Czech University of Life Sciences Prague

Faculty of Economics and Management

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Bachelor's Thesis

Effect of Foreigners on Unemployment and Business Environment in the Czech Republic

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

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Effect of Foreigners on Unemployment and Business Environment in the Czech Republic

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Objectives of thesis

The ultimate objective of the following thesis is to assess the effect of foreigners and immigration on the unemployment and business environment in the Czech Republic.

The author seeks the main goal of answering the question of whether there is a correlation between the number of foreigners – both high skilled and low skilled ones and the unemployment level in the country. In addition to the main goal, the author wants to find out if the increasing number of foreigners does really change the pattern of business environment in the country and positions offered in the labor market.

Methodology

Splitting the work into the theoretical part and the practical ones will be done so that the author will analyse the background and recent publications on the subject of immigration to the country as well as on the subject of the unemployment in the Czech Republic.

In the practical part, the author will use both induction and deduction. The author ultimately comes up with a relevant econometric model for predicting the unemployment based on factors attributed to immigrants and immigration as well as the author comes up with a relevant theory to describe shifts happened in the labour market.

The proposed extent of the thesis

30-40 pages

Keywords

unemployment, foreigners, business environment, the Czech Republic

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Recommended information sources

Čabla, Adam, and Ivana Malá. "Modelling of unemployment duration in the Czech Republic." Prague Economic Papers 2017.4 (2017): 438-449.

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Stoklasová, Radmila. "Model of the unemployment rate in the Czech Republic." Proceedings of 30th international conference on mathematical methods in economics. 2012.

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Declaration

I declare that I have worked on my bachelor thesis titled "Effect of Foreigners on Unemployment and Business Environment in the Czech Republic" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 15.03.2023   _____

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Effect of Foreigners on Unemployment and Business Environment in the Czech Republic

Abstract

The author of the following thesis examines the Czech labor market in order to conclude that there is a correlation between the change of the unemployment rate in the country and the total number of people who immigrate to the Czech Republic. This information is presented in the form of a thesis. In the end, the author provides evidence to support the contention that immigration is one of the most significant factors that have a discernible and favorable impact on the unemployment rate. According to his findings, a drop of almost two percentage points in the unemployment rate is precipitated by an increase of just one percent in the number of people from other countries living in the Czech Republic.

In addition to the primary result of the author, he arrives at the conclusion that a newly passed law that temporarily halts all immigration from Russia and Belarus is not likely to have a significant effect. This conclusion is reached in addition to the major discovery of the author.

Keywords: unemployment, foreigners, immigration, economic growth, labor force

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Klíčová slova: nezaměstnanost, cizinci, imigrace, hospodářsky růst, pracovní sila

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EU – European Union

BLUE – Best linear unbiased estimator

CZK – Czech Crown

OLS – Ordinary least squares

TSLS – Two-stage ordinary least squares

GDP – Gross domestic product

1 Introduction

In the light of recent circumstances related to foreigners and numerous legislatives accepted by the Czech Government, the author of the thesis decided to take an insight into the economic domain and find out if the growing presence of foreigners in the Czech Republic had a positive effect on the domestic economy and the labour market in general. An additional piece of motivation to write this thesis is the fact that the author of this very thesis is a foreigner in the Czech Republic, so it serves as an additional motivation to see if similar group of people somehow positively contribute to the country's labor force.

Undoubtedly, the presence of foreigners in the country's most inhabited cities, including Pilsen, Prague, Ostrava, and Brno, was too immense to be overlooked. Without any doubt, the growing presence of foreigners is traditionally accompanied by skepticism from the locals. In some cases, as it will be shown later on, this skepticism can be justified, as rapid globalization also causes its adverse effects. Nevertheless, the author analyses if the Czech Republic really benefits from opening its doors to third nationals and people deriving from other EU member-states or the countries strongly cooperating with the European Union, e.g., Ukraine, Georgia, and others.

2 Objectives and Methodology

2.1 Objectives

The ultimate goal of the following thesis is to assess the effect of foreigners and immigration on the unemployment and business environment in the Czech Republic. The author seeks the primary goal of answering the question of whether there is a correlation between the number of foreigners – both high-skilled and low-skilled ones and the unemployment level in the country. In addition to the main goal, the author wants to determine if the political decision to ban Russian citizens from entering the country will significantly affect the domestic labor market.

2.2 Methodology

Splitting the work into the theoretical and practical parts will be done so that the author will analyze the background and recent publications on the subject of immigration to the country as well as on unemployment in the Czech Republic.

In the practical part, the author will use both induction and deduction. The author ultimately comes up with a relevant econometric model for predicting unemployment based on factors attributed to immigrants and immigration, well as the author comes up with a relevant theory to describe shifts that happened in the labor market.

3   Literature Review

3.1   Czech Economy

3.1.1   Major Events

It is absolutely necessary to gain some insight into the Czech economic domain and to keep up with the most recent trends and significant events that have been taking place in the country in order to comprehend the background of this bachelor thesis. Upon hearing the name of the country, the very first thing that comes to everyone's mind is undoubtedly the fact that thirty years ago, the country was known to everyone under a different name – Czechoslovakia. The kind of economy that was prevalent in the nation back in the history was a centrally planned one, mostly because of its close ties and strong affiliation with the Soviet Union (the country was a member of the Warsaw Pact). Czechoslovakia maintained a style of economy known as central planning for nearly half of a century until the Velvet Revolution in 1989 (Teichova, 2013).

Therefore, it is pretty obvious that the years of having an economy that was centrally planned took a toll on the country in many different ways. After the Velvet Revolution, it was extremely difficult to perform the transition to a market economy for a number of reasons, to name just a few of which include the lack of a free market of commodities and a free price determining mechanism. Inflation reached a staggering 56.6 percent in the year 1991 as a direct result of the revolution as well as the initial steps towards a general economic reform (Coats, 2000). In addition to the difficulties brought on by the transition to a different kind of economy, it is essential to highlight the fact that there was virtually no free movement of labor across the entirety of the Eurozone in the same way that it is currently able to do so. Since of this, the country surely found itself in a position where it had to place the majority of its emphasis on the labor force that it already possessed and did not extend an invitation to people from other nations because doing so was relatively complicated.

The economic pessimism that prevailed in the society did not prevent the country from eventually being able to successfully complete its transition. This was accomplished through a series of economic reforms, privatization, foreign direct investment, and an influx

of Czechs who had fled the country as a result of the events that took place in 1948 and 1968 – Communist coup d'état and Prague Spring, respectively (Brodsky, 2003).

In 1993, the country was divided into what is now known as the Czech Republic and the Slovak Republic. This event is of essential importance from an economic standpoint since as a result of it, two countries are now required to enact their own legislation and maintain their own budgets. Despite the separation and the impression that this event might create, to the surprise of many, it had almost nothing to do with ethnic conflicts or tensions between Czechs and Slovaks. The decision was believed to be solely political as Slovak and Czech politicians wanted to have full independence over what they were doing. Because of this, the degree of integration that exists between the two, in addition to the commercial relationship, is extremely beneficial for both parties. From this moment on, however, residents of Slovakia who worked in the Czech Republic were counted as part of the foreign labor force and not the domestic workforce from an economic standpoint. In addition to this reality, taking into consideration the degree to which the economies of the Czech Republic and Slovakia have developed, it is reasonable to assume that workers from Slovakia who made the decision to work in Prague or other Czech cities did so primarily for economic reasons, given that the Czech Republic was wealthier than its neighbor at the time due to the higher level of industrialization (Kirschbaum 1993).

According to the economic theory, a massive working immigration causes domestic workers (Czechs) to be in a worse position. This is because the increase in the workforce caused by the immigration inevitably affects the minimum wage, which goes down, as more people are willing to work for a lower wage. Moreover, the economic theory suggests that domestic workers (Czechs) are more likely to be exploited. Despite this, the historical ties and the level of integration did not cause any significant movement or protest on the part of Czech workers against Slovaks. This is because, in the eyes of many Czech workers, Slovakia was still the same country; the only difference was that the government was different (Drbohlav, 2003).

3.1.2 Specialization

Workers differ from one another in one very crucial area, and that is the specialty that they have chosen to pursue. This is true despite the fact that they may speak a different

language or come from different backgrounds. The most common reason for people to immigrate from one country to another is because there is a scarcity in the destination country. It is not uncommon to run across situations in which a particular nation specializes in one particular field while simultaneously suffering from a severe labor shortage in another one. Nevertheless, the author plans to return to this topic in later chapters and discuss it in greater detail. At this point in time, it is absolutely necessary to have a look at the specialization of the Czech Republic and examine the segmentation of the economy according to sector in the first place.

The most common approach to classifying the economy involves breaking it up into three distinct parts: the primary sector, which encompasses agriculture and other closely related activities; the secondary sector, which comprises manufacturing or any other form of production; and the tertiary sector, which comprises primarily service industries. As a result of the fact that the vast majority of industrialized countries have focused their economies on service industries, the tertiary sector typically accounts for the largest portion of the overall GDP of any particular nation. The secondary industry is the most essential one for countries still in the process of establishing their economies. According to a number of different categorizations, the Czech Republic is thought to be a developed country. It recently completed its transition from an economy that was centrally planned, and it successfully integrated into the block of mostly developed countries known as the European Union (Schmidt, 2009). Both of these accomplishments lend credence to this belief. The breakdown of the Czech economy into its several sectors by employment is depicted in Figure 1, which is available for viewing.

Figure 1, breakdown of Czech Economy by employment

Employment by sectors

- Agriculture: 3%
- Manufacturing: 38%
- Services: 59%
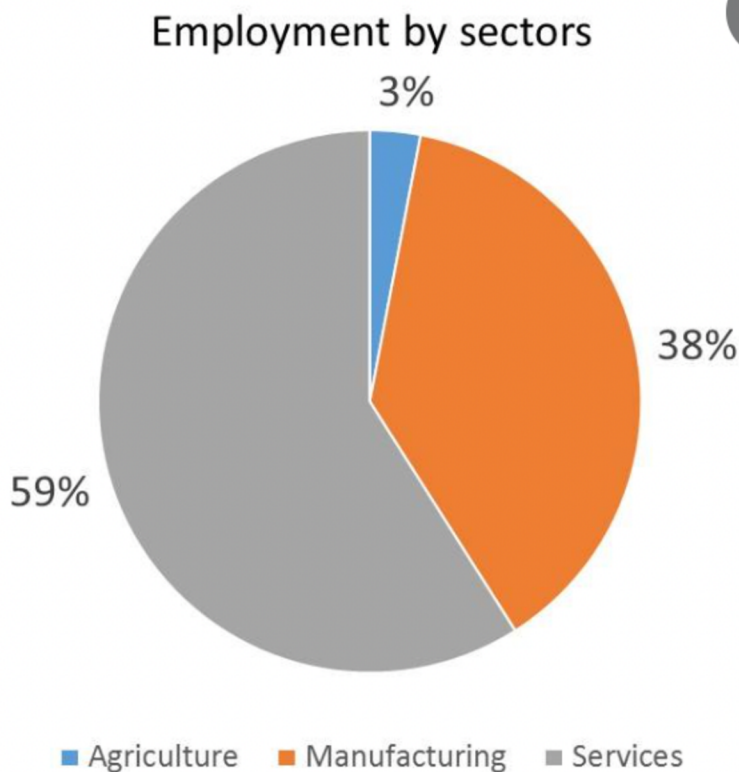
Source: own processing based on the Czech Statistical Office, 2022

According to the chart, the Czech Republic places a significant emphasis on service-related industries, which account for about sixty percent of the country's total economic output. The presence of the automobile manufacturing behemoth Skoda, which not only produces automobiles but also trams and other machinery, is likely responsible for the extremely high percentage of the economy that is devoted to the manufacturing sector. The fact that agriculture accounts for barely 3% of jobs in this country is one of the things that makes this situation particularly intriguing. Therefore, it is reasonable to conclude that the nation is dealing with a shortage in the number of people engaged in the agricultural sector; nevertheless, in contrast to this simple assumption that can be made, the actual situation is very different from what is being shown. Agriculture was not left behind by the rapid growth of technology, and new technologies were incorporated into the sector as a result. With devices that have a GPS link, it is now possible to process hectares of land without any involvement from human labor at all. The so-called treadmill problem was unavoidably

caused by the detrimental effects that automation had on farmers and other producers (Dubyna, 2022)

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Regardless of this, there is a significant discovery that can be made: in contrast to the vast majority of developed European nations, the Czech Republic does not really have a problem with a lack of people working in the primary sector, so the issues only arise in the secondary and tertiary sectors, which are the areas in which immigrants are predominantly employed (Drbohlav, 2009).

3.1.3   Development and trends

In spite of rather optimistic narrative in the previous two chapters, the current state of Czech economy is far from being perfect and satisfying. When judging any economy, it is essential to take a look at macroeconomic indicators and see what is going wrong.

Figure 2, Czech Republic's macroeconomic overview in summer 2022

	Last	Previous		
Currency	24.33	24.23		Aug/22
Stock Market	1225	1203	points	Aug/22
GDP Growth Rate	0.2	0.9	percent	Jun/22
GDP Annual Growth Rate	3.6	4.9	percent	Jun/22
Unemployment Rate	3.1	3.2	percent	Jun/22
Inflation Rate	17.2	16	percent	Jun/22
Inflation Rate Mom	1.6	1.8	percent	Jun/22
Interest Rate	7	5.75	percent	Jun/22
Balance of Trade	-23200	-28400	CZK Million	May/22
Current Account	-316	-2117	EUR Million	Mar/22
Current Account to GDP	-0.8	2	percent of GDP	Dec/21
Government Debt to GDP	41.9	37.7	percent of GDP	Dec/21
Government Budget	-5.9	-5.8	percent of GDP	Dec/21

Source: Trading Economics, 2022

Inflation is the very first issue that everyone should be aware of and concerned about. Without a shadow of a doubt, the circumstance surrounding the inflation rate in the Czech Republic in 2022 can be characterized as precarious and should be treated as such. An inflation rate of two digits in a nation that is famed for its historically low inflation rate of roughly two or three percent is rather remarkable, especially considering the fact that

consumers are severely impacted by the phenomena that is prevalent in 2022. In addition to this, one can observe that the government of the Czech Republic is operating with a staggeringly large deficit; hence, the inflation can be somewhat explained by the fact that the government is operating with such a deficit. On the other hand, the true cause of the recent spike in inflation can be found in a completely unrelated field. The Czech Republic was predominantly dependent on Russia as its principal partner in all areas relating to energy; hence, tensions that arose in the relationship between these two countries surely played an extremely significant influence in the increase in the cost of gas and oil. Each day that there is fighting in Ukraine makes the relationship between the two countries more complicated, which is unfortunate for the country since it makes it less likely that the situation will improve.

In contrast to the dismal scenario with the country's inflation rate, the country's unemployment index presents some signals of optimism because the vast majority of people are still employed.   Given the dire state of the economy in 2022, it is abundantly clear that it is quite unlikely that the nation will somehow focus on other concerns, including immigration, until the economy has achieved some level of stability. Gas is not only required for heating, contrary to what many people believe, but it is also an integral part of any manufacturing process. If the situation with energy continues to be so complex and adverse, it is quite probable that the population will face a real shortage of gas. Gas is not only required for heating, contrary to what many people believe, but it is also an integral part of any manufacturing process. Figure 1, which shows the percentage of people who are employed in manufacturing, and it can also be possible to consider the number of manufacturing industries in the Czech Republic, it is almost certain that once there is a shortage, the vast majority of those firms will simply fail, and people will be out of work (Ratten, 2022).

It is without a doubt the first thing that is on the agenda for the country, and that is to deal with the energy crisis. Fortunately for the Czech Government, it is not alone in this problem; therefore, the country can expect its neighbors to help bail them out once the crisis becomes even more serious.

3.2   Immigration

3.2.1   Major Ethnic Groups

Before analysing any impact caused by the growing presence of immigrants in the Czech Republic, it is essential to understand which nations are actively immigrating to the Czech Republic since it can help to shed brighter light on the type of immigration that the country is facing.

Figure 3, Foreigners living in the Czech Republic in 2019
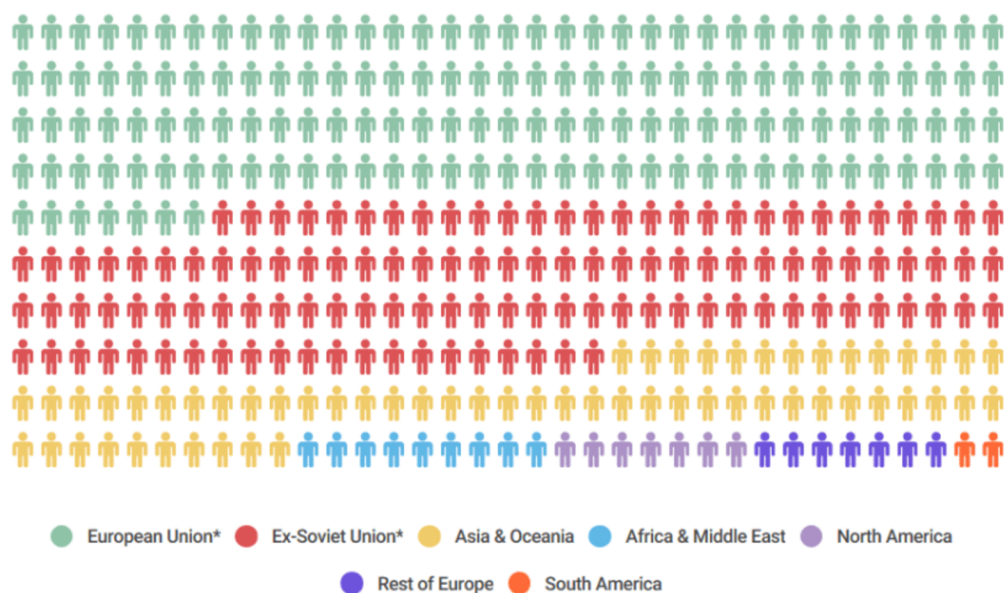
Source: Czech Statistical Office, 2022

When looking at Figure 3, it becomes quite obvious that the overwhelming majority of foreigners living in the Czech Republic are represented by citizens of other European countries who primarily conduct either business or corporate activities. This is the case because the majority of foreigners living in the Czech Republic are involved in either business or corporate activities. The fact that there are people from other European countries living and working in the Czech Republic is a positive indicator that the country offers competitive work environments, appealing incomes, and acceptable working circumstances. Despite the fact that the majority of those Europeans are citizens of other countries that were once part of the Warsaw Pact, there are still people coming from countries like the United Kingdom, France, Germany, Spain, and Italy. It is safe to say that the majority of those Europeans are Warsaw Pact citizens. People who once lived in the Soviet Union make up the second largest group, as shown by the very same chart. This can be explained by

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geographic proximity, linguistic proximity, and higher pay, as these factors are more prevalent in countries that were were part of the Soviet Union. It is still very clear, when discussing immigrants from the post-soviet environment in the Czech Republic, that the bulk of such immigrants are Ukrainians (Strielkowski, 2016). This is followed by Russians, Kazakhs, and other nationalities. It is interesting to note that there is place for Asians as well given that the Czech Republic's third largest immigrant group is comprised of people from Asia, notably Vietnam. Overall, this number is an excellent piece of evidence that the working and commercial environments in the Czech Republic are quite international and diversified, with room for anyone who is prepared to work and dedicate themselves to the organization (European Commission, 2020).

Nevertheless, it is necessary to take a closer look at the numbers that underlie immigration to this country. Checking the specific breakdown of immigrants based on their citizenship is an important tool that will assist in seeing the big picture about immigration in the Czech Republic and the patterns that have emerged as a result of it.

Figure 4, foreigners by citizenship in 2022
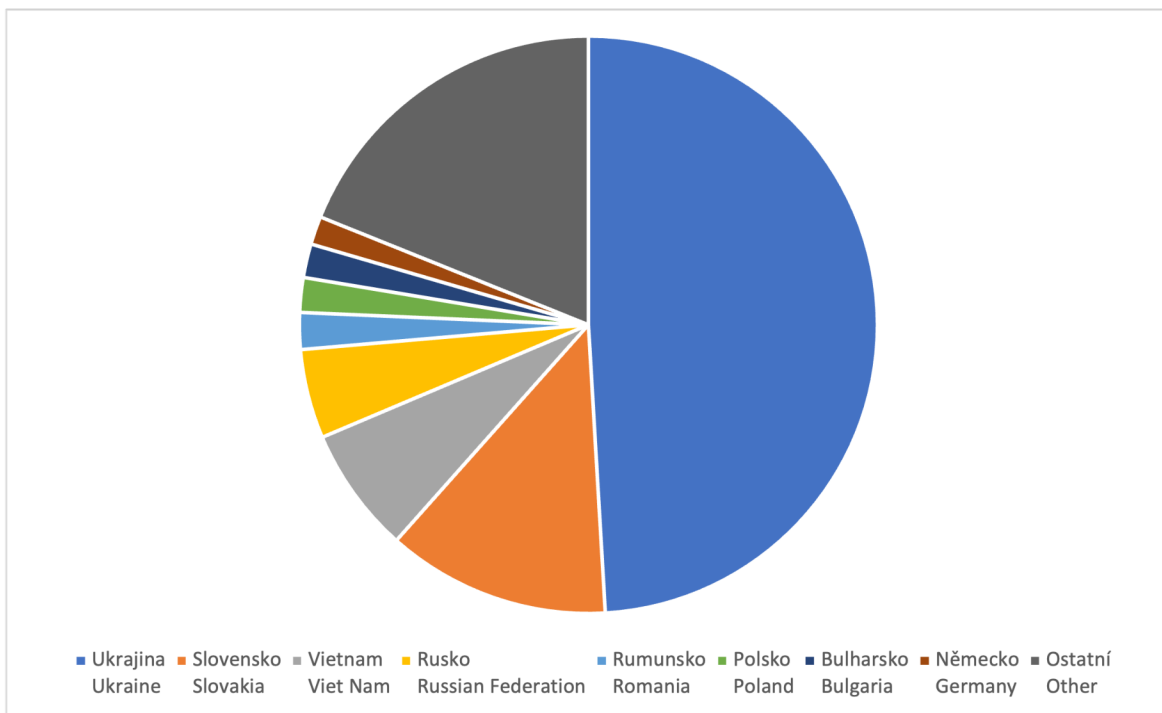
Source: Czech Statistical Office, 2022

A more in-depth breakdown, which can be found in Figure 4 shown above, is also at your disposal in addition to the numbers that were previously presented. It is quite clear that

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Ukrainians account for essentially the majority of all foreign residents in the Czech Republic. In addition to this, it is fairly clear that the vast majority of Europeans currently residing in the country are predominantly Slovaks, who are exempt from the requirement that they submit an application for a work permit in this country.

It would be rather incorrect to regard all immigrants as a working mass here when talking about immigration as a whole, because some of them are here for other goals including studies, economic operations, and scientific purposes among other things. The author is going to look at the legislation that is behind the immigration procedure as well as the licenses that may be acquired by foreigners who are already living in the country in the next chapter (Drbohlav, 2003).

3.2.2 Legislation

According to the Czech Ministry of interior, foreigners can apply for various types of long-term residence (any stay above 90 days), which are:

1) Long-term residence for the purpose of studies
2) Long-term residence for the purpose of work
3) Long-term residence for the purpose of scientific research
4) Long-term residence for the purpose of business
5) Long-term residence for the purpose of investment
6) Political asylum
7) Family reunification
8) Permanent long-term residence (after 5 years of his current stay in the Czech Republic)

When it comes to number behind the residences that foreigners have, a particular pattern can be followed in Figure 5 below, where current information about foreigners with the permanent residence in the Czech Republic is available (Czech Ministry of Interior, 2022).

Figure 5, number of foreigners according to the type of residence in thousands
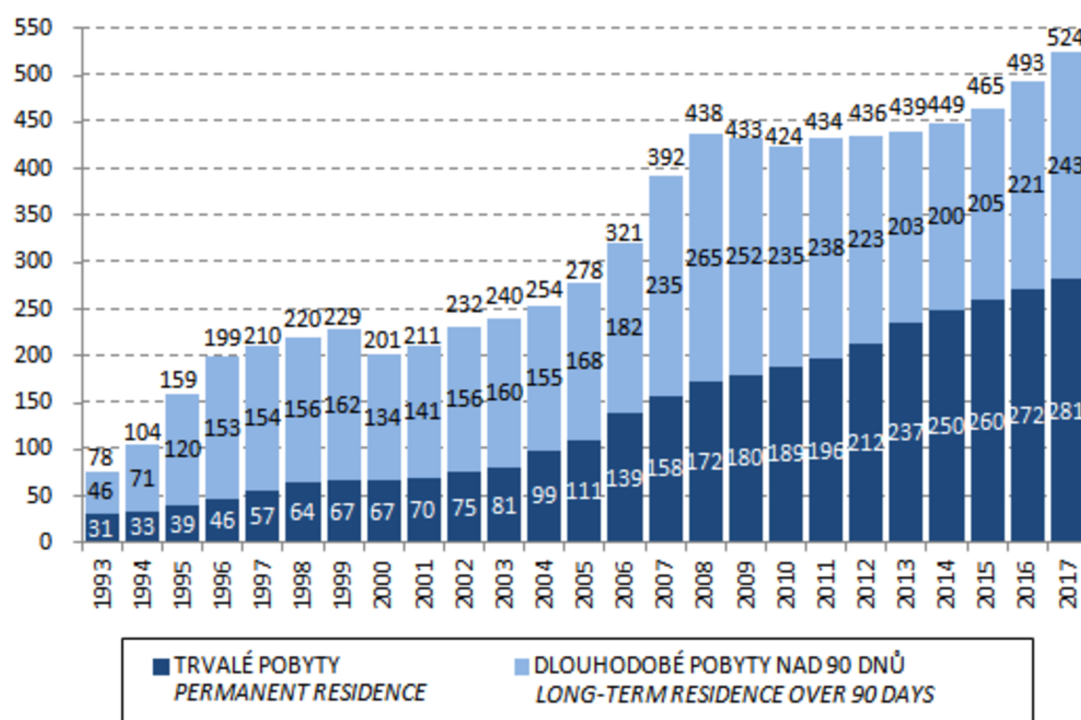
Source: Czech Statistical Office, 2022

As a result, it is clear that the vast majority of non-Czechs living in the Czech Republic in 2017 held permanent residence permits, which enabled them to remain in the country without extending their visas or reporting to the local consulate or embassy at any point.

Nevertheless, this diagram is an excellent illustration of the trend that is currently taking place: the nation is opening its doors to immigrants, and in addition, it enables them to remain in the country and integrate themselves into the Czech community so that they can construct their future lives here.

In addition, another map (Figure 6) illustrates the dispersion of foreign nationals across the country.

Figure 6, share of foreigners in regions
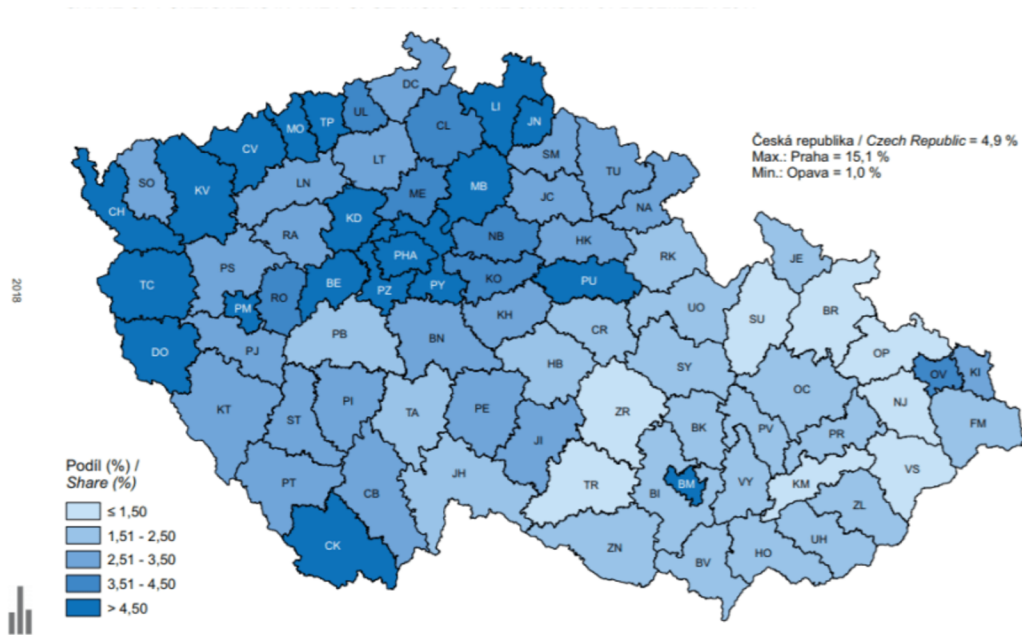
Source: Czech Statistical Office, 2022

Undoubtedly, regions attracting foreigners are primarily huge centers of production and business. Thus, Brno, Ostrava, Karlovy Vary, Prague and Ceske Budejovice are among the most popular destinations of foreigners to settle (Vacková, 2022).

3.2.3 Illegal immigration

Illegal immigration and the possibility of illegal activities being carried out by immigrants is one of the most common and persuasive arguments that people who oppose immigration use to persuade governments in almost every country around the world to significantly reduce the overall level of immigration. According to data provided by the Czech Statistical Office, the amount of people living in the Czech Republic without proper documentation is astonishingly low.

Figure 7, illegal immigration per year

2008 - 2020

Legend:
- PŘES STÁTNÍ HRANICE / *ACROSS THE STATE BORDERS*
- NELEGÁLNÍ POBYT / *ILLEGAL STAY*
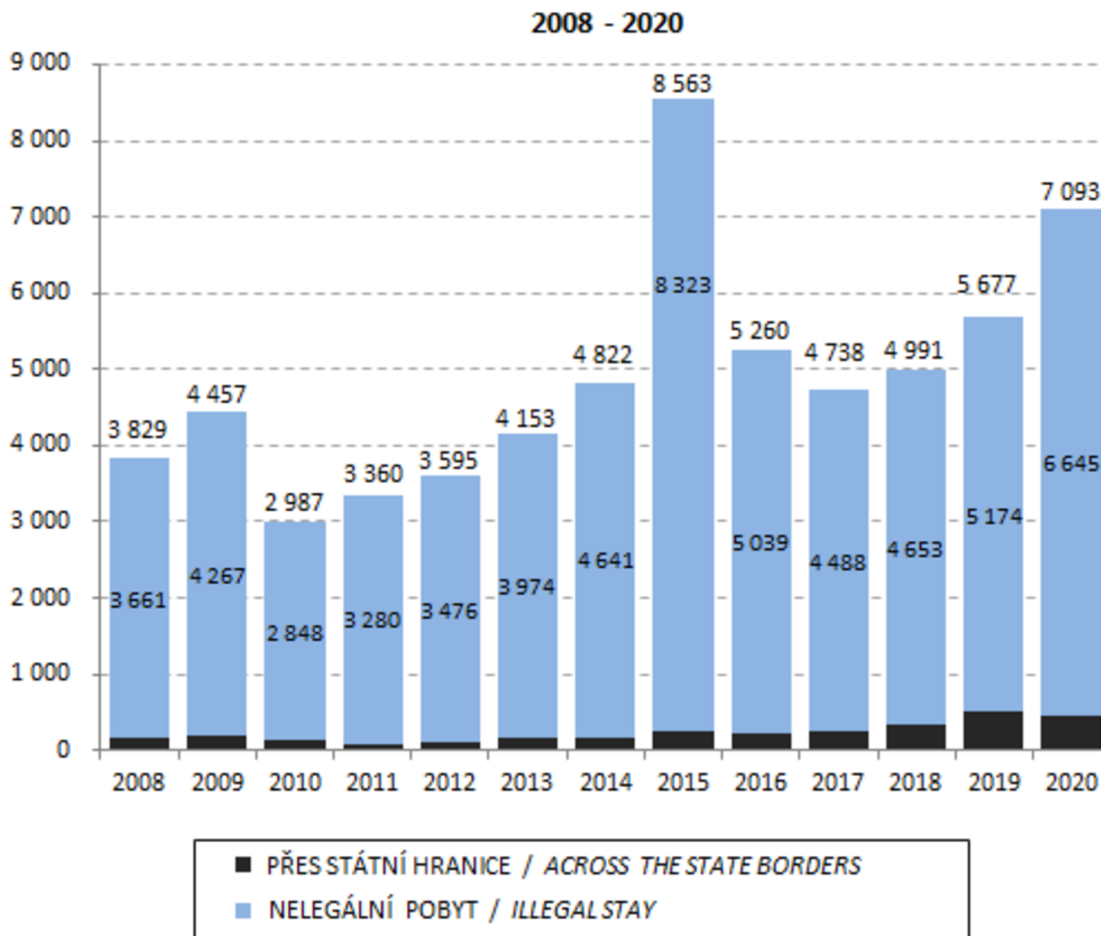
Source: Czech Statistical Office, 2022

However, this low figure can be explained by the present attitude that the European Union has towards inhabitants of countries who have a history of experiencing high rates of illegal immigration, such as Ukrainians and Georgians. Recent events have resulted in these two countries receiving an extraordinary present from the European Union in the form of permission for their residents to remain in any Schengen zone country without the need for a visa. Of course, this does not allow them to work, but records suggest that many of those foreigners utilize those tourist visas to make a living, gain money, and travel back to their countries. This is because these visas do not allow them to work. Unfortunately, a significant number of non-citizens have a propensity to abuse this privilege, and because they do not leave the region after the allotted period of time (ninety days), those immigrants might be considered to be in violation of the law (Drbohlav, 2009).

Obviously, levels that low cannot in any way be compared to those that are found in the United States since they are simply not comparable. The number of people living in the United States illegally is depicted in Figure 8, which can be viewed here.

Figure 8, unauthorized immigrants in USA

In millions
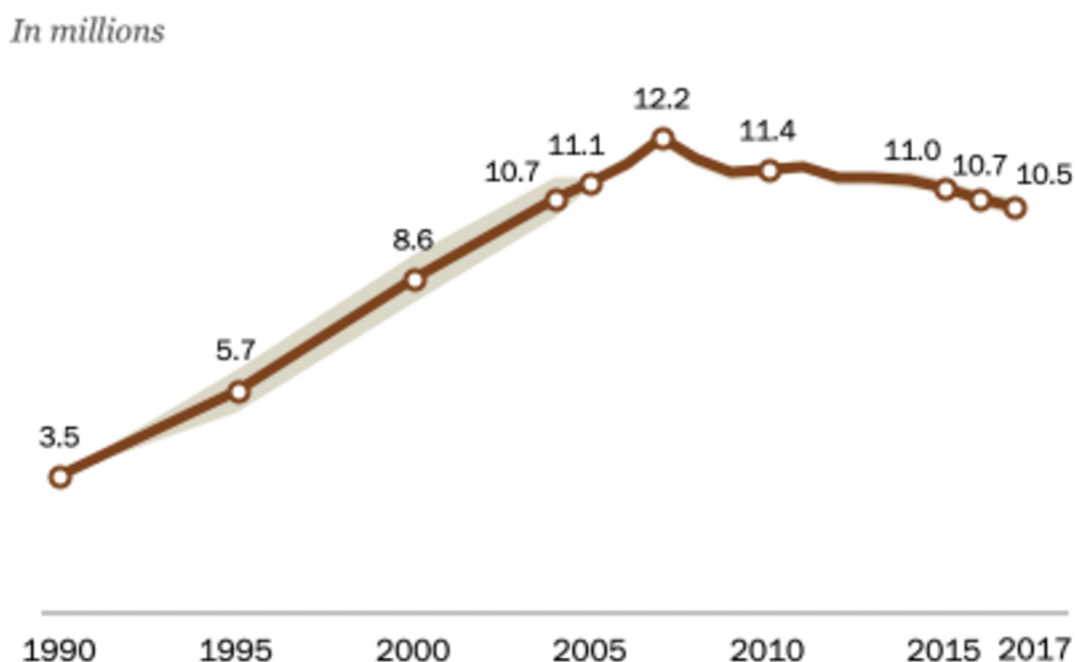
Source: Nowrasteh, 2022

However, the history of the United States demonstrates that the arrival of waves of illegal immigrants does not always indicate that all of those immigrants would engage in illicit activities like as smuggling, drug dealing, and prostitution in the nation in which they are residing. On the other hand, the great majority of undocumented immigrants choose to pick jobs that are unpopular with the native population where they are living. In order to accomplish this goal, several nations have adopted policies that are somewhat more lenient towards illegal immigrants, and every five or six years, these nations provide legal status to those who first entered their territory in violation of the law. The fact that the vast majority of immigrants in the Czech Republic are there legally a vital piece of proof that the nation is adopting a policy of open doors, which is a strategy that is highly popular within the European Union. In addition, studies have shown that immigrants who settle in the Czech Republic almost often end up in jobs that require a certain level of professional expertise and certification (Nowrasteh, 2022).

3.3 Domestic Markets and Immigration

3.3.1 Positive Effects

Before finally initiating the analysis and focusing on the creation of an econometric model describing the development of unemployment in the Czech Republic, it is vital to refer to other studies empathizing on positive effect and other externalities for the domestic economy created from immigration. The very first consequence of any immigration wave is the change in the workforce. Immigrants are workers and increase in the domestic supply of workers shifts the supply curve of labor to the right thus creating a new equilibrium in the labor market. The situation is depicted in Figure 9.

Figure 9, changes in labor market
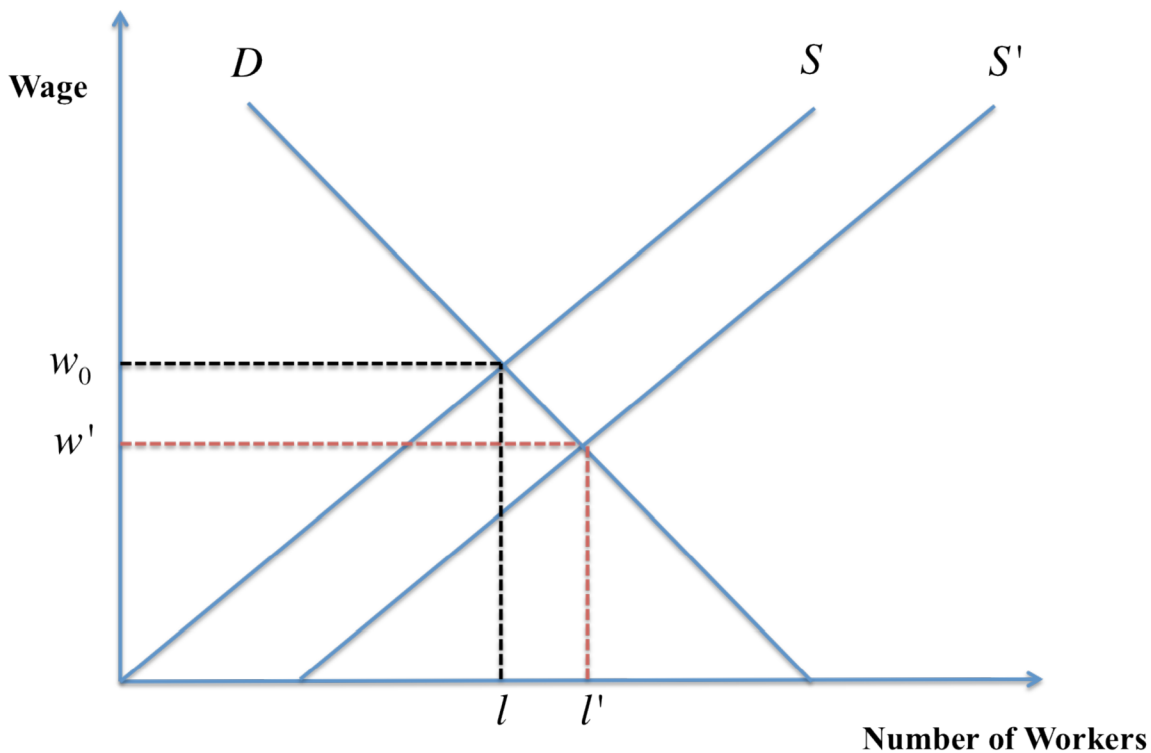
Source: own processing based on Berger, 2022

The new equilibrium that has been established leads to a lower salary across the board, including the minimum one, as well as an increase in the number of willing employees. Because there are now more individuals prepared to labor for lower wages, it is quite clear that domestic businesses and companies have emerged as the winners from this situation. In addition to this, any growth in the domestic labor supply that is induced by immigration would surely result in an increase in competition, and it is anticipated that this

phenomenon will encourage local employees to either enhance their qualifications or simply become more productive. As a result, businesses get more employees who are motivated, they pay cheaper rates, and they see an improvement in production. The fundamental effect of this is that local businesses are producing a higher level of actual production, which is contributing to the general rise in GDP throughout the nation. Many prosperous economies have, at some point in time, depended on immigrants who helped the country to overcome relatively difficult times. This includes the United States, which relied on immigrants from all over the world; Germany, which relied on immigrants from Turkey in the 20th century; and the Netherlands, which relied on immigrants from Morocco in the second half of the 20th century. There are several successful instances of nations that have embraced immigration and not found it to be a problem, which has ultimately led to a quickly developing economy with a greater level of productivity (Berger, 2022).

In addition to this, high-income countries, specifically countries such as the United States of America, Canada, the United Kingdom, etc., are susceptible to a phenomenon known as "selective immigration" or professional immigration. This occurs when these countries offer visas to people who have exceptional experience, abilities, or qualification. Naturally, anything like this might only be feasible in highly developed countries, and the Czech Republic does not at present time have any programs that are even somewhat comparable.

3.3.2 Negative Effects

On the other hand, the issue of immigration is fraught with a great deal of complexity. Despite the fact that it very plainly generates considerable benefits for corporations and companies, as well as for the actual production of the nation, it results in a worsening of the economic situation for domestic employees. Those who have been working in the country for some times do not have an interest in seeing the average wage go down, and sometimes local workers are simply unable to compete with immigrants because they are unable to reduce the financial requirements they need to meet. Immigrants are able to lower their financial requirements. In addition to this, upgrading one's qualifications is not always a possibility. This is due to the fact that many firms simply prefer hiring individuals who are willing to work for a lower salary, since this is the aspect that the majority of employers consider to be the most significant. In addition to this, there is a possibility that

an increase in the number of immigrants could significantly lower the overall quality of the services that are provided. This is because immigrants may not possess the necessary set of skills, but firms may still hire them because of the wage they are asking for because it is in the interest of businesses to do so (Okkerse, 2008).

There is no one right way to respond to the topic of whether immigration is inherently a positive or negative development since the nature of the situation varies from one setting to another, and there is no one response to this question. However, there is one thing that is completely obvious: immigration is a phenomenon that has been a part of society for centuries, and it appears to be getting even more common and important as globalization is blossoming in all parts of the world, not just Europe, Oceania, and North America. This is a crystal-clear fact (Delgado Prieto, 2022).

4 Practical Part

4.1 Econometric Model

Upon specifying his goals and methodology, the author mentioned the need for an econometric model to predict the unemployment rate based on metrics related to immigration and immigrants. Apart from the variables related to immigration, the author also suggests adding other economic variables in order to reach a better result in terms of the quality of the model.

Thus, the author does not solely focus on immigration as the main phenomenon explaining the fluctuations in the unemployment rate in the Czech Republic. Despite the fact that immigration, without any doubt, has its own effect on unemployment, as it has already been proven numerous times by economic researchers and think tanks, including variables exclusively related to immigration and immigration only would have significantly distorted the result and boiled down to a biased conclusion.

Of course, the author could have chosen another approach to describe the effect of immigration on unemployment, but an econometric model is the best one due to the fact that it would also allow the author to make predictions about the unemployment level in the country if appropriately created and proven to be BLUE – best linear unbiased estimator (absence of multicollinearity, autocorrelation, heteroscedasticity and presence of normality of residuals).

4.1.1 Variables

A linear regression model cannot be created without a set of relevant variables – both dependent and independent. In the context of the following research, the author selected the following set of variables:

- *Y_t, dependent variable = the unemployment rate in the Czech Republic measured in percentage points.*
- *X_{1t}, the first independent variable = the number of legal immigrants in the Czech Republic per year measured in thousands of people.*

- X_{2t}, *the second independent variable = the inflation rate in the Czech Republic measured in percentage points.*
- X_{3t}, *the third independent variable = the amount of minimum wage in the Czech Republic, measured in CZK.*

Hence, the desired model will have the following structure:

$$Y_t = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon_i$$

The choice of the first independent variable (the number of legal immigrants) is justified by the main objective of the following research. The selection of the second independent variable (the inflation rate) is explained by the existing economic theory, including the Phillips curve and the handful of other publications indicating a presence of negative correlation between the two and a strong association between them. The selection of the third independent variable is justified pretty easily – out of all economic metrics and measures, the minimal wage set by the government has the direct and probably one of the strongest effects on the unemployment rate in any country. Clearly, the Czech Republic won't be an exception in that sense.

4.1.2 Model

The model itself is a simple linear model, which does not generally require complicated approaches to creating linear econometric models such as TOLS used for simultaneous and recursive models, so the main approach used for constructing the model is the ordinary least squares method.

Given the level of technological progress, the author refrained from performing all calculations manually. For the sake of accuracy and efficiency of his resources, the author selected a particular software that was bound to help him to create the model and verify its unbiasedness and statistical accuracy at the same time. The author chose Gretl for her research.

Apart from choosing software, there was also an important step that had to be dealt with before any software was chosen – collecting data and specifying the time interval to be analyzed. The author collected data through the Czech Statistical Office, Eurostat, and the World Bank, and the time interval chosen was 17 years – covering the period from 2005 to 2021.

Thus, it is possible to see the table below, which will be inputted into GRETL later on.

Table 1, dataset for GRETL

Year	Unemployment rate	Number of Immigrants	Inflation Rate	Minimal Wage
2005	7,93%	278,312	1,86%	7 185 CZK
2006	7,15%	321,456	2,53%	7 955 CZK
2007	5,32%	392,315	2,85%	8 000 CZK
2008	4,39%	437,565	6,36%	8 000 CZK
2009	6,66%	432,503	1,02%	8 000 CZK
2010	7,28%	424,291	1,47%	8 000 CZK
2011	6,70%	434,153	1,92%	8 000 CZK
2012	7%	435,946	3,28%	8 000 CZK
2013	7%	439,189	1,44%	8 500 CZK
2014	6,10%	449,367	0,35%	8 500 CZK
2015	5%	464,670	0,33%	9 200 CZK
2016	4%	493,441	0,68%	9 900 CZK
2017	2,90%	524,142	2,45%	11 000 CZK
2018	2%	564,345	2,15%	12 200 CZK
2019	2%	593,366	2,85%	13 350 CZK
2020	2,60%	632,570	3,16%	14 600 CZK
2021	2,80%	658,564	3,84%	15 200 CZK

Source: Own processing based on data from the Czech Statistical Office

After preparing and collecting data, setting the time interval, and specifying all variables, it is essential to perform the very first step of creating an econometric model – checking if there is any multicollinearity. The issue occurs whenever two or more independent variables are strongly linearly associated (correlated) with each other. This directly influences the quality of the model, so whenever this mentioned issue is encountered, it is essential to transform the initial dataset.

In order to check if there is a multicollinearity problem present in the created dataset, the author will use a correlation matrix. The output from GRETL is available in Figure 10.

Figure 10, correlation matrix

```
                        gretl: correlation matrix

Correlation Coefficients, using the observations 2005 - 2021
5% critical value (two-tailed) = 0.4821 for n = 17

NumberofImmigr~    InflationRate       MinimalWage
        1.0000           0.1982            0.9292 NumberofImmigr~
                         1.0000            0.2307 InflationRate
                                           1.0000 MinimalWage
```
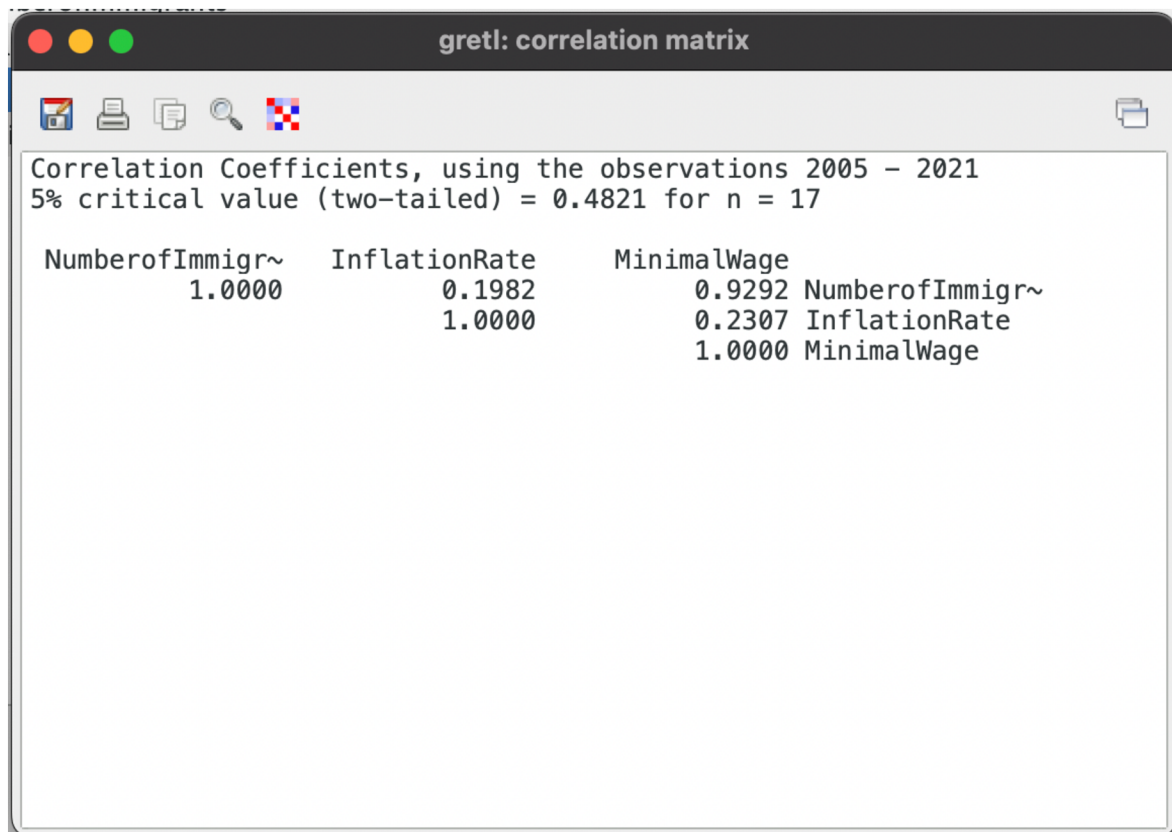
Source: own processing

The author sets the value of 0.8 as the boundary for classifying a relationship as strongly correlated. Thus, following the output from GRETL, it is possible to see that the correlation between the number of immigrants and the minimum wage is exceptionally high, with the value of r = 0.92. The problem of multicollinearity is encountered here, but it can be easily eliminated by transforming the variable of minimal wage into the variable of the first difference of the minimum wage, i.e., instead of having the variable directly representing the wage, the difference (growth) will be used for further calculations.

Now, after transforming the variable, the new input from the correlation matrix is shown in Figure 11.

Figure 11, new input from the correlation matrix

gretl: correlation matrix

```
Correlation Coefficients, using the observations 2006 – 2021
5% critical value (two-tailed) = 0.4973 for n = 16

 NumberofImmigr~    InflationRate    d_MinimalWage
        1.0000           0.1878            0.6213 NumberofImmigr~
                         1.0000           -0.0057 InflationRate
                                           1.0000 d_MinimalWage
```
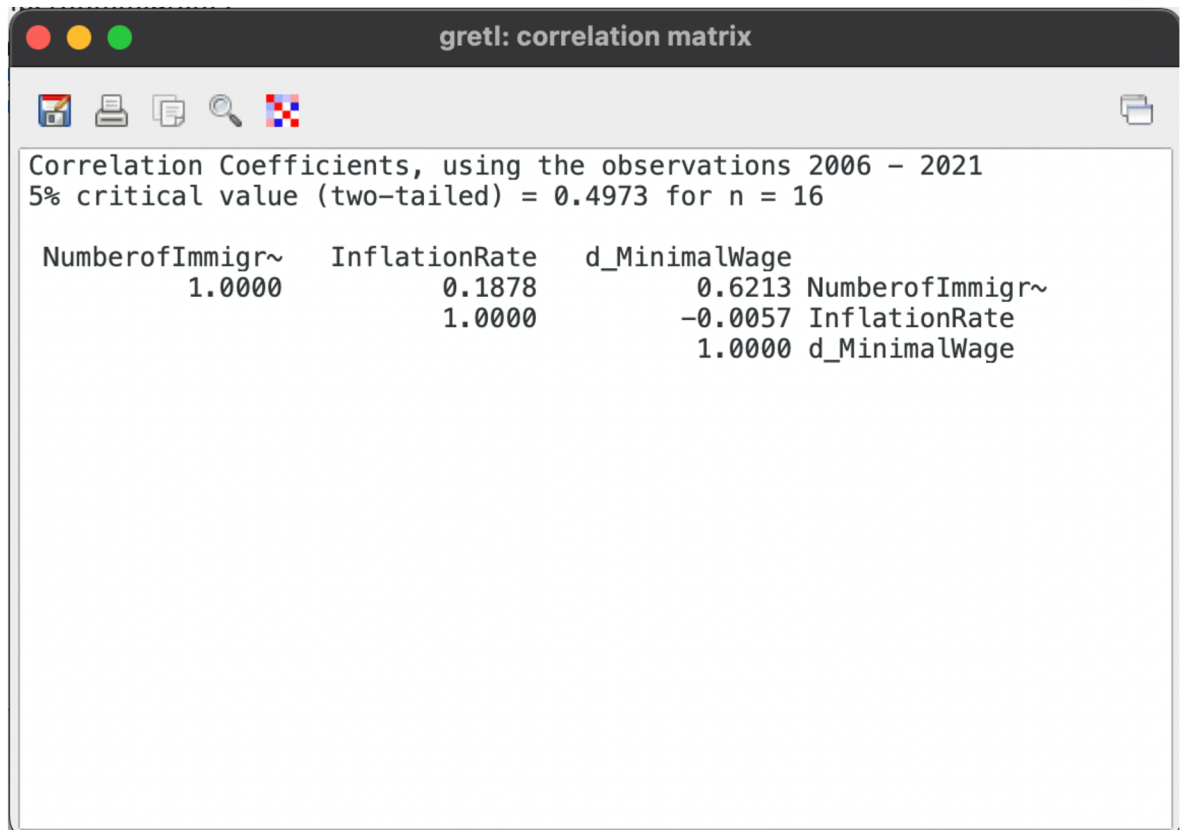
Source: own processing

As a result of the transformation performed, it can be seen that there is no more problem of multicollinearity in the dataset since all coefficients of correlation are less than 0.8. Thus, the author can continue to the final step of the process – the creation of an econometric model using the ordinary least squares method.

Figure 12, GRETL OLS output

```
●●●                          gretl: model 2

File  Edit  Tests  Save  Graphs  Analysis  LaTeX                    ⬛

Model 2: OLS, using observations 2006–2021 (T = 16)
Dependent variable: Unemploymentrate

                    coefficient   std. error   t-ratio   p-value
  -----------------------------------------------------------------
  const               0.121217    0.0138970      8.723   1.53e-06  ***
  NumberofImmigran~  -0.000119768 3.28904e-05   -3.641    0.0034   ***
  InflationRate      -0.264228    0.153963      -1.716    0.1118
  d_MinimalWage      -1.61696e-05 5.91264e-06   -2.735    0.0181   **

Mean dependent var   0.049438    S.D. dependent var    0.019655
Sum squared resid    0.000930    S.E. of regression    0.008804
R-squared            0.839485    Adjusted R-squared    0.799356
F(3, 12)            20.91971     P-value(F)            0.000047
Log-likelihood      55.31864     Akaike criterion    -102.6373
Schwarz criterion  -99.54692     Hannan-Quinn        -102.4790
rho                  0.303299     Durbin-Watson         1.313177

Excluding the constant, p-value was highest for variable 3 (InflationRate)
```

Source: own processing

$$Y_t = 0.12 - 0.00011X_1 - 0.26X_2 - 1.61 * e^{-05}X_3 + \varepsilon_i$$

Based on the OLS output from GRETL available in Figure 12, the following model is created:

4.2 Verification

In this chapter, the author will verify if the model complies with all requirements of basic econometric models and if the following model can be used for making general predictions of the unemployment rate in the Czech Republic.

4.2.1 Economic Verification

The very first kind of verification that will be performed is economical. During the process of economic verification, the author will analyze the relationship between variables and see if it follows the general economic logic and theories.

In order to proceed with the verification, it is essential to take an insight into the interpretation available from the model. Thus,

If the number of legal immigrants in the Czech Republic (X1) increases by 1 thousand, the unemployment rate decreases by 0.000119768 percent.

This statement fully complies with the economic theory since any increase in the domestic workforce is likely to cause unemployment to go down. In addition, given the fact that the overwhelming majority of foreigners in the Czech Republic are actively working, this relationship seems even more logical.

If the inflation rate rises by 1 percent, the unemployment decreases by 0.26 percent.

This statement also fully complies with the economic theory because it is known that the inflation rate and the unemployment rate are negatively correlated, and an increase in one indicator triggers the opposite shift in the other.

If the change in the minimum wage increases by 1 CZK, the unemployment rate goes down by 0.0000061696 percent.

This is also quite logical since any increase in the minimal wage leaves workers better off since their labor is more appreciated and better paid.

Finally, as a result of the economic verification, it is possible to conclude that the following model does fully comply with the economic framework and can be used for making economic predictions.

4.2.2 Mathematical Verification

The main goal of the mathematical verification of any econometric model lies in finding out if the actual average unemployment rate would be equal to the fitted average unemployment rate. Based on the logic behind the OLS method, it is fundamental that those two values will be equal. In other words, the author needs to find a fitted value for each year and then find the average unemployment rate for the time series and compare it to the actual mean.

Hence, the author was able to find out that the average actual unemployment rate in the Czech Republic from 2005 to 2021 was 0.049438 or 4.9%, while the average fitted unemployment rate value was also 0.049438 or 4.9%. All in all, these two values are equal, so it is possible to conclude that the model passed the mathematical verification successfully.

4.2.3 Econometric Verification

In the econometric verification of the model, the author will be finding out if the estimator is BLUE, standing for the best linear unbiased estimator. For this purpose, it is essential to find out if the model has any of the following problems: heteroscedasticity, autocorrelation, and absence of normality of residuals. The author uses the very same piece of software for doing related tests that will help to find out if any of the problems mentioned above are present in the model. The GRETL output containing test parameters for three tests is shown in Figure 13.

Figure 13, GRETL test output

```
White's test for heteroskedasticity –
  Null hypothesis: heteroskedasticity not present
  Test statistic: LM = 11.1682
  with p-value = P(Chi-square(9) > 11.1682) = 0.264354

LM test for autocorrelation up to order 1 –
  Null hypothesis: no autocorrelation
  Test statistic: LMF = 1.48237
  with p-value = P(F(1, 11) > 1.48237) = 0.248878

Test for normality of residual –
  Null hypothesis: error is normally distributed
  Test statistic: Chi-square(2) = 1.48505
  with p-value = 0.47591
```

Source: own processing

First, the author will test if there is a problem with heteroskedasticity. Heteroskedasticity is the situation when the variance of residuals is scattered unequally over the range of the dataset. For finding out if this problem is present in the dataset or not, White's test for heteroskedasticity will be used, whose output is available in the table below.

<div align="center">**Table 2, White's test**</div>

Ho: Heteroskedasticity is not present Ha: Heteroskedasticity is present
Alpha = 0.05
P = 0.264 0.264 > 0.05 => Ho is not rejected => Heteroskedasticity is not present in the model.

Source: own processing

Hence, there is no heteroskedasticity, and residuals are homoscedastic.

Then, it is essential to find out if there is an autocorrelation problem. Autocorrelation refers to situations when residuals return the same values over periods of time, which is also a problem. To understand if there is autocorrelation of the first order in the model, the Durbin-Watson test is used. The whole testing procedure is available in the next table.

<div align="center">**Table 3, Durbin-Watson test**</div>

Ho: Autocorrelation is not present Ha: Autocorrelation is present
Alpha = 0.05
P = 0.24 0.24 > 0.05 => Ho is not rejected => Autocorrelation is not present in the model.

Source: own processing

Hence, there is no autocorrelation, and residuals are not autocorrelated.

The very final step of the econometric verification of the model lies in checking if the residuals follow the shape of the normal distribution (bell-shaped). For this purpose, the Jarque-Bera test is used, which can be found in the table below.

<div align="center">**Table 4, normality test**</div>

Ho: Residuals are normally distributed Ha: Residuals are not distributed normally
Alpha = 0.05

P = 0.47

0.47 > 0.05 => Ho is not rejected => Residuals are normally distributed.

Source: own processing

Hence, the residuals are normally distributed.

To conclude the econometric verification, it is possible to say that the model complies with all requirements, and it is BLUE.

4.2.4   Statistical Verification

The very final verification of the model will be statistical. Here, the author will find out if the model is statistically significant, if predictors are statistically significant and if the model is of good quality.

The quality of the model can be assessed by looking at the adjusted R^2, which reflects the percentage of the variation in the dependent variable explained by the variation in the independent ones. In the case of the model for predicting the unemployment rate in the Czech Republic, the coefficient of determination (R^2) is equal to 0.79, following the output from GRETL in Figure 12.

79% of the variation in the unemployment rate is explained by the variation in the independent variables. This is a reasonably good result. Given the fact that the adjusted R^2 reflects the quality given a potential extension of the model through adding new variables, it is a promising result. The model fails to explain only 21% of the variation in the unemployment rate in the Czech Republic.

After checking the coefficient of determination and assessing the quality, it is essential to check if the whole model is significant.

The significance of the whole model indicates that there is at least one dependent or predictor variable, which has a statistically significant effect on the dependent variable. The

test used for this purpose is called F-test, and the test statistic, as well as the P-value, are available in Figure 12. As for the test procedure, it is shown below.

Table 5, F-test

Ho: ß1 = ß2 = ß3 = 0 (the model is not significant)   Ha: At least one ß ≠ 0 (the model is statistically significant)
A = 0.05
P = 0.000047   0.000047 < 0.05 => Ho is rejected, Ha is assumed => the model is statistically significant.

Source: own processing

Following the result of the F-test, it is possible to conclude that the model is statistically significant, meaning that there is at least one predictor that has a significant effect on the unemployment rate in the Czech Republic. Now, the author will find out which predictors are statistically significant and which are not using a series of independent T-tests.

Table 6, T-tests

Ho: ß1 = 0 (X1, number of foreigners is not statistically significant) Ha: ß1 ≠ 0 (X1, number of foreigners is statistically significant)	Ho: ß2 = 0 (X2, inflation rate is not statistically significant) Ha: ß2 ≠ 0 (X2, inflation rate is statistically significant)	Ho: ß3 = 0 (X3, change in the minimum wage is not statistically significant) Ha: ß3 ≠ 0 (X3, change in the minimum wage is statistically significant)
A = 0.05	A = 0.05	A = 0.05
P = 0.0034 0.0034 < 0.05 => Ho is rejected, Ha is assumed => X1 is significant	P = 0.11 0.11 > 0.05 => Ho is not rejected => X2 is not significant	P = 0.01 0.01 < 0.05 => Ho is rejected, Ha is assumed => X3 is significant

Source: own processing

Following the series of t-tests, it is possible to conclude that there is only one variable that does not have any statistical effect on the unemployment rate in the Czech Republic, and it is the inflation rate (X2), for which the null hypothesis was accepted.

The author believes that there are two possible explanations for that – the effect of inflation on the unemployment rate in the Czech Republic is relatively low, and the unemployment is more influenced by other phenomena than by inflation, or the dataset simply needs to be adjusted by covering a larger period of time. However, this might also be an indicator that the Czech Republic did not fully complete the process of transitioning the economy from the centrally planned to the market one, and some processes might still be halted.

Yet, the author decides not to exclude the inflation rate variable despite the fact that by now, it can definitely be done following its statistically low effect on unemployment.

All in all, the model created by the author performed well according to all possible kinds of verifications applied to econometric models, so general conclusions and predictions can definitely be made by using the model.

4.2.5   Elasticities

In order to understand the ultimate effect of each variable included by the author in the econometric model, comparing the shift in the unemployment rate caused by 1 unit change in each predictor is not enough based on the fact that each variable has units as a measure. Thus, the author will now find out which variable out of the three included into the model has the strongest effect on the dependent variable.

To accomplish this intermediate goal, the author will calculate elasticities that directly indicate an average percentage change of a dependent variable (the unemployment rate in this case) resulting from a 1% change in the dependent variable.

The following table contains calculations and results for all three variables.

Table 7, elasticity calculation

Year	Unemployment rate	Number of Immigrants	Inflation Rate	Minimal Wage	d_Minimal Wage	Fitted
2005	7,93%	278,31	1,86%	7 185 CZK	-	
2006	7,15%	321,46	2,53%	7 955 CZK	770 CZK	7,13%
2007	5,32%	392,32	2,85%	8 000 CZK	45 CZK	6,64%
2008	4,39%	437,57	6,36%	8 000 CZK	0 CZK	5,20%
2009	6,66%	432,50	1,02%	8 000 CZK	0 CZK	6,67%
2010	7,28%	424,29	1,47%	8 000 CZK	0 CZK	6,65%
2011	6,70%	434,15	1,92%	8 000 CZK	0 CZK	6,41%
2012	7%	435,95	3,28%	8 000 CZK	0 CZK	6,03%
2013	7%	439,19	1,44%	8 500 CZK	500 CZK	6,17%
2014	6,10%	449,37	0,35%	8 500 CZK	0 CZK	6,65%
2015	5%	464,67	0,33%	9 200 CZK	700 CZK	6,04%
2016	4%	493,44	0,68%	9 900 CZK	700 CZK	5,60%
2017	2,90%	524,14	2,45%	11 000 CZK	1 100 CZK	4,52%
2018	2%	564,35	2,15%	12 200 CZK	1 200 CZK	4,05%
2019	2%	593,37	2,85%	13 350 CZK	1 150 CZK	3,55%
2020	2,60%	632,57	3,16%	14 600 CZK	1 250 CZK	2,94%
2021	2,80%	658,56	3,84%	15 200 CZK	600 CZK	2,85%

constant	number of	inflation	d_wage
0,121217	-0,000119768	-0,264228	-6,1696E-06
Elasticity	-2,000446254	-0,21197621	-2,318471205

Source: Own processing

Based on the calculation, it is possible to describe the effect that individual predictor has on the unemployment rate.

- Thus, a 1% change in the number of foreigners in the Czech Republic triggered a 2% decrease in the unemployment rate in the Czech Republic in 2019.
- 1% change in the inflation rate triggered a 0.21% decrease in the unemployment rate in the Czech Republic in 2019.
- 1% change in the difference in the minimum wage triggered a 2.31% decrease in the unemployment rate in the Czech Republic in 2019.

By looking at those calculations, it is possible to say that the minimum wage and its change still have the largest effect on the unemployment rate. Nonetheless, the most important metric for the following research – the number of foreigners in the Czech Republic is the second-most important influencer of the change in the unemployment rate in the Czech Republic, followed by the inflation rate in 2019.

4.2.6 Model Application

Yet, until 2022, the Czech Republic was not anyhow officially restricting immigration flow into the country (Czech Ministry of Interior, 2022). The tendency, however, changed after the events that took place in February between the Russian Federation and Ukraine. Thus, as it was mentioned above, the country suspended all application procedures for citizens of Russia and Belarus until March 2023. Now, using the model created earlier and statistics from the Czech Statistical Office, the author will try to project how this would influence the unemployment rate in the country.

Before using the model for calculations, it is firstly important to calculate the average yearly increment of immigrants from Russia and Belarus and calculate the projected value that will not come to the country. For this purpose, fresh statistics from the Czech Statistical Office will be used.

Figure 14, average change in the immigration rate per citizenship

Datum Date	Change Total	Ukrajina Ukraine	Slovensko Slovakia	Vietnam Viet Nam	Rusko Russian Federation	Rumunsko Romania	Polsko Poland	Bulharsko Bulgaria	Německo Germany	Ostatní Other
31.12.2021	26 059	31 221	-9 914	1 967	3 458	410	-2 797	-622	-6 069	8 405
31.12.2020	38 909	20 136	3 266	932	3 700	1 572	-1 034	734	-617	10 220
31.12.2019	28 950	13 809	4 461	809	-16	2 140	488	1 590	211	5 458
31.12.2018	40 120	14 229	5 013	1 335	1 383	2 122	610	1 798	6	13 624
31.12.2017	30 398	7 235	4 553	1 728	853	1 736	364	1 545	45	12 339
31.12.2016	28 851	4 226	5 662	1 122	1 015	1 710	465	1 266	752	12 633
31.12.2015	15 639	1 631	5 367	292	287	1 375	214	926	777	4 770
31.12.2014	10 387	-851	5 274	-740	1 270	964	174	926	1 180	2 190
31.12.2013	3 323	-7 408	5 141	46	134	1 113	217	910	1 358	1 812
31.12.2012	1 824	-6 378	4 554	-905	573	822	177	787	1 386	808
31.12.2011	11 088	-5 314	9 473	-2 036	767	427	816	508	1 892	4 555
31.12.2010	-8 004	-7 638	-1 666	-825	1 546	319	-1 031	524	79	688
31.12.2009	-4 996	12	-2 588	868	3 217	477	-2 437	481	-3 704	-1 322
31.12.2008	46 214	5 439	8 154	9 303	3 875	445	1 103	898	1 795	15 202
31.12.2007	70 631	23 932	9 496	10 176	4 739	358	1 713	389	5 592	14 236
31.12.2006	43 144	14 805	8 939	3 947	2 295	115	1 084	84	2 922	8 953
31.12.2005	-	-	-	-	-	-	-	-	-	-
average	23 909	6 818	4 074	1 751	1 819	1 007	8	797	475	7 161

Source: Own processing based on Czech Statistical Office

Thus, upon calculating the average change per citizenship, it can be calculated that on average, from 2005 to 2021, there was an increase of 23909 citizens per year, and out of them, 1819 on average were Russians.

Now, the author will use the model created to predict the unemployment rate. The values of independent variables will be selected based on the current economic trends and the projected changes, including the suspension of visa applications for Russians.

Before selecting the values for variables, it is essential to mention that the author does not take into consideration a colossal flow of Ukrainian refugees into the Czech Republic because it is an extraordinary situation, and those people are not likely to be fully integrated into the labor market as the overwhelming majority of them is likely to go back to Ukraine (United Nations, 2022).

- *X1, number of immigrants = 660 849 (the number of foreigners as of 31.12.2021) + 23 909 (average increment per year) – 1819 (average number of Russians immigrating into the Czech Republic) = 682,939*
- *X2, inflation rate = 10% (based on forecasts)*
- *X3, change in minimal wage = 16 200 (amount in 2022) – 15 200 (amount in 2021) = 1000 CZK*

All values will be put into the following model:

$$Y_t = 0.12 - 0.00011X_1 - 0.26X_2 - 1.61 * e^{-05}X_3 + \varepsilon_i$$

Thus, the projected level of unemployment in the Czech Republic, given the values selected by the author, is **0.68%.**

Following this calculation, it is possible to conclude that despite the belief that banning Russians from coming to the Czech Republic can somehow damage the immigration rate, this political decision will definitely halt the immigration rate and likely damage the rights of people, but it is not likely to anyhow trigger a change in the unemployment rate. In contrast, there is still room for further research that could shed light if this political decision will influence the quality and productivity of labor because, as it is known to everyone, workers are different, and immigrants from one country can be much more qualified than those from another.

5 Results and Discussion

Undoubtedly, the author's analysis prompts the author to conclude that foreigners undoubtedly play a very significant role in the overall unemployment in the Czech Republic. The miraculous decrease in unemployment in the mid-2010s can be explained by the rise in immigration to the country, as some researchers claim, and the author's model and the breakdown of elasticities prove this logic (Čižinský Pavel, 2014). Incredibly low rates of inflation are partially explained by the rise in legal immigration. After all, there should be no doubt at all that any immigration and especially such a colossal one, would have a direct impact on the increase of the workforce of the country.

In contrast to this, it is still vital to understand that a low level of unemployment is not universal salvation, and it definitely has its consequences. Over the time period of more than ten years, the country had an incredibly low level of inflation and a low unemployment rate at the same time. However, this situation cannot be sustained forever, and the gradual increase in the inflation rate is fully explained by incredibly low rates of unemployment partially caused by the massive waves of immigration into the country. In other words, people criticizing the government for its relatively welcoming immigration policy were indeed partially right – it triggered an increase in the minimum wage and also influenced the inflation rate (Galuščák, 2010). The author came up to the same conclusions as other authors in this domain as well.

However, despite all drawbacks, the author would still like to highlight the fact that immigration in the Czech Republic is rather a positive phenomenon. Yet, a potential sophistication of bureaucratic processes might definitely boil down to a decrease in immigration, which would subsequently trigger a surge in the unemployment rate. Indeed, it would be quite logical to assume that once there are fewer immigrants coming to the country, there will be more working positions available for locals, and the unemployment should go down, but it is not that obvious.

The growing presence of legal immigrants, who are coming to the Czech Republic for the purpose of studying, working, or conducting business activities also increases the number of qualified workers because immigrants are experienced enough to come here and

work, or they increase their qualifications during studies and further internships. As a consequence of this, the Czech market becomes attractive for foreign investors and companies, who slowly open more and more headquarters in the Czech Republic, and by doing so, they enter the market, thus creating a tremendous amount of benefit for the country.

Undoubtedly, Czechs would be able to replace foreigners who won't come because of bureaucracy or other complications, but it won't ever be possible to take up all potential positions that will be generated by more and more international companies. First, because of the language – not everyone in the Czech Republic is proficient in English. As this index shows, the country is in 27th place in the world in terms of English proficiency (EF English Proficiency Index, 2021). Secondly, foreign companies also need workers for outsourcing purposes who are fluent in other languages apart from Czech and English. Thirdly, there is already a shortage of qualified staff in the Czech Republic, so closing the gates to new people and trying to substitute them with the domestic population would require a radical change in the amount of Czech workforce, which is clearly not possible and not likely to happen, as it can be seen on the population pyramid in Figure 15.

Figure 15, Population pyramid
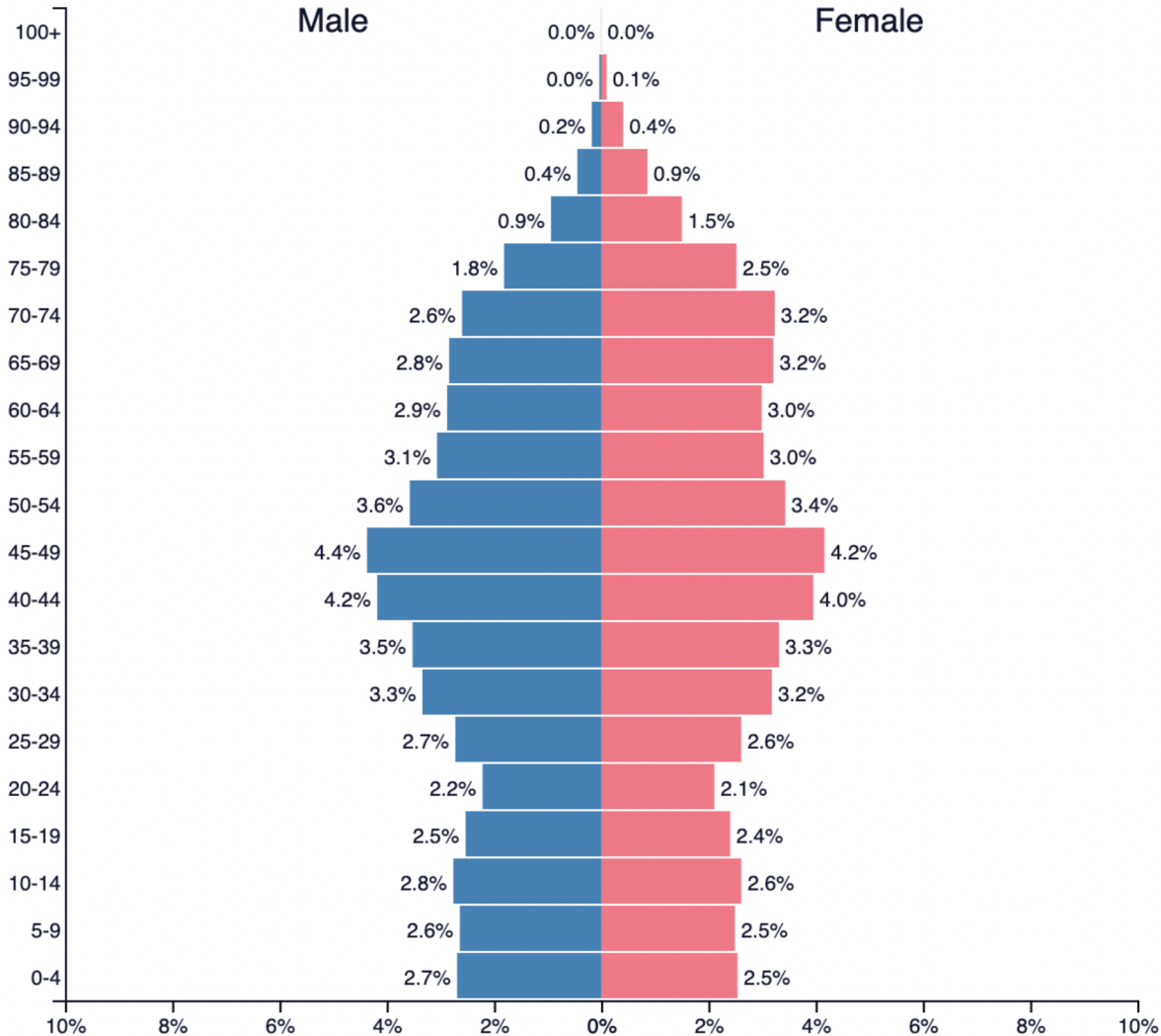
Source: Pyramid.net, 2022

Unluckily for those believing that the assumption about replacing foreigners with Czechs, the pyramid suggests that the amount of workforce is likely to shrink as a consequence of the aging population. Thus, in 5 years' time, the number of people reaching the age of retirement (63 for men and 62 and 4 months for women) will exceed 1.2 million. Of course, it is not yet guaranteed that all of those people will quit their jobs indefinitely, but a shrink is surely expected, as only 22% of Czechs continue working beyond the retirement age (Czech Radio, 2008).

At the same time, the number of people that will enter the age when they will be allowed to work without any restrictions will reach only half a million, as can be concluded from the pyramid.

In other words, upon considering 22% as an average proportion of seniors working after the retirement age and multiplying it by 1.2 million, the number of 264 000 can be found. This is the approximate value of seniors not retiring and actively continuing to participate in economic activities. Yet, one million people will still quit the market, and only half will be replaced, resulting in the approximate shrink of another half of a million in the Czech workforce. Clearly, the need for immigration is even more obvious after conducting the following breakdown. In addition, it is wise to say that European countries are primarily aging nations, with the largest proportion of the population reaching the age of retirement and the average age of 40 or even bigger in some states. For this purpose, those countries tend to ease the immigration restrictions and allow a flow of new workforce in order to sustain the desired level.

All in all, this all supports the assumption made by the author that there is no way to decrease immigration in the Czech Republic without damaging the domestic economy.

6 Conclusion

In order to sum up his findings, the author would like to emphasize her findings one more time. It is true that the influx of immigrants assisted the nation in maintaining its astonishingly low level of unemployment; however, at the same time, this unemployment level gradually triggered a drastic increase in the inflation rate. However, the traditionally low unemployment rates in the Czech Republic in 2022 are not a sufficient explanation for the incredibly high inflation rates that were recorded during that year. The primary factor that contributed to the rise in inflation was the rise in the price of raw materials and energy in particular.

According to the results of the author's research, the number of immigrants ended up being the second most important factor in determining the change in the unemployment rate in the Czech Republic.

Additionally, the current suspension of all applications from citizens of Russia and Belarus is not likely to have a significant impact on both the unemployment rate and the overall average increase in the number of immigrants to the Czech Republic per year. This is due to the fact that citizens of Russia and Belarus are not even close to being the most prominent minority group in the country.

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