.64	205.65	187.76	154.74	145.16	<0.001
Entrepreneurial intentions	145.17	128.33	163.20	174.43	20799	189.11	156.38	156.37	0.002

Table 14 below shows the information about the Lithuanian proficiency variable. We see that there is a statistically significant differences in all constructs. It seems that the people with different levels of local language proficiency. The data might suggest that people who have levels (A2, B1, and B2), have a higher mean ranking, this means that these people can be more integrated into the society. As they are more active, they might be engaging in more entrepreneurial activities.

Table 14.

Lithuanian proficiency Demographic Differences in the Evaluation of Model Constructs

Constructs	Mean Rank						P value
	A1	A2	B1	B2	C1	C2	
Labor migration	154.61	183.12	193.66	160.43	171.87	113.66	<0.001
Change in individual skills	131.83	159.95	217	174.11	140.98	156.95	<0.001
Entrepreneurial intentions	144.02	165.91	214.44	195.36	156.74	154.75	<0.001

3.6 Hypothesis testing

H1: Labor migration positively influence the change in individual skills.

H0: There is no relationship between labor migration and change in individual skills.

For this hypothesis, we will use a regression model to test the relationship between labor migration and entrepreneurial intentions. We tested the regression linearity assumptions and they were not violated. Linearity was checked by drawing P-P plot were we can see the observed values are on the same line as the predicted values. Independence and homoscedasticity were checked by plotting a scatter plot, the residuals are normally distributed and do not have any pattern. Normality was also checked by drawing a histogram, the shape of the distribution is bell-shaped, which suggest the data is normally distributed. Multicolinearity does not need to be checked for this one as we are doing a simple regression analysis.

We also summed up the variables included to measure labor migration, which include (PS1; PS2; PS3; PS4; PL1; PL2; PL3; PL4; PL5; LM). The new variable name is 'Mtotal2'. As for the individual skills, we also summed up the items of (EXP1; EXP21 EXP3; EXP4), the new variable name is EXtotal.

The correlation coefficient for this regression is 0.311, the P <0.001. This suggests that labor migration has an effect on change in individual skills by 0.311. The results are statistically significant as the P value is lower than 0.001. This results gives us enough information to reject the null hypothesis, and accept the alternative hypothesis. We can confirm that the labor migration influence change in individual skills by 0.311.

H2: Change in individual skills directly influence entrepreneurial intentions.

H0: There is no relationship between change in individual skills and entrepreneurial intentions.

For testing this hypothesis a linear regression was also used. Regression assumptions were checked similarly to the first hypothesis. The data looks normally distributed, linear, and do not follow a pattern. For the entrepreneurial intentions items, we summed up the items (EI1; EI2; EI3; EI4) into one new variables (EItotal).

The correlation coefficient is 0.790, the P value is lower than 0.01 (P<0.001). This suggest that 'change in individual skills' make a change of 0.79 points in entrepreneurial intentions. The results are also statistically significant. This allows to reject the null hypothesis and confirm the alternative. Change in individual skills does indeed influence entrepreneurial intentions by 0.790.

H3: Individual skills mediates the relationship between labor migration and entrepreneurial intentions.

H0: There is no relationship between the variables

For this hypothesis we will use a multiple regression model. We will include labor migration and change in individual skills as the independent variables, and entrepreneurial intentions as the dependent variables. Regression assumptions were also checked ad validated. One additional step was to check the multicolinearity between the independent variables. The correlation coefficient is 0.311, which does not violate the assumptions of multicolinearity. Now we see the correlation between labor migration (Mtotal2) and entrepreneurial intention (EItotal) is 0.044, and between change in individual skills (EXtotal) and entrepreneurial intentions (EItotal) is 0.738. The P value of this test is 0.001, which is significant.

This results give us enough information to reject the null hypothesis, and confirm the alternative. We can see a significant relationship between the variables, and individual skills does indeed mediate the relationship between labor migration and entrepreneurial intentions.

To sum up the results from the regression analyses, this is how the three variables connect between each other.

Labor migration → Change individual skills = 0.311; Labor migration → entrepreneurial intentions = 0.044; Change in individual → entrepreneurial intentions = 0.738.

Y = [0.311 x 0.738] + 0.044 = 0.2735

H4: Business challenges negatively moderate the relationship between individual skills and entrepreneurial intentions.

H0: Business challenges do not moderate the relationship

To test this hypothesis, we will used a PROCESS by Hayes. This also requires checking for regression assumptions, we have already checked the assumptions for dependent variable 'entrepreneurial intentions' and predictable variables' change in individual skills'. We checked the linearity and multicolinearity of the variable CHAtotal (which includes the sum of challenges variables: CHA1; CHA2; CHA3; CHA4; and CHA5). There is no mulitcoinearity between the independent variables. The linearity was also checked and the observed values are in line with the predicted values.

After conducting the necessary tests, it was found that there is no statistical significance present. The period for the BootLLCI ranges from -0.0035 to 0.0013, indicating that the data is not significant as zero falls within this range. As a result, the null hypothesis cannot be rejected, and it is not possible to confirm that business challenges negatively moderate the relationship between individual skills and entrepreneurial intentions. The lack of statistical significance is the main reason behind this.

H5: Business opportunities positively moderate the relationship between individual skills and entrepreneurial intentions.

H0: Business challenges do not moderate the relationship

We plan to test the hypothesis using the PROCESS as well. As part of this analysis, we have already checked the assumptions for the dependent variable 'entrepreneurial intentions' and the predictable variable 'change in individual skills.' In addition, we have also checked for linearity and multicollinearity in the variable OPPtotal, which represents the sum of the challenges variables OPP1, OPP2, OPP3, OPP4, and OPP5. The results indicate that there is no evidence of multicollinearity between the independent variables, and the observed values are consistent with the predicted values, indicating a linear relationship.

Moving forward for checking the tests, unfortunately, the tests do not how any statistical significance. The BootLLCI period is between -0.0045 and 0.003. This means that the data is not significant because zero is in the period. This means that the null hypothesis cannot be rejected. Thus we cannot confirm that business opportunities positively moderate the relationship between individual skills and entrepreneurial intentions. This is mainly due to no statistical significance.

H6: Social Capital positively moderate the relationship between individual skills and entrepreneurial intentions.

H0: Social Capital do not moderate the relationship

PROCESS analysis was also used for this hypothesis. We have already ensured that the assumptions for the dependent variable 'entrepreneurial intentions' and the predictable variable 'change in individual skills' are met. Additionally, we have also checked for linearity and multicollinearity in the variable social capital (SC). Our findings indicate that there is no evidence of multicollinearity between the independent variables, and the observed values align with the predicted values, indicating a linear relationship.

However, after conducting the necessary tests, we found that there is no statistical significance present. The BootLLCI period is between -0.0100 and 0.0140, suggesting that the data is not significant as zero falls within this range. Therefore, we cannot reject the null hypothesis, and we cannot confirm that Social Capital positively moderate the relationship between individual skills and entrepreneurial intentions. The primary reason for this is the lack of statistical significance.

3.6 Research analysis results and discussion

A survey was conducted to gather information about the effects of labor migration on entrepreneurial intentions. The sample included 323 participants, the demographic data show that the majority of the respondents are male (54.4%), in the age between 18-24 years (44.9%), have lived in Lithuania for 3-10 years (53.3%), have a bachelor's degree (65%), and have a low level of Lithuanian proficiency (A1 level: 36.5%). Descriptive statistics were also presented, the mean, median, standard deviation, skewness, and kurtosis were analyzed. Political instability was the highest factor that influence people to migrate with a mean of 3.5 out of 5. Moreover, lack of finance and lack of support network seem to have the highest challenges on people's entrepreneurial intentions. Surprisingly though, language barrier and legal procedures do not have strong impact on international people. Conversely, supportive community and social network have a high mean of around 4 out of 5.

Moving to the hypothesis testing, the research aimed to test whether labor migration have any influence on individual skills change in regard to entrepreneurial intentions. The results showed that 31% of change in individual entrepreneurial skills is accounted by labor migration. Moreover, change in individuals skills make up almost 80% of migrants entrepreneurial intentions. We also tested how labor migration affect entrepreneurial intentions directly in order to complete the regression equation. The effect is about 4% only. The research also tried to find out whether the connection between change in individual skills and entrepreneurial intentions is moderated by other factors, including business challenges and opportunities. However, due to statistical insignificance in the data, we could not find strong evidence.

Therefore, we can find the effect of labor migration on entrepreneurial intentions by plugging in the results; $(Y) = (0.311 * 0.79) + 0.044 = 0.253$. This means that the fact of labor migrating make up of 25% of migrant's entrepreneurial intentions. It is important to note that this percent is subject to change by business challenges and business opportunities. Even though this research could not find statistical significance about the moderating effects of business challenges and opportunities. The belief of moderating effect should still be valid as it is supported by a high number of academic

researches (Fotopoulos and Storey (2019; Trung et al., 2018; Gandhi and Raina, 2018; Omar, 2019) have all agreed that there are outside factors besides internal factors that affect one's entrepreneurial intentions. The main factor of not having statistical significance is the fact of not using measuring scales or multiple items to measure the effects of business challenges and opportunities.

The decision to exclude multiple items to measure business challenges and opportunities is a result of the pilot study. A pilot study was conducted on 25 participants, and longer questionnaire was administrated. The questionnaire included multiple items/measurement scales for business challenges and opportunities. In addition to the final questionnaire, there was additional 10 items. The survey was perceived as lengthy by participants, with only 30% completing it, resulting in feedback to reduce the number of questions. Their feedback was to reduce the number of questions. Consequently, a newer and shorter questionnaire was created. However, the new questionnaire had some drawbacks in regard of measuring these business challenges and opportunities. The main issue was that the new questionnaire asked questions about multiple challenges and opportunities, questions on multiple challenges and opportunities were found to measure a different construct from the moderating effect between individual skills and entrepreneurial intentions. Specifically, these questions tended to measure which challenges or opportunities had a higher impact on entrepreneurial intentions, rather than the extent to which they moderated the relationship between individual skills and entrepreneurial intentions

Figure 4.

Revised Model with Regression Values
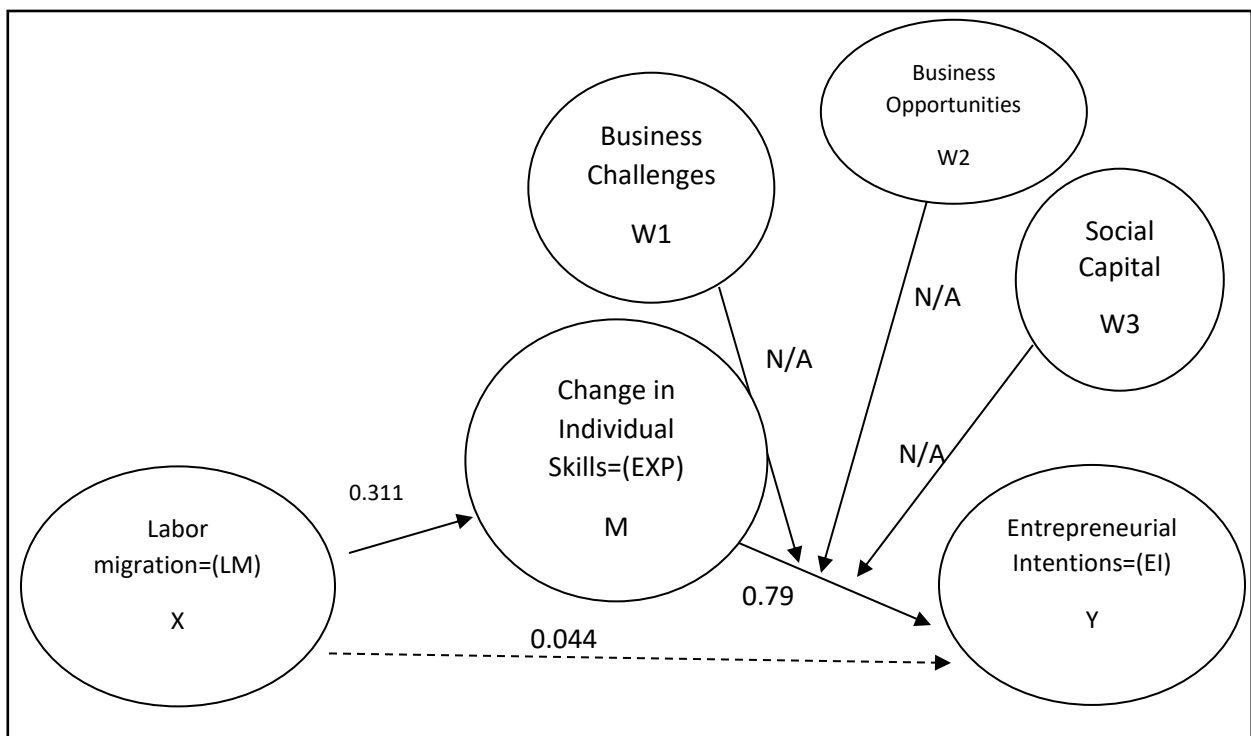
3.7 Scientific contribution

This research has advanced the knowledge about the effects of labor migration and entrepreneurial intentions. It also adds information about entrepreneurial intentions of labor migrants in Lithuania. The methodology of this research was developed by gathering information from many researches (Hameed et al., 2020; Omar, 2019; Berger et al., 2021; Fotopoulos and Storey 2019; Trung et al., 2018 Gandhi and Raina, 2018; Abdurakhmanova & Abdurakhmanov, 2019; De Haas, 2005; De Haas, Castles, & Miller, 2019) and analyzing them all together. Research design was made up of combining the ideas of (Antoncic and Hisrich, 2000; Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018; Omar, 2019) about the factors affecting entrepreneurial intentions, like internal and external, with the ideas of (Friberg, 2013, 2016; De Haas, 2005) about the consequences of labor migration, including change in individual skills. By introducing new ideas and methodology, this research makes it closer to grasp the full picture of the effects of labor migration on entrepreneurial intentions. The research design of labor migration, individual skills, and entrepreneurial intentions seem to be working well. The research design can be used in further research as well. Even though the scope of the research was on fintech, the design can be used in almost all areas that are related to labor migration or migration, and entrepreneurial intentions.

The research also identifies areas were researches need to be more careful with. The main area in which further research needed is regarding the creation of questionnaires and measurement scales. The main challenge is to have proper scales to measure the desired variables with shorter questionnaire possible.

3.8 Research limitation

The research limitation related to the measurement of challenges and opportunities in this study is significant because these variables are crucial in understanding how they affect the moderating effect between individual skills and entrepreneurial intentions. The researchers used a shorter questionnaire to measure these variables due to feedback from a pilot study that the previous questionnaire was too lengthy, resulting in only 30% of participants completing it. However, this shorter questionnaire only included a few questions on challenges and opportunities, and the questions tended to measure the impact of these factors on entrepreneurial intentions rather than their moderating effect.

Additionally, the scales used to measure challenges and opportunities did not provide statistically significant data. This means that the researchers were not able to determine whether these

factors had a significant impact on entrepreneurial intentions, and it limits the reliability of the results. It also suggests that the researchers may need to develop new or more effective scales to measure these variables in future studies.

CONCLUSIONS, IMPLICATION AND RECOMMENDATION

In conclusion, this research has examined the effects of labor migration on entrepreneurial intentions. Through the use of survey based research, several key findings have been found. Firstly, labor migration affects one's entrepreneurial intentions through the mediating factor, individual skills. Secondly, there are some factors that have a moderating influence on people's entrepreneurial intentions. Lastly, the research had some limitations that help further research determining a more suitable methodology, and measuring scales.

During the literature review, it was found that people migrate for various push and pull factors (De Haas, 2005; De Haas et al., 2019). The research has studied some of the so called push and pull factors, and it was proven that people do indeed decide because of various factors. Push factors are meant to be the factors that cause people to leave their home country. In this research, it was identified that a higher number of people decide to leave because of 'political instability'. Regarding the pull factors, or the factors that attract people to come to certain places (Lithuania in our research). Education was the highest factor, and then followed by good living conditions in Lithuania. This gives us some insights on the labor migrants coming to Lithuania, it looks like they are coming from places where the political situation is perceived unstable. On the other hand, people's choice or the way they can immigrate to Lithuania is through education.

This is useful information to decision makers, and organizations that help promote Lithuania. However, some researches, like (Baas, M., 2019) has researched the education-migration industry. They found that people who migrate for the sake of education cause brain drain to the sending countries. They concluded that the economic situation in the sending countries worsened because of brain drain and unavailability of a skilled labor force. While (Gruzevskis, 2007) suggests that even though emigration causes brain drain and negative impact on the sending countries, this impact is only short term. They concluded that in the long run, every country should benefit from people's movements. Brain drain can compensate for foreign direct investments, and return migrants. They also suggest that the decrease of production in the sending countries because of unavailability of labor force can be compensated by migrants sending money back home (remittances). (De Haas, Castles, and Miller, 2019) found out that there are some organizations, such as the International Labor Organization and the Global Forum on Migration and Development, that have a big control of the labor migration tendencies. They also suggest that even though there is a lot of opposition against these organizations, these organizations have played a major role in shaping the regulations, and the

protection of labor migrants. They concluded that every country should understand how these organizations work before making any policy.

The main research aim was to determine how someone being a labor migrant affects their entrepreneurial intentions. (Friberg, 2013, 2016; Trung et al., 2020) found that people's individual skills change during the course of migration. Moreover, (Antoncic and Hisrich, 2000; Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018; Omar, 2019) suggest that individual traits have a significant impact on one's entrepreneurial intentions. Therefore, the research conducted on 323 participants to test whether their individual skills that are related to entrepreneurial intentions have changed during the course of migration, and whether these changes have any impact on entrepreneurial intentions. The result of the research found out that almost 30% of changes in individual skills is accounted for by migration. This goes in line with (Friberg, 2013, 2016; Trung et al., 2020). Moreover, 70% of one's entrepreneurial intentions is accounted for by these individual skills. This also goes in line with (Antoncic and Hisrich, 2000; Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018; Omar, 2019). Finally, using multiple regression equations including labor migration, individual skills, and entrepreneurial intentions, it was found that the total effect of labor migration on entrepreneurial intentions is 25%. Meaning that 25% of migrant's entrepreneurial intentions are caused by the fact of migration.

This research tried to study the external factors that affect entrepreneurial intentions of migrants. It was identified that external factors such as business challenges and opportunities have an influence on migrants' entrepreneurial intentions. Lack of finance, legal processes, lack of a support network, and a language barrier, for example, have all been proven to have a detrimental impact on entrepreneurial goals (Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018). Government subsidies, a thriving startup ecosystem, a supportive community, and mentoring and training programs, on the other hand, have been proven to favorably affect entrepreneurial goals (Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018). This research hypothesized that these challenges and opportunities moderate the relationship between individual skills and entrepreneurial intentions. However due to limitations in data collection, the results did not prove this hypothesis. While, (Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018; Omar, 2019) suggest that challenges and opportunities are moderators. Even though the research could not confirm the moderation effect of these factors, other researchers (Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018; Omar, 2019) do suggest the moderation effect. Thus, we cannot definitely say yes or no, and further research is needed. Additionally, while there is

no statistical significance, the measured challenges and opportunities give us useful information. For example, participants on average do not see language barriers and legal procedures as strong challenges for their entrepreneurial intentions. This is insightful information as it looks like the fintech industry is well positioned socially and politically. Moreover, results show that a supportive community is a strong factor for migrants' entrepreneurial intentions. A thriving start-up system and availability of mentorship and training programs were found to be effective to migrant's entrepreneurial intentions. Even though the results do not go in line with (Ayalon & Rapolienė, 2021; Gandhi & Raina, 2018) in regard to the challenges, as language barriers and legal procedure do not seem to be strong challenges, the results from the opportunities do indeed match.

From the analysis of demographic differences, it can be concluded that there are some patterns that help policy makers. These findings help us understand the different responses of different demographic groups, which policymakers can use in order to make targeted policies. For example, we found out that males have a higher mean rank in regard to entrepreneur skills and intentions. The age between 25-40 years have the highest engagements in regard to entrepreneurial intentions. Education is also an important factor as people with Bachelor's and Masters have a higher entrepreneurial activity. Finally, the type of work or area of work has an important effect on people's entrepreneurial intentions as well. In general, these findings can aid in understanding the variations in responses among various demographic groups and can aid decision-makers in developing targeted policies to encourage entrepreneurship.

Moving to the implication suggested from his research. For decision makers and organizations that help promote Lithuania, they can use the information that Lithuania is a good place for education, and the country has good living conditions. This has been proved by the results from the study of 323 participants. Moreover, if there is a need to increase the start-up and entrepreneurship in the country, it is firstly important to focus on people's individual skills that are related to entrepreneurship. Providing mentorship and training programs will help increase migrants' entrepreneurial intentions. Moreover, the decision makers should strive for having a suitable start-up system where entrepreneurs are supported.

For future research, it is recommended to explore the areas of business challenges and opportunities. It is important to understand how these factors affect one's entrepreneurial intentions. It will also be useful to find out more about more challenges and opportunities that could potentially be connected to entrepreneurial intentions. Another recommendation would be to use a research

model that collect enough data about these challenges and opportunities, and at the same time is not too extensive from the participants' side. One possible solution is to use a mix method of qualitative and quantitative. Using both these methods will help one another, and at the same, it will help saturating the data (Fusch P. I., & Ness L. R., 2015; Staller K. M., 2021)

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SUMMARY IN LITHUANIAN

Darbo jėgos migracijos poveikis verslininkystės ketinimams: Lietuvos „Fintech" sektoriaus atvejo tyrimas

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Darbo vadovė: doc. dr. Aurelija Ulbinaitė, Vilnius, 2023

Santrauka

52 puslapiai, 4 iliustracijos, 15 lentelių, 42 literatūros šaltiniai.

Šio magistro darbo pagrindinis tikslas yra ištirti du reiškinius – darbo jėgos migraciją ir verslininkystės ketinimus. Tyrimo tikslas buvo nustatyti, kaip darbo jėgos migracija veikia verslininkystės ketinimus. Kitaip tariant, buvo siekiama išsiaiškinti, kaip darbo migrantai daro įtaką verslo ketinimams.

Tyrimas susideda iš penkių pagrindinių etapų: mokslinės literatūros analizės, tyrimo metodologijos pasirinkimo, duomenų rinkimo ir jų analizės, rezultatų apibendrinimo, diskusijos ir išvadų parengimo.

Mokslinės literatūros analizės metu buvo nustatyta, kad asmeniniai verslininkystės ketinimai gali būti paaiškinami vidinėmis priežastimis (asmeniniais įgūdžiais) ir kitais išoriniais veiksniais. Viena vertus, asmeniniai įgūdžiai gali tiesiogiai daryti įtaką verslininkystės ketinimams. Kita vertus, išoriniai veiksniai turi moderuojantį poveikį asmeniniams įgūdžiams ir verslininkystės ketinimams. Be to, nustatyta, kad žmonių asmeniniai įgūdžiai keičiasi būnant darbo migrantais.

Tad taikant tyrimo metodologiją buvo nagrinėjamas tiesioginis darbo jėgos migracijos ir asmeninių įgūdžių ryšys bei tiesioginis asmeninių įgūdžių ir verslininkystės ketinimų ryšys. Be to, buvo nagrinėjami išoriniai veiksniai, kurie turi moderuojantį poveikį asmeniniams įgūdžiams ir verslininkystės ketinimams.

Norint surinkti duomenis, buvo atliktas apklausa pagrįstas tyrimas, o imtis buvo nustatyta remiantis „Fintech" sektoriumi Lietuvoje. Apklausoje dalyvavo 323 respondentai. Apklausos klausimai buvo parengti remiantis mokslinės literatūros analizės rezultatais. Siekiant įvertinti darbo jėgos migraciją, buvo naudojami mokslinės literatūros analizės rezultatai. Siekiant įvertinti asmeninių įgūdžių pokyčius, buvo naudojama Didžiojo Penketo asmenybės bruožų teorija. Verslininkystės ketinimai buvo vertinami naudojant verslininkystės ketinimų klausimyno matavimo skalę. Pagrindinis apribojimas, su kuriuo susidūrė tyrėjas, buvo tai, kad trūko matavimo skalės išoriniams veiksniams, kad būtų galima juos įvertinti. Tai lėmė statistiškai nereikšmingus duomenis apie išorinius veiksnius.

Iš viso buvo iškeltos šešios hipotezės, o duomenų analizėje buvo naudojami tiesinės regresijos, daugialypės regresijos ir PROCESS pagal Hayes testai. Tris hipotezes pavyko patvirtinti. Padaryta išvada, kad darbo jėgos migracija teigiamai 0,311 dydžiu lemia asmeninių įgūdžių pokytį, o asmeninių įgūdžių pokytis taip pat teigiamai 0,79 dydžiu lemia verslininkystės ketinimus. Be to, darbo jėgos migracija turi nedidelį tiesioginį 0,044 dydžio poveikį verslininkystės ketinimams. Todėl darbo migracijos visiškas poveikis verslininkystės ketinimams yra 0.2735. Tačiau dėl statistinio reikšmingumo nebuvo galima patvirtinti išorinių veiksnių moderuojančio poveikio verslininkystės ketinimams.

Taigi šis tyrimas atkreipia politikų dėmesį į mentorystės ir palaikančios bendruomenės svarbą būsimiems verslininkams bei tinkamos startuolių ekosistemos kūrimą. Galiausiai šis tyrimas skatina naudoti kiekybinių ir kokybinių metodų derinį, kad būtų galima gauti pageidaujamus, visiškai išsamius duomenis.

SUMMARY IN ENGLISH

Effects of Labor Migration on Entrepreneurial Intentions: A Case Study on The Fintech Industry in Lithuania.

Yohana DAWOOD

Master Thesis

GLOBAL BUSINESS AND ECONOMICS MASTER STUDY PROGRAMME

Faculty of Economics and Business Administration, Vilnius University

Supervisor: Assoc. Prof. Dr. Aurelija Ulbinaitė, Vilnius, 2023

Summary

52 pages, 4 figures, 15 tables, 42 references.

The main purpose of this master thesis is to study two phenomena, labor migration and entrepreneurial intentions. The aim of the research was to find out how labor migration affects entrepreneurial intentions. In other words, we tried to find out how someone being a labor migrant affected their entrepreneurial intentions.

The research has mainly 5 stages, conducting a literature review analysis, determining the research design, collecting data, analyzing the collected data, and preparing results, discussion and implication.

It was found during the literature review that a person's entrepreneurial intentions can be explained internally (individual skills), and by some other external factors. In one hand, individual skills can directly influence entrepreneurial intentions. In the other hand, external factors have a moderator effect between individual skills and entrepreneurial intentions. Moreover, it was found out that people's individual skills change during the course of being a labor migrant.

Therefore, the research methodology included the direct relationship between labor migration and individual skills, and the direct relationship between individual skills and entrepreneurial intentions. Additionally, the moderating effects of external factors in the relationship between individual skills and entrepreneurial intentions.

In order to collect data, a survey-based research was conducted and the sample population was determined based on the Fintech industry in Lithuania. There were 323 participants in the survey. The survey questions were created based on the findings from the literature review. To measure labor migration, findings from literate review were created. To measure change in individual skills, the Big Five Personality Traits measurement was used. To measure entrepreneurial intentions, the Entrepreneurial Intentions Questionnaire measurement scale was used. However, the researcher's main limitation was the absence of a measurement scales to measure the external factors we wanted to measure. Thus it resulted in having a statistical insignificant data about the external factors.

In total, there were six hypotheses and linear regression, multiple regression, and PROCESS by Hayes tests were used to analyze the data. Three of the hypotheses were accepted, we concluded that labor migration positively influence the change of individual skills by 0.311, while change in individual skills also positively influence entrepreneurial intentions by 0.79. Additionally there is a slight influence of labor migration on entrepreneurial intentions directly by 0.044. Thus, the total

effect of labor migration on entrepreneurial intentions is 0.2735. However due to statistical significance we could not confirm the moderating effect of external factors on entrepreneurial intentions.

As a conclusion, this research draws the attention of policy makers to focus on providing the mentorship and supportive community for future entrepreneurs, and to create a suitable startup system. Lastly, this research encourages of using a mixed methods of quantitative and qualitative in order to reach the desired and saturated data.

ANNEXES

ANNEX 2. Survey template

Table *15. Research Survey Questions*

No.1	How often do you feel that the following factors caused you to migrate in the first place?	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	Lack of job opportunities in home country	1	2	3	4	5
	Low income in home country	1	2	3	4	5
	Political instability in home country	1	2	3	4	5
	Poor living conditions in home country	1	2	3	4	5
No.2	How often do you feel that the following factors attracted you to Lithuania?	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	Job opportunities in Lithuania	1	2	3	4	5
2.	High income in Lithuania	1	2	3	4	5
3.	Political stability in Lithuania	1	2	3	4	5
4.	Good living conditions in Lithuania	1	2	3	4	5

Continuation of Table 15.

No.3	To what degree has exposure to different business environments improved your knowledge and skills for starting and running a business?	Not at all	A little	Somewhat	A lot	Completely
No.4	How confident are you in starting and running a business after experiencing new opportunities?	Not at all	A little	Somewhat	A lot	Completely
No.5	How has exposure to different markets and customers affected your willingness to take risks in business?	Not at all	A little	Somewhat	A lot	Completely
No.6	How has exposure to different markets and customers affected your creativity and willingness to try new ideas in business?	Not at all	A little	Somewhat	A lot	Completely
No.7	How strongly do you agree or disagree that the following challenges stop you from pursuing entrepreneurial ambition?	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	Lack of access to finance	1	2	3	4	5
2.	Legal procedures	1	2	3	4	5
3.	Language barriers	1	2	3	4	5

Continuation of Table 15.

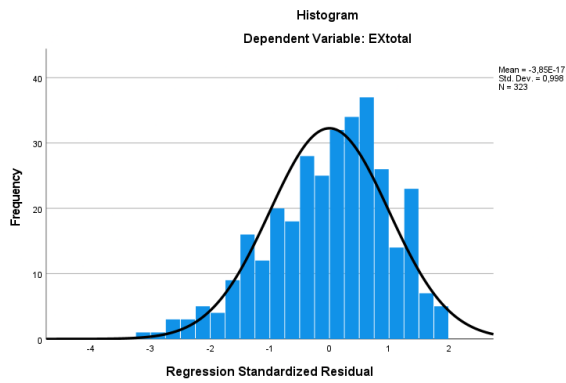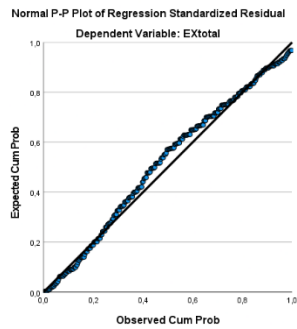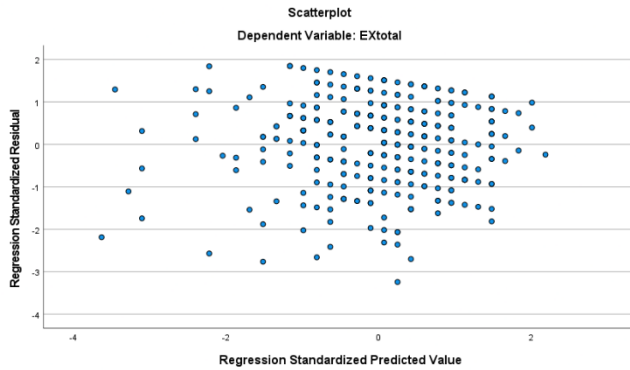| 4.	Lack of a support network	1	2	3	4	5
No.8	How strongly do you agree or disagree that the following opportunities motivate you in your entrepreneurial ambition	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	Availability of government grants for small businesses	1	2	3	4	5
2.	A thriving startup ecosystem	1	2	3	4	5
3.	Access to a large market for the desired product or service	1	2	3	4	5
4.	A supportive community of entrepreneurs	1	2	3	4	5
5.	Access to mentorship and training programs.	1	2	3	4	5
No.9	Please answer questions regarding Social Capital	strongly disagree	disagree	neutral	agree	strongly agree
1.	To what extent do you believe that having strong relationships with others in your industry can positively impact your ability to pursue entrepreneurial opportunities?	1	2	3	4	5

Continuation of Table 15.

No.10	Please answer questions regarding entrepreneurial intentions	strongly disagree	disagree	neutral	agree	strongly agree
1.	I intend to start my own business in the future	1	2	3	4	5
	I am confident in my ability to start and run a successful business	1	2	3	4	5
	I believe I have the skills and knowledge necessary to start and run a successful business	1	2	3	4	5
	I am willing to take the risks necessary to start and run a successful business	1	2	3	4	5
No.11	What is your gender?	Female	Male	Prefer not to say		
No.12	What is your age?	18-24 years old	25-30 years old	30-40 years old	41+	
No.13	How long have you been living in Lithuania?	less than a year	1-3 years	3-10 years	more than 10 years	

Continuation of Table 15.

No. 14	What is your department?	Human Resources	Finance	Finance	Marketing	Sales	Operations	Information Technology	Customer Service	Other
No. 15	Which of the following best describes your educational achievement?	Less than high school	High school diploma/GED	Some college, but no degree	Associate degree (e.g. AA, AS)	Bachelor's degree (e.g. BA, BS)	Master's degree (e.g. MA, MS, MBA)	Professional degree (e.g. MD, JD, DDS)	Doctorate degree (e.g. PhD, EdD)	
No. 16	What is your level of proficiency in the Lithuanian language?	A1 - Beginner	A2 - Elementary	B1 - Intermediate	B2 - Upper-intermediate	C1 - Advanced	C2 - Proficient/native speaker"			

ANNEX 2. SPSS OUTPUT

H1

Scatterplot
Dependent Variable: EXtotal

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: EXtotal

Histogram
Dependent Variable: EXtotal

Mean = -3,85E-17
Std. Dev. = 0,998
N = 323

ANOVA[a]

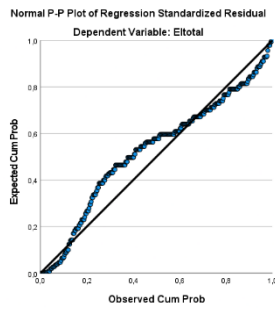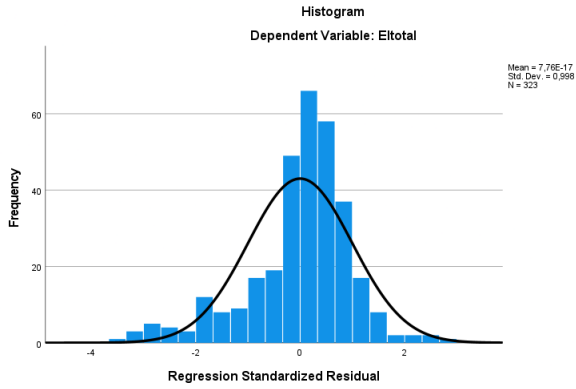| Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	385,218	1	385,218	34,350	<,001[b]
	Residual	3599,885	321	11,215		
	Total	3985,102	322			

a. Dependent Variable: EXtotal

b. Predictors: (Constant), Mtotal2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	8,451	1,098		7,697	<,001			
	Mtotal2	,171	,029	,311	5,861	<,001	,311	,311	,311

a. Dependent Variable: EXtotal
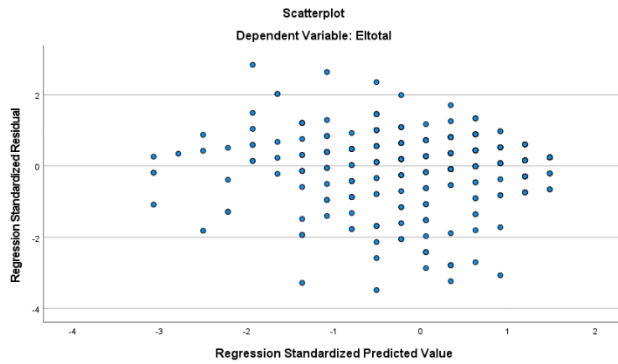
H2

Histogram

Dependent Variable: EItotal

Mean = 7,76E-17
Std. Dev. = 0,998
N = 323

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: EItotal

Scatterplot

Dependent Variable: EItotal

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	3,155	,536		5,883	<,001			
	EXtotal	,815	,035	,790	23,121	<,001	,790	,790	,790

a. Dependent Variable: EItotal

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2649,714	1	2649,714	534,567	<,001[b]
	Residual	1591,116	321	4,957		
	Total	4240,830	322			

a. Dependent Variable: Eltotal

b. Predictors: (Constant), EXtotal

H3
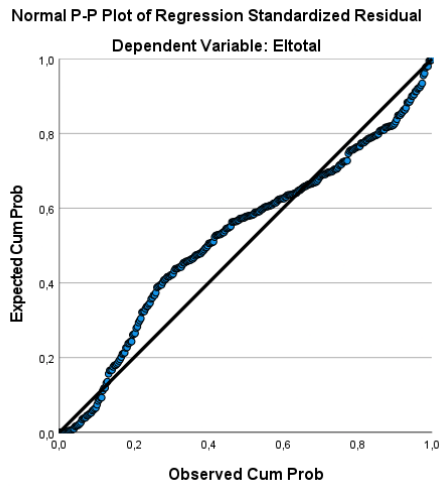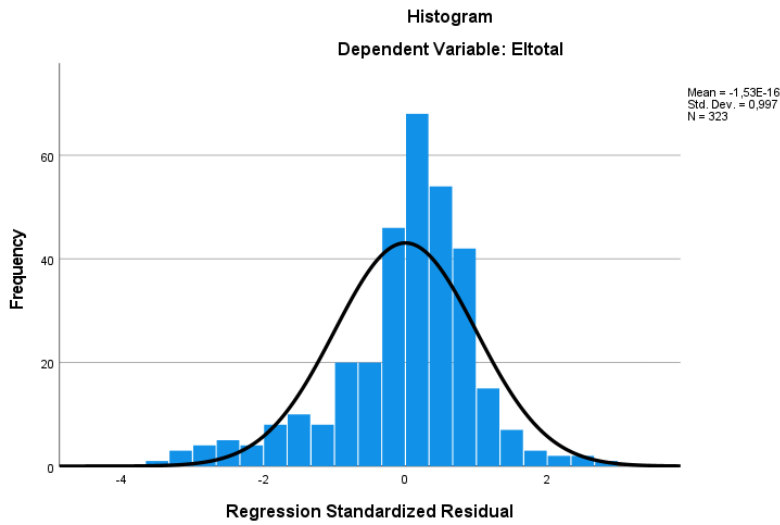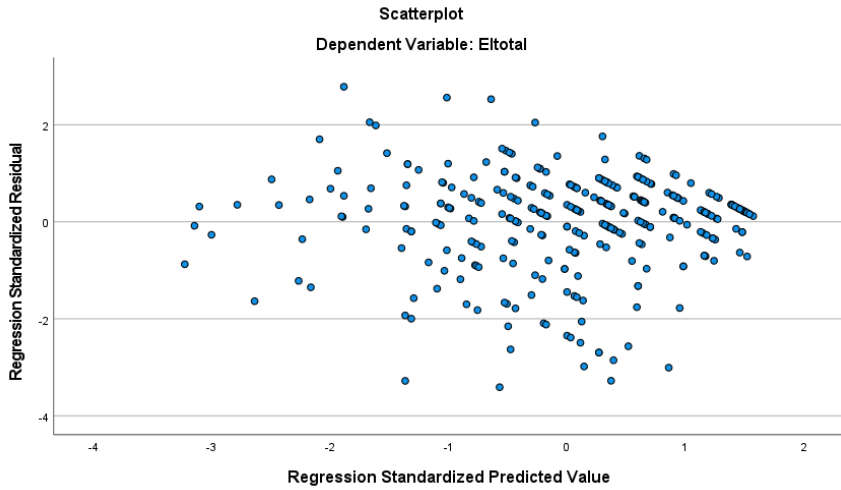
Histogram

Dependent Variable: Eltotal

Mean = -1,53E-16
Std. Dev. = 0,997
N = 323

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Eltotal

Scatterplot

Dependent Variable: Eltotal

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	2,407	,794		3,033	,003			
	Mtotal2	,026	,020	,046	1,276	,203	,287	,071	,044
	EXtotal	,801	,037	,776	21,600	<,001	,790	,770	,738

a. Dependent Variable: Eltotal

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2657,774	2	1328,887	268,622	<,001[b]
	Residual	1583,056	320	4,947		
	Total	4240,830	322			

a. Dependent Variable: Eltotal

b. Predictors: (Constant), EXtotal, Mtotal2

H4

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Eltotal

Scatterplot

Dependent Variable: Eltotal
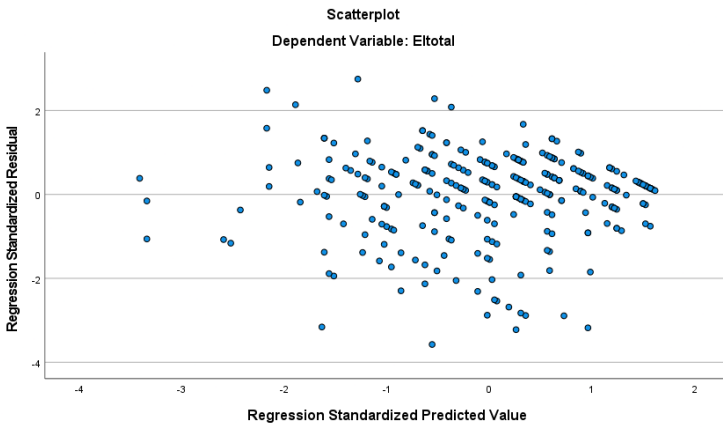

Histogram

Dependent Variable: Eltotal

Mean = 2,03E-16
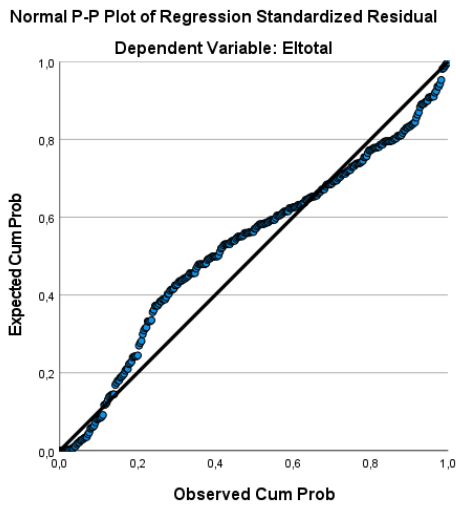Std. Dev. = 0,997
N = 312
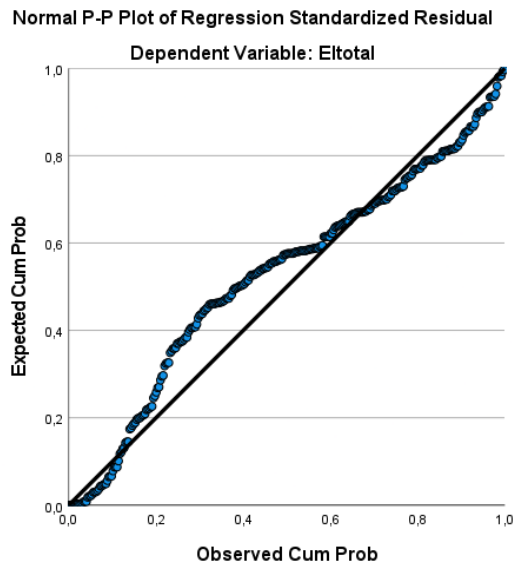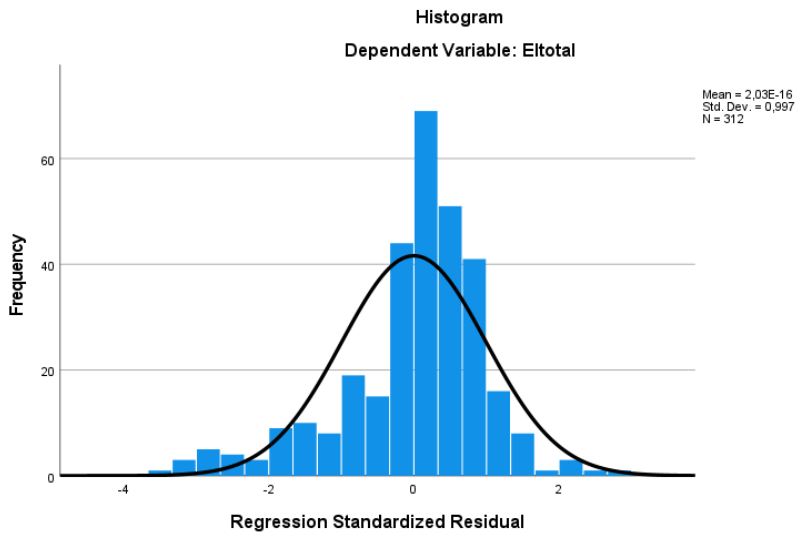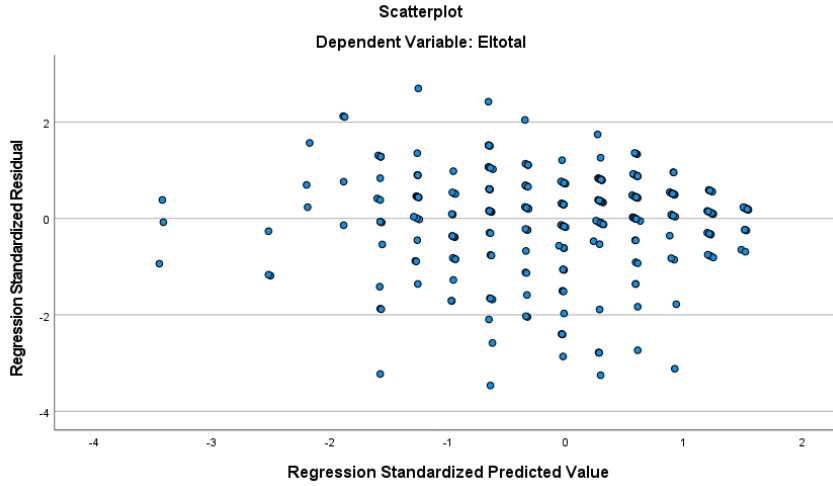

```
        Index of moderated mediation:
                  Index      BootSE     BootLLCI     BootULCI
        CHAtotal  -,0007     ,0012      -,0035       ,0013
```
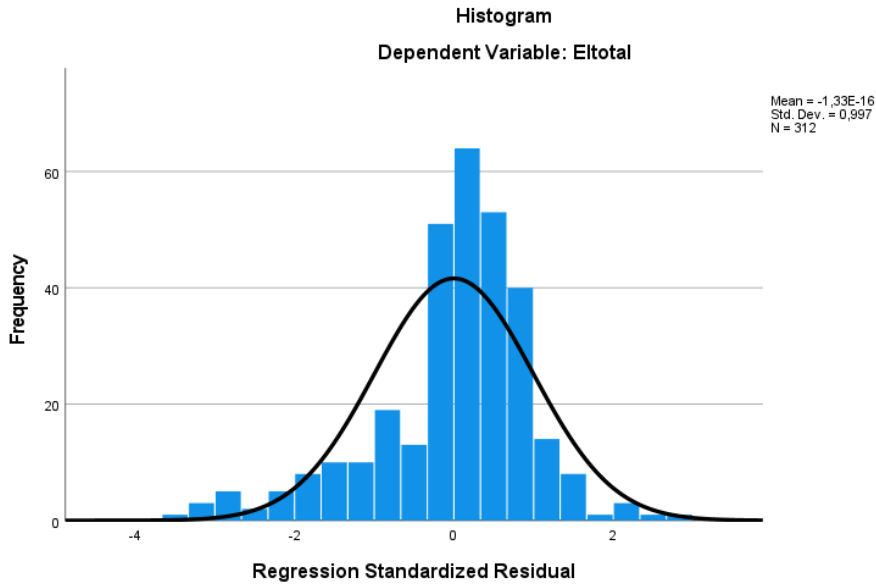
Histogram

Dependent Variable: Eltotal

Mean = -1,33E-16
Std. Dev. = 0,997
N = 312

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Eltotal

Scatterplot

Dependent Variable: Eltotal

```
Index of moderated mediation:
             Index      BootSE    BootLLCI    BootULCI
OPPtotal     -,0016      ,0013     -,0045        ,0003
```

H6

Histogram
Dependent Variable: Eltotal

Mean = -1,24E-16
Std. Dev. = 0,997
N = 312

Regression Standardized Residual

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Eltotal

Observed Cum Prob

Scatterplot
Dependent Variable: Eltotal
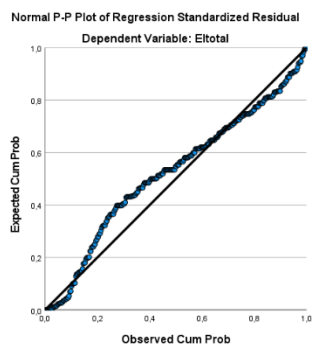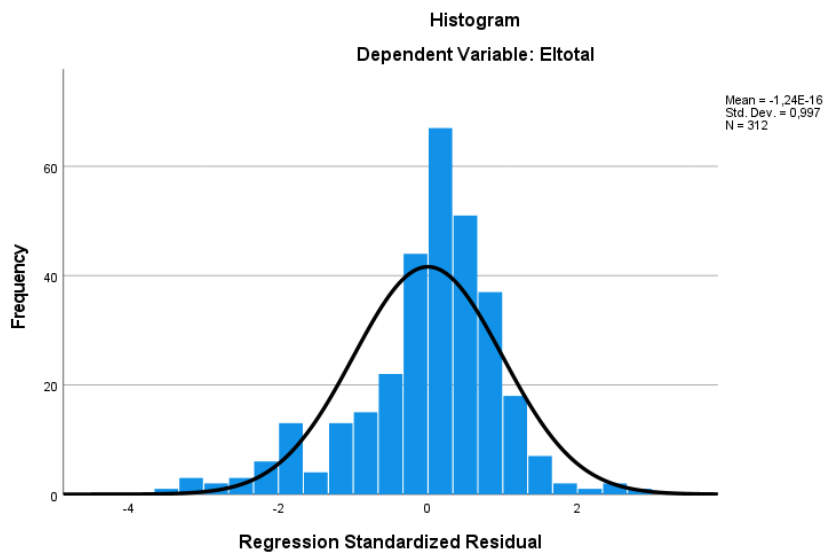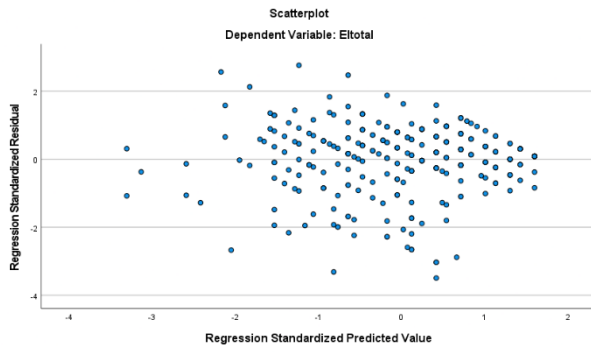
```
Index of moderated mediation:
        Index     BootSE    BootLLCI    BootULCI
SC      ,0012     ,0058     -,0100        ,0140
```