Czech University of Life Sciences Prague

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Diploma Thesis

Starting a Business: Czech Republic or Russian Federation

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DIPLOMA THESIS ASSIGNMENT

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Economics Policy and Administration
Business Administration

Thesis title

Starting a Business: Czech Republic or Russian Federation

Objectives of thesis

This thesis aims at evaluating and comparing the business environment in the Czech Republic and the Russian Federation. The main objectives are the demonstration of the development and current state of both countries, analysis of the macroeconomic environments, evaluation of the relevant aspects of doing business and, finally, identification of potentials and threats. The last part of the thesis is dedicated to the comparison of the potentials to the current threats and based on the outcome proposing solutions by the author.

Methodology

Analysis of academic literature and statistical data, obtained from both databases of the World Bank, WTO, WEF and from the national statistics resources- Federal State Statistics Service (Russian Federation) and Czech Statistical Office.

PESTEL analysis.

The proposed extent of the thesis

60 – 80 pages

Keywords

Business Environment, GDP, Economy, International Trade, Political Environment

Recommended information sources

1. Fawn, Rick. The Czech Republic : A Nation of Velvet, Routledge, 2000. ProQuest Ebook Central, https://ebookcentral-proquest-com.infozdroje.czu.cz/lib/czup/detail.action?docID=201170.
10. WTO (2018): Trade Profile: Czech Republic. Available at: http://stat.wto.org/CountryProfile/WSDBCountryPFView.aspx?Country=CZ&Language=F
2. KPMG (2018): Doing Business in Russia. Available at: https://assets.kpmg/content/dam/kpmg/ru/pdf/2018/07/ru-en-doing-business-in-russia-300718.pdf
3. Lovell, Stephen. The Shadow of War : Russia and the USSR, 1941 to the Present, John Wiley & Sons, Incorporated, 2010. ProQuest Ebook Central, Available at: https://ebookcentral-proquest-com.infozdroje.czu.cz/lib/czup/detail.action?docID=4043810
4. Ministry of Finance of the Czech Republic : Macroeconomic Forecast of the Czech Republic. January 2019, ISSN 2533-5588. Available at: https://www.mfcr.cz/en/statistics/macroeconomic-forecast/2019/macroeconomic-forecast-january-2019-34184
5. The Heritage Foundation (2019): Index of Economic Freedom.
6. Voskoboynikov I., (2017): Sources of long run economic growth in Russia before and after the global financial crisis. Russian Journal of Economics 3(4): 348-365. Available at: https://doi.org/10.1016/j.ruje.2017.12.003
7. World Bank Group (2018): „PRESERVING STABILITY; DOUBLING GROWTH; HALVING POVERTY HOW?". Russia Economic Report, Issue 40. Available at: http://pubdocs.worldbank.org/en/673631543924406524/RER-40-English.pdf
8. World Bank Group (2018): Doing Business 2019: Economy Profile Czech Republic. http://www.doingbusiness.org/en/data/exploreeconomies/czech-republic
9. WTO (2018): Trade Profile Russia. Available at: https://www.wto.org/english/res_e/statis_e/daily_update_e/trade_profiles/RU_e.pdf

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Declaration

   I declare that I have worked on my diploma thesis titled " Starting a Business: Czech Republic or Russian Federation" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the diploma thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 27.03.2021   _____Anastasiia Evseeva_____

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I would like to thank Ing. Tomáš Maier, Ph.D. for expert advice, guidance and encouragement during completion of this work.

Starting a Business: Czech Republic or Russian Federation

Abstract

Diploma Thesis Starting a Business: Czech Republic or Russian Federation aims at quantifying and comparing business environments in both Czech Republic and Russian Federation. The core aim of the thesis is to conclude which business environment is more predictable and fitting for new businesses. Thesis is divided into four parts. The first part starts with presenting the development of economic and business policies in Russia, followed by the description of the processes of setting up a business. The second part is concerned with demonstrating the path to the market economy of the Czech Republic, and later the process of choosing and setting up a business entity. The third part aims at constructing, analysing and interpreting the OLS model. Finally, the fourth part compares the results of the estimated OLS models for the Czech Republic and Russian Federation, outlines potential threats and opportunities, and suggests additional factors for consideration.

Zakládání podniku: Česká republika vs. Ruská federace

Abstrakt

Diplomová práce Zahájení podnikání: Česká republika nebo Ruská federace si klade za cíl kvantifikovat a porovnat podnikatelské prostředí v České republice a Ruské federaci. Hlavním cílem práce je zjistit, které podnikatelské prostředí je předvídatelnější a vhodnější pro nové podniky. Práce je rozdělena do čtyř částí. První část seznamuje s vývojem hospodářské a obchodní politiky v Rusku, a následně popisuje procesy zakládání podniků. Druhá část se zabývá popisem cesty k tržní ekonomice České republiky a později procesem výběru a založení podnikatelského subjektu. Třetí část je zaměřena na konstrukci, analýzu a interpretaci modelu OLS. Čtvrtá část nakonec porovnává výsledky odhadovaných modelů OLS pro Českou republiku a Ruskou federaci, nastiňuje potenciální hrozby a příležitosti a navrhuje další faktory, které je třeba vzít v úvahu.

Klíčová slova: Podnikatelské prostředí, HDP, Ekonomika, Mezinárodní Obchod, Politické Prostředí

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Introduction

According to the recent report from the meeting of the OECD Council[1], local governments in both developing and developed countries are faced with the severe problem of slow economic growth, poor investment and lack of capital inflows. In the long-run the named issues can affect productivity, as the evidence shows direct connection between FDI and output, as well as the ability of economies to overcome economic crisis. While the named issues need a stable and constantly developing economic, monetary and fiscal policies, one of the core forces that is able to tackle the problem is the economic activity of Small and Medium-sized Enterprises (SMEs) and their contribution to the economy. It is tough to underestimate the contribution: SMEs participate in the technological transformation and enhance the pace of globalisation, provide employment, thus promoting economic growth, reducing income inequalities and fostering innovation. Existence of SMEs enhances the global competitiveness of the economies in the world arena. By participating in international trade, SMEs push for the greater competitiveness, producing what markets demands at a time for a price which consumers are willing to pay. Moreover, in the emerging economies SMEs contribute notably to the GDP (on average at the rate of 33 percent) and create the conditions for the economic diversification, where resource-rich countries are no longer vulnerable to commodity prices' fluctuations.

However, the business environment differs significantly among countries, which is seen from the statistics on new businesses being established annually over the past years. In an essence, business environment includes economic, political, legal, social and technological conditions in which businesses are established and operating. Businesses depend on the accessibility to resources, such as finance, land, people and knowledge, as much as they

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[1] OECD. *Financing SMEs and Entrepreneurs 2020: An OECD Scorecard*. OECD Publishing: Paris, 2020. Available at www.oecd.org. Accessed 2 March 2021.

depend on the policies which can directly or indirectly affect the choice of the operations and which can limit the scope of their business.

Business environment comparison, as a vital prerequisite for starting a business in Russia and Czech Republic is the major concern of this paper. The issue is attracting considerable attention from both the academic research and international organisations, but the previous work has been limited to analysing the economic and political factors, or comparing the competitiveness of economies on the aspects such as access to infrastructure, efficiency of goods and labour markets, development of financial market and availability of loans. There has been limited discussion and research on which factors business environment depends on in each of the two economies, and which factors play the major role in the development of business environment. This paper attempts at quantifying the business environments to compare and contrast them.

Objectives and Methodology

Objectives

This thesis aims at analysing and comparing business environment in the Czech Republic and Russian Federation, predominantly focusing on the issues faced by small and medium sized enterprises. The research conducted in the paper is divided into two parts: theoretical background and practical analysis. The core aim of the theoretical part is to thoroughly present all the relevant information on the business environment, which will be supported by the following sub-aims:

- demonstration of the development of the economic and business policies in both Czech Republic and Russian Federation

- evaluation of the relevant legal aspects of starting and doing business

- presentation of the whole administrative process of opening a legal entity

As for the second part of the thesis, the author attempts at analysing the relationship between the business environment and selected economic factors. The core objective is to identify the main variables that determine the number of new businesses opening annually, their impact and degree of influence on the business environment and potential opportunities and threats. The practical part of the thesis then further discusses the potential omissions in the estimated econometric models and proposes additional factors to consider. Finally, considering all facts presented in the paper, the final conclusion is being drawn answering the question of which businesses environment is more fitting for the new businesses.

Methodology

The thesis firstly focuses on demonstrating the development of the economic and business policies of Czechia and Russia, which provide a concept of the manner in which both countries valued and supported entrepreneurial activity over time. This overview provides a valuable deep dive into the sociological factors that influenced entrepreneurship over time. Following that, the fundamental aspects of starting and doing business, namely taxation and establishment laws, trade constraints and licenses will be discussed. A special attention will be given to various forms of doing business, including their restrictions. This will be achieved by studying related federal laws and regulations of each country, as well as analysis of the business information portals of both countries. To provide a comprehensive guide of administrative process of opening a legal entity, most attention will be given to the Federal Tax and Trade portals. To conduct the aspiring amount of research, electronic sources of major international organizations will be used, namely the Global Competitiveness Report by the World Economic Forum, Doing Business Report by the World Bank, KPMG and Deloitte Reports on the current business issues in both countries. Apart from that, academic literature on the issue will be studied.

Econometric analysis

The second part of the thesis focuses on preparing the regression analysis, using the method of the Ordinary Least Squares (OLS).

In the model analyzed the variables are formulated as the following:

- ▪ Dependent variable
    - y_1 – New business density (NBD) (establishments per 1000 people)

- ▪ Independent/explanatory variables:
    - x_1 – Unit Vector
    - x_2 – Cost of business start-up procedures (% of GNI per capita)
    - x_3 – Corruption Perception Index (CPI) (0-100, higher the better)
    - x_4 – Total tax and contribution rate (% of profits)

- x_5 – GDP per capita (in current USD)

- x_6 – R&D expenditure (% of GDP)

- x_7 – FDI net inflows (in billions USD)

- x_8 –Unemployment rate (% of labour force)

- x_9 –Inflation rate (annual percentage change)

- Stochastic

- u_{1t} – error term (includes all variation of dependent variable that cannot be explained by independent variables)

The econometric model of the new business density in the Czech Republic and Russian Federation was built on the basis of knowledge of economic theory, personal assumptions, and the resulting shape of the model is:

$$y_{1t} = f\ (x_{1t},\ x_{2t},\ x_{3t},\ x_{4t},\ x_{5t}, x_{6t}, x_{7t}, x_{8t}, x_{9t})$$

New Business Density= f (UV, Cost of business start-up procedures, CPI, Total tax and contribution rate, GDP per capita, R&D expenditures, FDI net inflows, Unemployment, Inflation).

Econometric model is built as follows:

$$y_t = \gamma_1 x_{1t} + \gamma_2 x_{2t} + \gamma_3 x_{3t} + \gamma_4 x_{4t} + \gamma_5 x_{5t} + \gamma_6 x_{6t} + \gamma_7 x_{7t} + \gamma_8 x_{8t} + \gamma_9 x_{9t} + u_t$$

The estimated model follows the set of assumptions:

1. $E(u_t) = 0$

2. $Var(u_t) = \sigma^2 < \infty$

3. $Cov(u_i, u_j) = 0$ for $i \neq j$

4. $Cov(x_{it}, u_t) = 0$

5. $h(X) = k,$

6. Normal distribution of $u_t.$

Starting a business in Russia

Historical background

After the dissolution of the Soviet Union Russia started its way to the market economy. The standard set of measures for transition, according to Stanley Fischer and Alan Gelb (1991)[2] were "agreed on" by the countries in transition in advance: liberalization (including price liberalization and removal of trade barriers), macroeconomic stability, privatization and legal reforms. The first move to the market economy was price liberalization: on January 2nd 1992 prices were freed (excluding milk, bread and public transport) expecting inflation to rise between 3 to 5 times- when in reality inflation skyrocketed to 874 percent (Graph 1 Appendix). This resulted in money in the saving accounts and the physical cash held by the general population to disappear overnight. The main concern became the raising prices on necessities while salaries remained same or were not paid out. Meantime, privatization took place and control over industrial, energy and financial sectors concentrated in the hands of a few wealthy individuals. This created inequality among population, with rich being super rich and able to sell the stocks of the companies. This is proven by statistics of the World Bank (2018) which illustrate that the GINI coefficient in 1993 peaked at 48.13 signalizing huge inequalities. Apart from that, Fawn (2000)[4] implies the view that managers now had control over salaries of the workers: wishing to cut the expenses to the minimum, salaries were either not paid, or workers would be fired. As seen from the Graph 2 in Appendix), unemployment started growing from the year 1993 and totalled to 13.26 percent in the year 1998. It is important

[2] FISCHER, S.- GELB, A. *Issues in Socialist Economy Reform*. Journal of Economic Perspectives, Vol. 5, p. 91-105.

[3] World Bank, 2019. GINI Index, World Bank Estimate. Available at: https://datacatalog.worldbank.org/gini-index-world-bank-estimate-1. Accessed 23 August 2019.

[4] FAWN, R. The Czech Republic : A Nation of Velvet, Routledge, 2000. ProQuest Ebook Central, https://ebookcentral-proquest-com.infozdroje.czu.cz/lib/czup/detail.action?docID=201170. Accessed 23 August 2019.

to state that population was not prepared for changes: during the Soviet times workers were certain that the government will treat them "fairly" and they will be paid according to their abilities and achievement of the production targets. This mentality also caused another problem during privatization- workers did not realise how the process of privatization should go and what would they gain from it, hence often selling or simply transferring their privatization vouchers to the managers of the company5.

In general, privatization in Russia brought a number of arguments, which principally came up with the similar conclusion: privatization did not go as planned and did not involve foreign investors or population as much as promised, as well as it did not stimulate restructuration of businesses. The model for privatization was that the ownership of the enterprises would be divided into different portions: a minor stake would remain with the state, another portion would go to the management of the company and its workers, and the public would bid for the rest. Altogether privatization program developed and followed quickly and by the year 1996 18 000 industrial enterprises were privatized[4]. However, at the end of privatization state remained the core shareholder of the top 50 Russia's biggest companies, when many other large enterprises were not privatized at all. Furthermore, insiders (employees and managers) often managed to control the pace of privatization and keep foreigners out. This was done by either seizing or demanding to transfer vouchers of employees to the managers, and at the same time not making the financial data of the company available to anyone except management. However, an increase in the flow of investment from foreign shareholders was noted later and by 1996 32 percent of the companies' ownership was attributed to the outsiders, still some authors[5] acknowledge that "*not all "outsiders" were as far outside as they seemed*" (Lovell, 2000, p.105). The second wave of privatization started with the decree of July 1994 and announced for the rest of holdings to be sold at the auctions: each company of more than 50 employees was to be transformed into a joint-stock company to be sold, and annual and auditor's reports were

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[5] LOVELL, S. The Shadow of War: Russia and the USSR, 1941 to the Present, John Wiley & Sons, Incorporated, 2010. Pages 105-110. ProQuest Ebook Central, Available at: https://ebookcentral-proquest-com.infozdroje.czu.cz/lib/czup/detail.action?docID=4043810 . Accessed 1 September 2019

required to be provided to the potential shareholders. The issue was however in the legacy of the first wave of privatization which resulted in a number of wealthy investors ("oligarchs") gathering control over most of the company's assets by exploiting the loopholes in the financial system[6].

Osipian[7] points out to the fact that Russia did achieve the market economy in a way that market was controlled by the invisible hand of the market as described by Adam Smith. However, the same author also indicates that in Russia the invisible hand of the market co-existed with the invisible hand of the state. By his definition the invisible hand of the state represents the state willing to give away the property rights while still retaining some control over it. Markus (2017)[8] and Osipian (2019)[7] both illustrated that the creation of bureaucratic corruption with the aim of self-enrichment undermined the flow of income and allowed for predatory raiders to act without punishment. Lovell (2000) suggests that this phenomenon demolished the achievements of privatization, since raider attacks involved acquiring individual property by "mafia" (Lovell, 2000, p. 107). A study done by Kihlgren[9] supports the same view that the business environment in Russia was undermined mostly by the political factors rather than economic, for instance the core conditions specified were: high levels of corruption, strong income inequality, failure of legislative system to protect businesses and establish order, lack of financial support for small businesses and high levels of crime. As for the economic development, along with the burst in inflation during transition, the output in all of the groups of transition economies

[6] BARNES, A. *Owning Russia: The Struggle over Factories, Farms, and Power*. Ithaca; London: Cornell University Press, 2006. Retrieved January 27, 2020, from www.jstor.org/stable/10.7591/j.ctv2n7mgv

[7] OSIPIAN, A. L. *Political and economic transition in Russia: Predatory raiding, privatization reforms, and property rights*. Retrieved from https://ebookcentral-proquest-com.infozdroje.czu.cz. Accessed 17 November 2019

[8] MARKUS, S. – VOLHA, C. The Flexible Few: Oligarchs and Wealth Defense in Developing Democracies. *Comparative Political Studies* 50, no. 12, 2017. Pages 1632–1665. doi:10.1177/0010414016688000.

[9] KIHLGREN A. *Small business in Russia—factors that slowed its development: an analysis.* Communist and Post-Communist Studies, Volume 36, Issue 2, Pages 193-207,ISSN 0967-067X. Retrieved from: https://doi.org/10.1016/S0967-067X(03)00025-4 . Accessed 27 January 2020

fell on average by 40 percent (Graph 3 in Appendix) before it started to develop again[10]. In Russia the output started to decline gradually from the year 1989 and hit the low in the year 1998 at 195 billion USD. However, there are two acts to mention here which can explain the trend: the figure might not reflect the actual situation because until the dissolution of the Soviet Union statistics were believed to be exaggerated in order to motivate workers. Then, closure of trade within the former Eastern Block led to a GDP decline, as well as the financial crisis which hit the country in 1998. At the early beginning of the year 2000 economic and business environment in Russia improved significantly. First of all, new Tax Code was introduced eliminating a number of smaller taxes and announcing a flat tax rate on income, unification of social security contributions. As for the trade liberalisation, protection of the sensitive industries and export taxes resulted in the current account surplus which grew to 23 billion USD in 2000[11]. However, service sector opening as well as harmonisation of import procedures still needed an overhaul, and in addition to that, a growing dependence on the world oil and gas prices became more obvious.

As for the business environment, legitimacy of the payment transactions had been increasing[12] with the drop in the number of barter transactions performed in industrial sales - from 45 percent in 1999 to 31 percent in 2000. As for the positive sides, with new efforts towards restructuring and greater competition on the market, companies started to realize that high business standards and good reputation can provide for long-term advantage, hence the corporate governance violations declined sharply. Still, Wolf and Lang[13] stated

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[10] IMF, 2000. *Transition Economies: An IMF Perspective on Progress and Prospects.* IMF Working Paper 00/08. Available at: https://www.imf.org/external/np/exr/ib/2000/110300.htm#P73_6733. Accessed 29 September 2019

[11] European Bank for Reconstruction and Development 2000. *Transition Report 2000*. ISBN: 1 898802 17 03. ISSN: 1356-3424

[12] The Heritage Foundation. Index of Economic Freedom 2019.

[13] Wolf, C., & Lang, T. (2006). Markets and Reform. In *Russia's Economy: Signs of Progress and Retreat on the Transitional Road*(pp. 23-28). Santa Monica, CA; Arlington, VA; Pittsburgh, PA: RAND Corporation. Retrieved January 28, 2020, from www.jstor.org/stable/10.7249/mg515osd.12

that the structural militarisation in Russia prevailed at the beginning of 2000s and economy did not fully transitioned to the "democratic free enterprise".

Types of businesses entities in Russia

Trade license

Federal Law № 99-FZ on Trade Licensing of Selected Activities outlines 50 activities in Russia for which trade license from the Ministry of Industry and Trade must be obtained. The act additionally presents a list of traded goods for which an import license should be obtained and which are controlled separately by the Ministry of Industry and Trade: radio-electronic means, encryption means, ozone-depleting substances and products containing them and finally precursors of narcotic substances[14]. In general, business in Russia can be established and performed without getting a trade license, if conducted activities and imported goods do not fall under the law[15].

Types of legal establishments

The first step in starting your own business in any country is the choice of the legal structure of the company. In Russia legal entities are the separate legal structures which can own separate property, participate in civil circulation, conduct business activities in accordance with the founding documents, and are liable for the debts with their property. Before selecting the most appropriate form of business it is vital to consider the following factors:

- Manner of capital formation

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[14] MINTEST. License of Ministry of Industry and Trade. Minpromtorg 2016. Available at: http://www.mintest-russia.com/sertifikatsiya-produktsii/litsenziya-minpromtorga/ . Accessed 15 January 2020

[15] Russian Federation. Federal Law 99-FZ, on Trade Licensing of Selected Activities. From 4th May 2011.

- Number of participants and founders, their contribution to the company
- Liability of participants and founders
- Methods of income distribution between participants
- Management of the business
- Succession order

Depending on the purpose of establishment, legal entities are divided into commercial (for profit) and non-commercial (not for profit). Commercial legal entities have the main goal of making a profit and include:

- Full partnership
- Partnership on belief (limited partnership)
- Limited liability company ("OOO")
- Additional liability company
- Joint-stock company ("AO")
- Production cooperative (Artel)
- State and municipal unitary enterprises
- Branch/representative office
- Individual entrepreneur/ sole traders

Partnership is defined as an association of people for the purpose of conducting a joint business. Depending on the type of property liability of participants, partnerships are divided into Full Partnerships and Limited Partnerships (Partnership on Belief). Participants in Full Partnership are responsible for the entirety of their property, as opposed to the Partnership on Belief, where the so-called "full partners" are responsible with their full property and "limited partners" or depositors are only responsible with the amount of property directly contributed to the partnership. Full partnership is a voluntary association of participants in business activity on contractual basis, which consists of adding each participants' share in the total share capital of the partnership. Participants in Full Partnership can be both individual entrepreneurs and commercial organizations, however, a

participant of one partnership cannot participate in two partnerships simultaneously. Regarding the rights of participants, each member in Full Partnership votes on core business issues and has one vote, unless a different procedure for determining the number of votes is prescribed by the establishing documents of association. Participants of a Full Partnership are jointly and severally liable with their property (even personal) for the obligations of the partnership. Profit is distributed among participants in proportion to the contributed capital.

In the Limited liability company (LLC) participants are not personally liable for the debts of the company, however, they are liable with property invested in the company. The authorized capital is divided into shares (not considered as securities) in proportion to the property invested[16], and later in proportion to the shares profit is distributed between the participants. A limited liability company is a voluntary association of participants through the initial formation of the authorized capital only at the expense of the contributions of the founders, hence founders are responsible for the obligations of the company with their capital contributed. The constituent document of the company is its Article of Association[17], which indicates the size of the authorized capital, address and legal name of the company, procedure for the transfer of shares and other mandatory conditions. To establish a Limited Liability Company the minimum share capital needed is 10 000 RUB (app. 160 USD), half of which can be paid upon initial registration, and the other half within 3 months from incorporation. The authorized capital of a LLC is compiled from the nominal value of the shares of its participants. The authorized capital may be contributed both in cash and in property, property rights, or other rights for which the monetary value can be established reliably. The supreme governing body in a LLC is the general meeting of the company's participants and everyday activities are managed by the company's executive body. Some participants can be granted additional rights in regards to strategic

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[16] Russian Federation. Federal Law № 14-FZ on Limited Liability Companies. From 8th February 1998 amended on 4th November 2019.

[17] MLegal, Establishment of a Limited Liability Company. Available at: http://mlegal.de/en/business-set-up/establishing-llc-ooo-russia/ . Accessed 17 January 2020

decision-making, however generally management of the company is in the hands of the executive body, which can consist of founders. In the companies with more than 15 members, the formation of an audit committee with the head auditor is mandatory. A LLC is liable for its obligations with all property belonging to it[18]. The company is not liable for the obligations of its participants as well as members of the company are not fully liable for the company's obligations and only bear the risk of losses associated with the activities of the company to the extent of the value of their contributions.

The general meeting of participants in the company also makes a decision on determining a part of the company's profit distributed among the company participants. Distribution of profit between participants is carried out in proportion to their shares in the authorized capital of the company, unless the Article establishes a different procedure for its distribution. LLCs are governed by the "Law on Limited Liability Company" (amended on November 4th 2019). Limited Liability Companies are one of the most popular forms of business entities and also legal form thorough which foreigners and foreign companies (as well as stateless people) can conduct business activities in Russia. LLC can have a total of 50 participants. If the number of participants exceeds 50 then it must be transformed into a public limited company (PLC) or a Production Cooperative. A participant may withdraw from the LLC company at any time, requiring the company, or remaining participants, to provide them with a portion of the net assets of the company proportionate to their shares in the company.

Additional Liability Company (ALC) can be established by one or several individuals, with the authorized capital divided into shares the amount of which is stated in the constitutional documents. Guidelines provided by the Russian-Asian Business Unit[18] highlights that all members of ALC bear subsidiary liability under its commitments with their properties in the amount proportionate to the cost of their deposits. One distinct feature of the ALC is that when one member goes bankrupt, his liability is shared between

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[18] Russian Asian Business Unit PTE Ltd., 2018. Additional Liability Company. Available at: https://www.ruasean.com/business/types-of-legal-entities/ . Accessed 17 January 2020

other members, unless stated differently in the foundation documents. Apart from that, all the regulations (regarding rights and liabilities) applicable to the LLCs in the same manner apply to the Additional Liability Companies. What an ALC cannot do is to issue shares, as opposed to the next type of the legal business formation.

A Joint Stock Company is a legal entity the authorized capital of which is divided into a certain number of shares distributed between shareholders. Shareholders are not liable for the company's obligations and bear the risk of losses associated with activities of the company only to the extent of the value of their shares. Under the Federal Law № 208-FZ on Joint Stock Companies[19], a Joint Stock company can engage in any form of commercial activity unless such activity is prohibited by the Federal law: it may buy property, contract, sue and be used. Introduced by the latest amendment regarding the new classification of the joint stock companies in the Civil Code of the Russian Federation brought about the criterion of publicity. Public (or Open) Joint Stock Company is a joint-stock company with shares and securities being publicly available or publicly traded on the terms established by laws on marketable securities. Shares of a non-public (Closed) Joint Stock cannot be placed through open subscription or offered for trade- these shares are distributed in advance between participants and cannot be freely bought and/or sold.

The decision to create a joint-stock company is taken at the constituent assembly, where participants enter into a written agreement between themselves on the procedure for creating the company. Still, the constituent document of the joint-stock company is not an agreement itself, but the charter of the company approved unanimously by the decision of the constituent assembly. The charter shall contain information on the categories of shares to be issued, their nominal value and number, amount of the authorized capital of the company, rights of shareholders, procedure for preparing and holding a general meeting of shareholders. Shares of the Joint Stock Company are securities and can be either ordinary shares or preferred shares. Common shareholders hold the ordinary shares and have the

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[19] Russian Federation. Federal Law № 208-FZ on Joint Stock Companies. From 26th December 1995, amended on 4th November 2019.

rights to vote, own a part of the company, transfer ownership, receive dividends, inspect and request corporate documents, sue for wrongful acts. However, if a company enters the liquidation process, common shareholders have the residual right in the company's assets. Preferred stockholders have priority over common stockholders when receiving dividends. Unlike common stockholders, preferred stockholders have limited rights and do not participate in voting over the major issues. The charter of the company shall indicate the size of the dividends and the value paid upon liquidation of the company on each type of preferred shares. The charter of the company may also provide for the conversion of preferred shares of a certain type into ordinary shares.

As stated before, foreigners and foreign entities can conduct business activities by establishing a Limited Liability Company. The same goes for the Joint Stock Companies: the law requires at least one director to be a resident, while there exist no restrictions on the residency of the shareholders. In addition to that, a Joint Stock Company can be fully owned by a foreign entity, same applies to the LLCs[20].

The minimum authorized capital of an Open JSC is 100 000 RUB (app. 1 600 USD) and the minimum authorized capital of a Closed JSC is 10 000 RUB (app.160 USD). The authorized capital of a joint-stock company may be increased by additional issue of shares or changes in their nominal value. The core obligation of a JSC is to create the reserve fund, which is intended to cover losses and repay bonds of the company, as well as to repay shares of the company in the absence of other funds. A JSC is also required to provide annual reports to the Tax authorities, but not required to publish it.

Production cooperative (Artel) is a commercial enterprise created on the basis of membership and personal labor participation of each member, which is formed by transferring property into the possession of cooperative, which is later transformed into shares contribution. The highest supervising body in Artel is the General Meeting of its member, holding the right to expel a member from Artel. Generally, each member has

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[20] Healy Consultants Group PLC, 2020. Business Entities in Russia. Available at:
https://www.healyconsultants.com/russia-company-registration/

equal voting power equivalent to one voting right, however, when it come to the distribution of profit, it is distributed between the members according to their statute labour[21]. Cooperatives conduct business activities only for reaching the targets and aims stated in the establishment documents.

In the State and municipal unitary enterprises, the authorized capital is one, hence the name "unitary", created by the owner of the state or municipalities and the owner is not responsible for the obligations of the created enterprises, and the enterprise is not responsible for the obligations of the owner. Liability is limited to the property of these enterprises. State and municipal unitary enterprises are a special type of commercial organization that is not endowed with the right of ownership of the property assigned. The property of a unitary enterprise cannot be divided, nor can it be distributed by shares, including any distribution within the company (employees, managers). Only state and municipal enterprises can be created under unitary type and are created by decision of the Government of the Russian Federation and the owner (state) bears subsidiary responsibility for its obligations.

Unitary enterprises are divided into two categories:

1. unitary enterprises based on the right of economic management
2. unitary enterprises based on the right of operational management.

The right of economic management is the right of an enterprise to own, use and dispose of property of an owner to the extent established by law or other legal acts. The right of operational management is the right of the enterprise to own, use and dispose of the property of the owner assigned to it within the limits established by law, in accordance with the goals of its activities, assignments of the owner and purpose of the property. The right of economic management is broader than the right of operational management,

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[21] Russian Asian Business Unit PTE Ltd., 2018. Production cooperative. Available at:
https://www.ruasean.com/business/types-of-legal-entities/66-production-cooperative.html

because an enterprise operating on the basis of the right of economic management has great independence in management[22].

Foreign entrepreneurs and business owners can establish a branch or a representative office on the territory of Russia. The core difference between a branch and a representative office is the ability to carry commercial activity in Russia: branches are considered a subdivision of a foreign legal entity and can exercise commercial activity, while a representative office is a subdivision of a foreign legal entity which represents the company in Russia but cannot exercise commercial activity. Hence, the purpose for establishment of a representative office is solely marketing activities and promotion of business activities between the headquarters and Russian market[23]. Legal requirements for setting, registering and termination of branches and representative offices is governed by Article 21 of Federal Law № 160-FZ on Foreign Investment in Russia. Article 21 dictates that both a branch and a Representation Office can only be opened and registered based on the decision of a foreign legal entity. Having made such decision, foreign entity must attain accreditation issued by the Federal Tax Service, which has been accrediting branches and representative offices since 2015, expect for foreign banks and foreign aviation enterprises, which is the responsibility of the Central Bank.

Apart from selecting one of the forms of establishments of legal entities from the list above, a foreigner has more options to choose from- buying a stake in a company or registering as an individual entrepreneur, neither of which require the establishment of the legal entity. Later option takes 3 days[24] to complete and with this form of doing business foreigners are given legal rights and will be liable with their property for debts, however,

[22] GRIBOV, V. Economics of Service Enterprise: A Training Manual. KNORUS, Moscow, 2011. Issue 3, p. 280.

[23] HG.Org. 2020. Establishing business in Russia- start-up in Russia, legal forms of incorporation. 2020. Articles by Lawyers. Available at: https://www.hg.org/legal-articles/

[24] Russian Federation. Federal Law №129-FZ on State registration of legal entities and individual entrepreneurs. From 8th August 2001, amended 1st January 2020.

this form also frees a foreigner from maintaining accounting records[25]. The procedure for government registration of the individual entrepreneurs in Russia is governed by the Article 22.1 of the Federal Law №129-FZ and prescribes the submission of the following documents or notarized copies[23]: registration form, copy of the registration document (Passport for the Russian citizen) or copy of the document recognized in accordance with an international treaty of the Russian Federation as an identity document of a foreign citizen, copy of the document confirming the permanent residence in Russia, document of payment of the state fee (800 RUB or app.12 USD), certificate of the criminal record. These documents are submitted to the Federal Tax Service and later the individual entrepreneur obtains state registration and tax certificate.

Definition of SMEs

In Russia Small and Medium sized enterprises have been defined by law and have certain criteria to fulfill to qualify either under a small enterprise, a medium enterprise, or what has been added, a microenterprise. Classification of business entities as small enterprises is done in accordance with the criteria established by the Federal Law 209-FZ[26]. The rules for conducting selective observations of small enterprises are established by Decree of the Government of the Russian Federation No. 79 "On the Procedure for Conducting Selective Statistical Observations of the Activities of Small and Medium-Sized Enterprises". Small businesses are defined as entities the average number of employees of which is up to 100 people, revenue from the sale of goods for the previous year excluding VAT should not exceed 800 mil RUB. The average number of employees includes the number of employees, the average number of external part-time workers and the average number of

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[25] ZUBACHEVA, K. Legal ways to start a business in Russia, if you are a foreigner. Russia Beyond, September 25th 2017. Available at: https://www.rbth.com/business/326239-ways-start-business-russia. Accessed 9 February 2020

[26] Russian Federation. Federal Law 209-FZ, on Development of small and medium entrepreneurship in the Russian Federation. From 24th July 2007

employees who performed work under civil law contracts[27]. The income of enterprises includes the cost of shipped goods of own production, performed works and services on their own, as well as revenue from the sale of goods purchased on the side.

Table 2: Criteria for SMEs in Russia

	Small	Medium	Micro
Legal criteria	For any LLC: 1) The total share of the constituent entities of the Russian Federation, municipalities, public and religious organizations, charitable and other funds in the authorized capital does not exceed 25%. 1a) the total share of foreign organizations does not exceed 49%. For any JSC: Shareholders are: the Russian Federation, constituent entities of the Russian Federation, municipalities, public and religious organizations, charitable and other funds own <25% of voting shares, and shareholders - foreign organizations or organizations that are not SMPs, own <49% of voting shares.		
Number of participants	16-100	101-250	<16
Turnover	11 mil EUR	28 bil EUR	1.7 mil EUR

Source: own evaluation based on Federal Law 156-FZ[28].

Classification criteria for businesses as medium-sized enterprises establishes that the average number of employees for medium-sized enterprises is from 101 to 250 people. In addition to that, the limit on values of the proceeds from the sale of goods and the book

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[27] ROSSTAT 2019. Basic definitions: small enterprises. Available at: https://www.gks.ru/. Accessed 1 March 2020

[28] Russian Federation. Federal Law 156-FZ on the Development of Small and Medium size enterprises, of 11th July 2007

value of assets are established by the Government of the Russian Federation. The average number of employees of a medium-sized enterprise for a calendar year is determined by taking into account all its employees, including workers working under civil law contracts or part-time taking into account actual hours worked, employees of representative offices, branches and other separate divisions[29].

Taxation of legal entities in Russia

Upon registration of a new legal entity, it is required to get registered with the Tax Authorities in the region you are registered as well as to register with the Russian Social Security Fund. All required documents for state registration should be provided to the local Tax Inspectorate in accordance with the Federal Law №129-FZ[30]. As for the Tax Code itself, it is necessary to note that the previous revisions took place prior to year 2003 and may not reflect the modern business needs, but rather match the needs of the growing market economy. New chapters in Part 2 of the Tax Code include new provisions for the VAT, individual income tax and profit tax.

The profits tax is levied on net profits of the company and the standard rate is 20 percent, out of which 17 percent is allocated to the regional authorities, and 3 percent to the Federal authorities. The regional authorities may, at their discretion, reduce the regional profits tax rate to 12.5 percent. The tax rate was reduced together with the introduction of new provisions on deductible expenses. Other provisions on profit taxation help foreign companies to benefit from the reduced withholding tax rates and exemptions under Russia's double taxation treaties. As an example, a representative office can deduct expenses incurred on their behalf by a parent company located abroad[31].

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[29] Russian Federation, The Federal Law No. 209-FZ "On the Development of Small and Medium-Sized Enterprises" from 24th July 2007.

[30] Russian Federation, Federal Law №129-FZ On the state registration of legal entities and individual businessmen, of 8th August 2001.

[31] United States of America Department of Commerce. Taxation: an overview of Russia's tax system. USA.gov 2019. Available at: https://www.trade.gov/knowledge-product/ . Accessed 2 February 2020

In Russia VAT is calculated on the basis of the sales value and is applied at a uniform rate of 20 percent, except for certain foodstuffs, medical treatments, children's clothes, and newspapers- for which a 10 percent rate applies. Financial services, software and industrial designs are exempt from paying the VAT. VAT also applies to imports to Russia, which is calculated based on the Customs' declared value, including both duties and fees, insurance and delivery cost. Import duties vary according to the country of origins, but the majority of goods are subject to the Most Favored Nation (MFN) principle of WTO. However, goods imported by foreign partners as an in-kind contribution to the charter capital of a new enterprise may be exempt from import duties for a period specified in the charter documents and exempt from import VAT under certain conditions (for instance, imports qualifying as technical equipment with no analogs on the Russian market). As for the export from Russia, goods manufactured in Russia and then exported to other countries are exempt from VAT. However, if payment for goods is received before export of goods, than the exporter must pay VAT and later request a refund from tax authorities.

Tax code undergone some changes in 2010 with regards to social security contributions. Today the Unified Social Tax is replaced by separate contributions to the State Pension Fund, Social Security Fund, Federal Medical Insurance Fund and Regional Medical Insurance Fund. The employer is liable for the entirety of social security contributions and no amount is withheld from employees' wages. Social security contributions apply at the rate of 30 percent to the employee's annual salary. Social security contributions are then distributed in the following way: 22 percent goes to the State Pension Fund, 2.9 percent are paid to the Social Security Fund, and the rest 5.1 percent goes to the Federal Medical Insurance Fund. Social security contributions are mandatory for all payments to the resident employees. Salary of the foreign citizens temporarily present in Russia is not subject to the social security contributions. Reduced rates of social security payment rates apply to businesses which participate in software and high-tech production and businesses engaged in special innovation projects (14 percent until 2023). Another tax alleviation applies to the companies that are members of the Skolkovo Project, and pay only 20 percent of the salary to the Social Pension Fund and are completely free from paying the Social Security and Medical Insurance Funds.

Another issue is withholding income and dividends. Foreign legal entities without a business presence in Russia are subject to a withholding tax of 10 percent on freight services provided in Russia. Other categories of income such as interest, royalties, income from leasing and rental operations are taxed at a 20 percent rate, while dividends are taxed at a 15 percent rate. Personal income of a Russian resident is a subject to a flat 13 percent rate imposed on worldwide income, while non-residents pay 30 percent tax on Russian-sourced income[32].

Administrative process of setting up a business in Russia

Earlier this thesis has presented the background information on the core topics to consider before starting with establishing process. An additional step for foreigners includes checking the immigration status and applying for visa. For self-employed foreigners without residency in Russia, Work Visa is the most suitable choice. However, if you are planning to start a business in Russia which will generate profit in the future and which would require the establishment of a legal entity- then you should apply for the Russian Business Visa.

For better comparison between Russian and the Czech Republic this section will explore how to establish a limited liability company, because the definition and legal aspects are almost the same worldwide for the limited liability companies. Moreover, LLC is the most common and easy to manage form of legal entity, because it is not necessary to establish the authorized capital in the form of shares. The first step in the registration process is the preparation of the necessary documents which in 2020 include[33]: passport details of founders, tax ID number of founders (if applicable), copy of the certificate of ownership of

[32] Federal Tax Service of Russian Federation 2019. Start your business. On-line portal. Available at: https://www.nalog.ru/create_business/ul/creation/ . Accessed 5 April 2020

[33] Federal Tax Service of Russian Federation 2020. How to start a business? Available at: https://www.nalog.ru/eng/how_to/starting_a_busines/ . Accessed 5 April 2020

premises or a letter of guarantee from the owner of premises. Before preparing the registration documents, founders should agree on the name of the company, legal address, the size and contribution method of the authorized capital, general director of the company, types of activities and tax stem applicable. The most crucial part is selecting the tax system: either the Simplified Taxation System (STS) or the basic taxation system is available. STS can only be applied for the companies which do not exceed the annual turnover of 60 million RUB, employ less than 100 people, do not have any branches and representative offices and for which participation of other companies in the company's capital does not exceed 25 percent. If a company does not fit the criteria, then a basic taxation system should be applied.

Following that, founders should prepare the protocol of constituent assembly of the LLC, simple decision of the establishment of LLC, contract on the establishment of LLC. Later should include legal information on founders, subject of the contract, name and address of the company, aim of incorporation and activities, legal status, authorized capital, management procedures, responsibilities of the parties and any additional provisions. Having prepared the documents, founders should fill in the application form of state registration of the legal entity upon creation in the form P11001[34].

Following that, the charter of the LLC is being prepared and printed in 2 copies, both to be submitted to the tax office, one of them with the tax stamp will be received after registration. The charter of the LLC is the only constituent document that defines the relationship between the founders of the company, the legal entity itself and its head. The standard charter composition for the LLC is not mandatory but is only intended to facilitate the initial registration of the LLC, so the charter can still be and is recommended to be created at your own discretion. The next step towards the registration of the LLC is the payment of the state fee for registration in the amount of 4 000 RUB (app. 60 USD). Today the process is simplified by just going to an online service of the Federal Tax Service to

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[34] Expatica 2020. Starting a business in Russia. Available at: https://www.expatica.com/ru/working/self-employment/starting-a-business-in-russia-103921/#Visas . Accessed 5 April 2020

generate a receipt for registration of LLC in the "State duty payment" section. Tax details are entered automatically when the state duty is generated in accordance with the address you entered. After the receipt is prepared and printed out, payment at the bank can be done without any commission.

Finally, the registration of an entity is concluded by the registration in the tax authority office at the location indicated by the founders in the application for state registration of a permanent executive body of the LLC. All the documents listed above, as well as the confirmation of payment of the state fee and passports of the founders are presented. No later than in 3 days[35] the following documents for the founders are being prepared: certificate of the state registration, tax identification number, certificate of tax registration and one copy of the charter with a stamp. The last steps would include opening a bank account and depositing a minimum of 50 percent of charter capital[36]. Altogether, the major issue for the founders is rather preparation of the necessary documents in accordance with the prescribed "sample", which are available on the Federal Tax Service website.

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[35] KPMG. Doing Business in Russia 2018. Available at:
https://assets.kpmg/content/dam/kpmg/ru/pdf/2018/07/ru-en-doing-business-in-russia- 300718.pdf. Accessed 5 April 2020

[36] Business Setup Worldwide 2020. Company registration in Russia. Available at:
https://www.businesssetup.com/ru/company-registration-in-russia . Accessed 5 April 2020

Starting a business in the Czech Republic

Historical background

Czechoslovakia differed from other former centrally planned economies in a way that economic transformations brought success and created a 'functioning market economy' required for the EU accession in 2004[37]. Even though European Commission discovered minor social and economic issues worth further development, overall, it was concluded that the political institutions were properly functioning, guaranteeing the rule of law and protection of human rights and minorities. Apart from that, Czech Republic had successfully fulfilled Copenhagen political criteria and was deemed capable of competing on the European market.

Graph 4 in Appendix illustrates the development of GDP per capital from the year 1991 until 2004. Since the early adoption of new economic policies, GDP per capita showed a positive development trend and stable year-on-year change. The initial drop at the beginning of the 1990s is backed up by the decline in trade due to abolishment of the export to the former Soviet Block and deflationary policies introduced in 1991, while later development is attributed to the progression of export to Western Europe and formation of new enterprises[38] . Rapid liberalization of prices, large-scale privatization and support of the newly developed banking system- all contributed to the development of GDP per capita and establishment of the functioning market economy[39].

Initial changes in the business environment started with privatisation of state-owned enterprises. Process of privatisation in the Czech Republic was divided into two distinct

[37] Commission of the European Communities. Regular report on Czech Republic's progress towards accession. Brussels, SEC (2002) 1402. Available at: https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/archives/pdf/key_documents/2002/cz_en.pdf. Accessed 28 December 2019

[38] MYANT, M. Economic transformation in the Czech Republic- a qualified success. *Europe-Asia studies*. Vol. 59, Issue 3, p.431-450. Routledge, May 1st 2007.

[39] MYANT, M. The rise and fall of Czech capitalism: economic development in the Czech Republic since 1989. *Europe-Asia studies, 2003.* Cheltenham, Edward Elgar.

programs- small and large-scale privatization, and a separate program was concerned with restitutions which would legalise returning certain property to the owners [40]. Large scale privatization was originally planned as a fast measure, rather than slow restructuring of each individual enterprise, and as a mechanism to attract as much competition and foreign bidders as possible[41]. Privatization of enterprises was based and evaluated on submitted privatization projects: as soon as the project was approved, an enterprise was transferred to the Fund of National Property which would finish privatization according to the approved project. Eventually, research [42] argues that large-scale privatization was a success, however, did not manage to bring as many competitors as intended, and the winners of privatization were mainly managers as their projects on average had a 53 percent of approval rate. Still, successful privatization was the first step towards the market economy and eventually 80 per cent of company's assets were under private control.

For the effective functioning of the market economy, it is essential that prices are the signs of the market performance and provide relevant information to the market participants, hence, it suggests that the state should not intervene in control and setting of prices. Price's liberalization in Czechoslovakia had a rather fast pace and up to 1997 already 85 percent of prices were liberalized[43]. Prices for food, heating, rent and public transportation were still regulated by the state, fearing the monopolies. Together with the price liberalization, a number of other economic and trade policies were introduced in order to stabilize the economy: Czech Koruna was devalued and adopted the peg exchange rate (pegged to a basket of Western currencies), internal convertibility of Czech Koruna was approved, as

[40] SACKS, P.M. *Privatization in the Czech Republic*. The Columbia Journal of World Business. Volume 28, Issue 1, p. 188-194. Retrieved from: ScienceDirect. Available at: https://www-sciencedirect-com.infozdroje.czu.cz/science/article/pii/002254289390065W#aep-bibliography-id5. Accessed 1 December 2019

[41] BLANCHARD, O. J.- FROOT, K. A.- SACHS, J. D. *The transition in eastern europe, volume 1: Country studies*. Retrieved from https://ebookcentral-proquest-com.infozdroje.czu.cz

[42] KOTRBA, J. Czech Privatisation: Players and Winners. CERGE-EI and University of Pittsburgh, April 1994. Available at: https://www.cerge-ei.cz/pdf/wp/Wp58.pdf. Accessed 1 December 2019

[43] KLAUS, V. Nemam rad katastroficke scenare. Sagit, Ostrava 2001.

well as a 20 percent surcharge on imports while export duties were at the 5 percent level. However, since Czech Republic has been a member of the General Agreement on Tariffs and Trade (GATT) since 1993 and World Trade Organization (WTO) member since its establishment in 1995, these protectionist measures were to be abolished, and eventually the import duty was not higher than 5.7 percent for the majority of goods. Tariff rates in the Czech Republic were lower than the OECD average[44] and trade policy of Czech Republic started following the core principle of the market economy, which were: achieving open trade policy, focusing on increasing predictability and trade security, free competition and implementation of the international trade policies, implementation of the Uruguay Round trade agreements and active participation in multilateral trading system[45]. In addition to that, the Maastricht Treaty (Treaty on European Union) was signed in 1991 which brought about the common foreign and security policy, created European citizenship and introduced convergence criteria[46] . European community removed barriers for approximately 70 percent of the Czech goods, and on the Czech market support for exporters was abolished.

Initially, Czech Republic had an advantage of lower cost of labour, which attracted a number of profitable investments into Czech enterprises[47], and allowing for the technological development due to the inflow of foreign investment and new technology. Western companies started investing heavily into the Eastern European markets, where the cost of labour was significantly lower and proximity to core European markets would offer

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[44] ZIDEK, L. *From central planning to the market: Transformation of the czech economy 1989-2004*. Retrieved from https://ebookcentral-proquest-com.infozdroje.czu.cz

[45] World Trade Organization (WTO). Trade Policy Reviews: Czech Republic 1996. First Press Release, Secretariat and Government Summaries 1996. Available at: https://www.wto.org/english/tratop_e/tpr_e/tp029_e.htm. Accessed 20 January 2020

[46] European Central Bank. Five things you need to know about the Maastricht Treaty. Available at: https://www.ecb.europa.eu/explainers/tell-me-more/html/25_years_maastricht.en.html. Accessed 20 January 2020

[47] Continental AG. Čtvrtstoletí od spojení české značky Barum s německým Continentalem. Available at: https://www.continental.com/cs-cz/pro-média/tisková-sdělen%C3%AD/čtvrtstolet%C3%AD-od-spojen%C3%AD-české-značky-barum-s-německým-continentalem-123242. Accessed 20 January 2020

new export opportunities. As an example, Barum can be analysed: started as a spin-off of Bata company and later become one of the Europe's top producers of both passenger and freight tyres[45], Barum signed a joint venture agreement with the German company Continental AG and a year later formed the group of companies under Barum Continental s.r.o. With the inflow of investments, technological advances and access to the most recent research and development, Barum was able to grow its production of tyres almost ten-fold and contributed 1.4 percent of the total exportation from the Czech Republic.

Types of businesses entities in the Czech Republic

Trade License

Generally, trade by natural persons, both foreigners and nationals, can only be conducted with and on the basis of a trade license issued by the Ministry of Industry and Trade as prescribed by Trade Licensing Act[48]. It is a distinctive way of defining an individual entrepreneur as a person who conducts business activity on the basis of trade license, according to the Czech law[49]. In the Act trade is defined as a "continuous activity carried out independently, in their own name, on their own responsibility for profit and in terms of this Act". Receiving a trade license is conditional and the applicant should follow the rules of:

1. Being of full legal capacity, which may include additional consent provided by the legal guardian of a minor
2. Integrity, proven by the extract from the Criminal Register
3. Additional professional qualifications

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[48] Czech Republic, Act No. 455/1991 on Trades from 2nd October 1991.

[49] Ecovis Ježek, Advokátní kancelář s.r.o 2020. Forms of business activities in Czech Republic in 2020. Available at: http://www.ecovislegal.cz/en/czech-legal-news/forms-of-business-activities-in-czech-republic/ Accessed 20 January 2020

Application for trade license is done at any trade licensing office or at the central registration point (CRM) with submitting uniform registration form (URF)[50]. However, under the Czech Licensing Act any business activity, whether conducted by a natural or legal person, national or foreigner, should be conducted only in accordance with the trade license or a specific permit in particular cases. These specific cases include providing professional services (lawyers, teachers) and practise of agricultural activities, which is governed by the Czech Agriculture Act[51]. On the other hand, a list of activities is excluded from licensed trade among which are entrepreneurial activities conducted by natural persons. For instance, auditors and tax advisors, doctors and dental practitioners, veterinary surgeons. As for the excluded activities those include banking services, research and distribution of medical products, maritime shipping and foreign trade in military[52].

Types of legal establishments

Currently the list of legal entities for the commercial purpose is:

- Limited Liability Company- Společnost s ručením omezeným (s.r.o.)
- Joint Stock Company - akciová společnost (a.s.)
- General Partnership (v.o.s)
- Limited Partnership (k.s)
- Co-operative (Druzstvo)
- Branch office
- European Company
- European Economic Interest Grouping

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[50]Czech Republic Ministry of Industry and Trade, 2019. CRM-central registration point. Available at: https://www.mpo.cz/en/business/licensed-trades/ . Accessed 20 January 2020

[51] Czech Republic. Act No. 252/1997 Coll. On Agriculture. From 12th November 1997.

[52] Czech Republic. Act No. 176/2019 (prev. Act No. 326/1999 Coll.) on Licensed Trade. From 16th July 2019

- European Cooperative Society

First of all, it is vital to state that the Czech Commercial Code does not recognize a branch office as a separate legal entity, thus it does not have legal capacity and may engage in business activities only within the limits set by the founding company. Branch offices in the Czech Republic act only as a representation of the parent company, which in the Russian market is presented by the representative office. Branch office should strictly adhere to the rules and directions set by the parent company in the association articles at the moment of registration. The branch office must be registered in the Commercial Register and the founder must appoint a director of the branch office who acts on behalf of the founding company, usually only to the extent of administrative processes of the branch. All major decisions are taken "at the top", meaning that the parent company takes full control. On the Czech market branches have several requirements[53], one of which is the appointment of the resident as a branch representative in dealing with tax authorities, if a parent company is a non-resident of Czech Republic. Branches are also required to keep accounting records and audit, file for VAT and employee returns. However, it is vital to note that branches do have limited liability, but the parent company is fully liable for the debts of the branch office.

A Limited Liability Company (LLC) under the Czech Commercial Code is a legal entity employing up to 50 participants with the registered capital created from shareholders' contributions, made either in the form of cash or in-kind with monetary value established. The minimum requirement for the registered capital is 1 CZK, which is derived from the minimum contributions from shareholders[54] (at least 1 CZK by a single shareholder), and of which at least 30 percent of cash contributions and 100 percent of in-kind contributions

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[53] Forma Company Worldwide 2019. Czech Republic Branch Office. Available at: https://www.formacompany.com/czech-republic/czech-republic-branch-office/. Accessed 20 January 2020

[54] Czech Business Web Portal. Limited Liability Company. Developed by CzechTrade. Available at: https://www.businessinfo.cz/psc/start-your-business/registration-of-legal-form-of-business/limited-liability-company/. Accessed 20 January 2020

must be paid upon registration. However, it is recommended to agree on a higher contribution to avoid the risk of insolvency. An LLC is the most common form of legal entity for small and medium-sized enterprises. It is established either by the Founder's Deed or by a Memorandum of Association concluded by several entities or individuals[55]. Both memorandum and founder's deed must be executed in the form of a notarial deed and contain general information about the entity: name, address, identification of shareholders, list of business activities, types and number of shares held at the moment by each shareholder, number of executives and their obligations, amount of registered capital. As soon as the Founders Deed or Memorandum is drawn, trade license must be obtained.

In the Limited Liability Company shareholders are only liable for the obligations up to the amount of unpaid contributions to the capital as registered in the Commercial Register[56], while the company is liable with the entirety of its assets[57]. A LLC cannot issue shares, but the rights and obligations of participants are represented by the ownership interest, the size of which is directly connected to the contribution of each shareholder. Memorandum of the company may prescribe for more than one type of interest, for instance, one category of interest can attach to it obligation of managing the company's day-to-day activities, while another category of interest may define an obligation to invest more in monetary terms. However, an ownership interest cannot be transferred easily and requires written agreement and an approval of general meeting, since the ownership interest is not the equity instrument. However, Czech law allows an ownership interest to exist in the form of "Common Certificate" which can be transferred with just an oral agreement[58].

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[55] CZECHINVEST. Setting up a business. Factsheet 20, March 2019.

[56] Czech Foreign Ministry 2019. Setting up a business. Available at: https://www.mzv.cz/seoul/en/economy_and_trade/setting_up_a_business/index.html. Accessed 20 January 2020

[57] Accace Management s.r.o, 2020. Company formation in the Czech Republic. Available at: https://accace.com/company-formation-in-the-czech-republic/. Accessed 20 January 2020

[58] PP Agency s.r.o, 2019. Doing business in the Czech Republic. 28th November 2019. ISSN 1211-0949

The distinctive feature of a Joint Stock Company is the division of registered capital into shares with specific nominal value. Shares are divided into the ordinary shares and shares with special rights, which for instance can have greater voting power. This form of legal entity is usually used for large companies (more than 50 employees). The JSC is established by the Article of Association by one or more shareholders. After drafting the Article, trade license must be attained. A JSC exists independently from its shareholders, therefore shareholders do not bear responsibility for the debts of the company.

To register a JSC, shareholders must meet the condition of the minimum registered capital which amounts to 2 000 000 CZK (app. 91 000 USD). Shareholders can contribute monetary or in-kind, but for later option the expert must be chosen to evaluate the value. Prior to registering the company, shareholders must pay at least 30 percent of the nominal value of shares[59]. Voting rights are attached to shares- equal number of voting rights must be attached to the shares with the equal nominal value. To manage the JSC founders can choose between monistic and dualistic model of corporate governance. Within the monistic model, the company has an Administrative Board which governs the activities of the company. Within the dualistic model, a Board of Directors and Supervisory Board are established, where the former governs the company and the later supervises the direction and scope of power of the former[57]. In case a company has more that 500 employees, one third of the representative on the Supervisory Board must be the employees.

General Commercial Partnership is a legal entity established by at least two partners who are either natural persons or legal entities. Each partner assumes unlimited liability for the partnership's debts and obligations and is allowed to act on behalf of the partnership, for instance to conclude contracts. General partnership is created by drafting a partnership

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[59] Czech Business Web Portal. Joint Stock Company. Developed by CzechTrade. Available at: https://www.businessinfo.cz/ms_psc/psc/start-your-business/registration-of-legal-form-of-business/joint-stock-company/. Accessed 21 January 2020

agreement and registering the partnership in the Commercial Register, where either the names and addresses of the partners or the company's office address are inserted[60].

As for the Limited Partnership, it is established by at least 2 partners where at least one partner assumes unlimited liability for the partnership's debts. Partners in this legal entity are divided into general partners, who's liability is unlimited, and limited partners, who are only responsible for the debts up to the amount of unpaid contributions. Only the general partners are allowed to act on behalf of the partnership, while legally only limited partners are obliged to contribution. Contribution is required to be paid up within the period of time, in the manner and in the scope determined in the memorandum of association[59]. If allowed by the memorandum of association, a member can pay up contribution by carrying out work or by providing a service on either one-time or repeated basis. A Limited Partnership can be established by both natural persons and legal entities by drafting a Partnership Agreement[61]. The entry into the Commercial Register must include partners' names and addresses or the partnership's registered office, a statement as to who are the limited and general partners, the amount of paid-in capital by each limited partner and any unpaid amounts at the time of entry.

A Cooperative ("Druzstvo") is defined by Law on Trade Corporations as a community of unincorporated persons established for the purpose of mutual support of its members or third parties with the purpose of doing business[62]. Cooperative can be established by the minimum of 3 members and the company must incorporate "Druzstvo" in the name. Cooperatives might seem as the most complicated legal entities because they need to follow a set of rules. First of all, cooperatives should at the time of incorporation establish

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[60] Czech Foreign Ministry. How to set up business in the Czech Republic. Available at: https://www.mzv.cz/chengdu/en/trade_and_economy/doing_business_in_the_czech_republic/how_to_set_up_business_in_the_cr/index.html. Accessed: 22 January 2020

[61] Czech Business Web Portal. Limited Partnership. Developed by CzechTrade 2018. Available at: https://www.businessinfo.cz/psc/start-your-business/registration-of-legal-form-of-business/limited-partnership/. Accessed: 22 January 2020

[62] Czech Republic. Law № 90/2012 on Trade Corporations. From 1st January 2014.

an indivisible fund comprised of at least 10 percent of registered capital. Each year at least 10 percent of profit after taxation should be transferred into the fund until its reserve reaches at least 50 percent of the amount of registered capital. Secondly, foreigners are not allowed to set up cooperatives but can only act as representatives. Finally, an obligation to contribute to the loss of cooperative can be imposed on the member, if specified in the Articles of Association. Still, members of cooperatives are not liable for the debts of the company, but cooperatives are liable with the entirety of their assets[60].

European Company or SE (Societas Europaea) is a European Public Limited Liability Company created by registering in any member state of the European Economic Area (EU plus Norway, Iceland and Liechtenstein)[63]. The associated SE Implementation Act (SEAG) came into force on 8th of October 2004 almost 30 years after the state of negotiations. Article 10 of the Act requires member states to treat SE as a public LLC established in accordance with the national law in which it has its registered seat. This is a form of legal entity which can be beneficial for both SMEs and large enterprises as businesses are no longer bound to one location and with the rapid trend of globalisation, prefer to establish multiple branches and expand their operation. Though most national legal forms of business are recognized worldwide, SE is established to make business simpler. The core objective of the SE Implementation Act is "to create a European company with its own legislative framework", allowing European companies to merge or form a holding company or joint subsidiary without having to decide on which national legislation prevails. The act provides four ways of forming a SE:

1. By merger of at least 2 companies from different member states
2. By formation of a European Holding Company
3. By formation of a European subsidiary

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[63] Czech Point 101. Establishment of a Societas Europaea (SE or European Company) in Czech Republic. Available at: http://www.czechpoint101.com/establishment-of-a-societas-europaea-se-or-european-company-in-czech-republic/. Accessed: 22 January 2020

4. By conversion of a national company with at least one subsidiary in another member states into SE[64]

Rules apply to all four options of establishment, for instance, formation by merger is only available to the public LLCs from different member states, while formation of a holding company is available to both public and private LLC with their registered offices in different member states or having subsidiaries in member states other than that of their registered office. The registered office must be the office of true operations of the companies and must be located in one of the member states of the EEA.

To register the European Company, the requirements must be followed: both the registered and head office must be in the same member state, presence in other EU countries (in the form of branches or subsidiaries), the minimum subscribed capital equals to 120 000 EUR and is divided into shares, and the extent of the employee's participation is agreed on with the employees' representatives[65]. As for the obligations of the European Companies, annual reports including the balance sheet, statement of profit and loss and statement of cash flow must be prepared and posted annually. The tax rules applicable are the national rules of the country where the registered office is.

European Companies are established because this form of business structure allows for easy transfer of the registered office to another member state without having to dissolve the company. In addition to that, it is effortless to run a business on the EU market since all activities can be restructured under a single brand name without having to establish numerous branch offices, meaning that you can create subsidiaries that will also be European Companies. Finally, this legal form has the most involvement of the employees in running a business. However, SE has a number of disadvantages, one of which can be

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[64] Your Europe European Union. Setting up a European Company (SE). Available at: https://europa.eu/youreurope/business/running-business/developing-business/setting-up-european-company/index_en.htm#. Accessed 1 March 2020

[65] IONOS Inc. Societas Europaea. Available at: https://www.ionos.com/startupguide/get-started/societas-europaea/. Accessed 1 March 2020

the mentioned participation of employees, which can be seen as a threat for the management of the company. Moreover, the minimum capital is off-putting for smaller companies or start-ups. Finally, if an SE bankrupts in one member state, it puts the whole company at risk, while if a company is divided into independent national subsidiaries, bankruptcy of a subsidiary does not possess a threat to the entire company[66].

European Economic Interest Grouping (EEIG) is a legal entity established by natural persons or legal entities from different member states. The purpose of the EEIG is to support activities of its members by pulling together all the resources, know-how and skills which would produce better results than members acting alone. It might be seen as a cooperative but in the Czech Republic the definition of activities is different: the activity must develop and be related to the economic activities performed by the members, and the purpose of association is not to gain profit, but to support the growth of its members[67]. If association generates profit- it must be distributed among the members. As a counterweight to the contractual freedom which is at the basis of the EEIG and the fact that members are not required to provide a minimum amount of capital, each member of the EEIG has unlimited joint liability for its debts[68].

European Cooperative Society has similar reasons for establishment as a European Company- it makes the process of cross-border trade easier for cooperatives which are already present in more than one EEA member state, thus letting cooperatives establish a Cooperative Society, similar to SE, without having to open numerous subsidiaries. In an essence, European Cooperative Societies (SCE or Societas Cooperativa Europaea) is a legal entity where members carry common activity to satisfy the business needs and get return on investment, while preserving the independence of members. SCEs can only be registered by either 5 participants (can be legal entities) registered in different member

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[66] European Union. Council Regulation №2157/2001 on the Statute for a European Company (SE). From 8th October 2001. Official Journal of the European Communities L 294/1.

[67] Czech Republic. Law № 360/2004 on European Economic Interest Grouping, from 20th May 2004.

[68] European Union. Council Regulation №2137/85 on the European Economic Interest Grouping. From 25th July 1985, reviewed 20th June 2016.

states or by a merger between existing cooperatives established under national law of EU member state and having its registered office in that member state. What is common with the European Economic Interest Group is that members benefit in proportion to their profit, not to the capital contribution[66].

Definition of SMEs

In the Czech Republic the core criteria for classification of enterprises is the number of people employed and is based upon the official EU definition and criteria. Additional criteria is either a turnover or the total of the Balance Sheet. SMEs are divided into micro enterprises (1-9 employees), small enterprises (up to 50 employees) and medium-sized (up to 250 employees). The annual turnover for the micro enterprises should not exceed 2 mil EUR, while the threshold for small and medium-sized enterprises is 10 and 50 mil EUR respectively. Turnover criteria cab ne replaced by the total amount of balance sheet: for micro and small enterprises the annual balance sheet total is exactly the same as the amount of turnover, but for the medium enterprises it should not exceed 43 mil EUR[69].

Table 2: Criteria for SMEs in the Czech Republic

	N. of employees	Turnover	Balance sheet total
Micro	< 10	< 2 mil EUR	< 2 mil EUR
Small	< 50	< 10 mil EUR	< 10 mil EUR
Medium	< 250	< 50 mil EUR	< 43 mil EUR

Source: Own evaluation

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[69] European Commission. User guide to the SME Definition. ISBN 978-92-79-45301-4

Taxation of legal entities in the Czech Republic

Corporate income tax rate in the Czech Republic is 19 percent and it is levied on all profits of the company including sale or disposal of assets[70]. Tax base depends on the location of the registered office of the company: for companies based in the Czech Republic tax base calculation includes income derived from activities in the Czech Republic and abroad. If the company is not based in the Czech Republic, then tax base includes only profit from activities carried out in the Czech Republic. Tax code also prescribes for advance payments to be made semi-annually; in case the previous tax liability was between 30 000-150 000 CZK. Advance payments equal to 40 percent of tax liability.

Personal income is taxed at the rate of 15 percent on the resident's worldwide income. If the salary exceeds the average salary by 48 times, then personal income is subject to 7 percent solidarity surcharge. Both employees and employers should contribute to the social security system. For health insurance 9 percent is contributed by the employer and 4.5 percent by an employee, while for the pension fund employers should contribute 21.5 percent and 6.5 is on employees. Employment and sickness insurance funds are contributed to solely by employers. In total, employers' contributions to the social security system amounts to 33.8 percent and 11 percent is added by employees[71].

Dividends, interest and royalties are subject to a 15 percent withholding tax rate. However, various conditions apply under EU directives. Under the parent-subsidiary directive, dividends paid from subsidiaries are exempt from taxation, if the parent company holds the minimum of 10 percent interest in subsidiary for at least 12 months uninterrupted[72]. On the other hand, a 35 percent withholding rate applies on all dividends paid to jurisdictions

[70] Your Europe European Union. Company tax in the EU- Czechia. Available at: https://europa.eu/youreurope/business/taxation/business-tax/company-tax-eu/czechia/index_en.htm. Accessed 5 March 2020

[71] CzechInvest. Taxation System. Available at: https://www.czechinvest.org/en/Doing-business-in-the-Czech-Republic/Taxation-system. Accessed 5 March 2020

[72] Accace Management. 2020 Tax guideline for the Czech Republic. Available at: https://accace.com/tax-guideline-for-the-czech-republic/. Accessed 7 March 2020

other than EU/EEA states, or with which Czech Republic does not hold double-taxation agreement. The same rules apply to dividends and royalty payments to non-residents. However, royalties paid from Czech tax residents to a company which is a residents of other EEA member states are exempt from taxation.

Standard VAT rate for goods and services in the Czech Republic is 21 percent. A reduced rate of 15 percent applies to basic foodstuffs, pharmaceutical products, newspapers and heating. A more reduced rate of 10 percent is used to tax baby food, books, mill products and gluten-free products[71]. Taxation laws define a taxpayer as either a legal entity or natural person who carries out economic activity, which includes:

- Supply of goods and services on the territory of Czechia
- Intra-community acquisition of goods for consideration from EU member states
- Imported goods

Legal entities or individual entrepreneurs who carry out economic activity on the territory of the Czech Republic must register for VAT if and when their 12-month period turnover exceeds 1mil CZK. Registration should be filled no later than on the 15th of the month following the month in which turnover reached the tax limit. A foreign taxable person that makes long-distance sales in the Czech Republic to any person that is not registered for VAT in the Czech Republic has to register for VAT in the Czech Republic if the total value of the goods reaches 1 140 000 CZK in the calendar year[73].

Since 2016 VAT registered persons should file a recapitulative statement which contains details of all transactions subject to VAT, and also transactions for which the input deduction was claimed. From January 1st 2020 Czech Republic applies Generalised Reverse Charge Mechanism (GRCM) under the Council Directive 2018/2057: this mechanism involves shifting liability for VAT payments from the supplier to the customer, to prevent suppliers from charging VAT on onward supplies and failing to remit VAT

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[73] Conbiz .All about the tax system in the Czech Republic. Available at: http://www.conbiz.eu/information/articles/all-about-the-tax-system-in-czech-republic. Accessed 1 March 2020

collected to the relevant tax agency[74]. Czech Republic has stated that 28 percent of the VAT gap was attributed to carousel fraud and the current administrative cooperation cannot help solving the issues. For that matter, Czech Republic will use GRCM for domestic supplies of goods and services which exceed 17 500 EUR per transaction.

Administrative process of setting up a business in the Czech Republic

As stated previously in the thesis, for better comparison of the administrative process, the example of setting up a Limited Liability Company is used, as the most popular form of doing business. The administrative process in the Czech Republic differs slightly, as it includes two distinctive steps- establishment and incorporation. LLCs are established by the memorandum of association, or if established by a sole owner- by the deed of foundation. Both documents should come in the form of the notarial deed and include company's legal name, legal address, objects of activities, identification of shareholders, amount of registered capital, initial executive, number of executives and their representation of the company. As LLCs have ownership interest determined by the contribution of each member, this information supported by the rights and obligation of each shareholder should be indicated in the memorandum. At the time of establishment, the memorandum of association will also include contribution obligations and the deadline for payment of monetary contributions, identification of appointed directors, appointment of contribution director and valuation and full description of any contribution in kind[75]. Once again, the document should come in the form of the notarial deed, for ease of the process signatures can be verified at any CzechPoint office[76].

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[74] European Council. VAT reverse charge mechanism: preventing VAT fraud. Available at: https://www.consilium.europa.eu/en/policies/vat-reverse-charge/. Accessed 5 March 2020

[75] Czech Trade. Registering a business: Limited Liability Company. Czech Business Web Portal 2019. Available at: https://www.businessinfo.cz/psc/start-your-business/registration-of-legal-form-of-business/limited-liability-company/. Accessed 6 April 2020

[76] Ministerstvo Vnitra České Republiky. CzechPoint: Veřejnost. Available at: https://www.czechpoint.cz/public/verejnost/sluzby/. Accessed 6 April 2020

Companies are incorporated when they are being registered into the Czech Commercial Register. In the Commercial Register users are able to access information on the legal entity which includes legal address and trading name, date of incorporation and founders. An executive person identified in the memorandum must file an application to the Commercial Register to establish the company within six months of its incorporation to the respective Registry Court. The Registry Court is obliged to register the company or to make its decision without undue delay. However, before applying to the Registry Court, a company must obtain trade license related to the activities performed. This registration can be done at the central registration point (CRP) using the uniform registration form (URF). For obtaining the trade license, an entrepreneur should specify the business activities and subject of trade, upon which the conditions for professional or qualified trade can be applied[77].

An application form to the Commercial Register must be accompanied by: documents evidencing the incorporation and existence of founders, memorandum of association (or deed of foundation), evidence of payment of the minimum registered capital, an affidavit signed by each member of the executive and supervisory body and consent from each member to the entry of his/her details in the Commercial Register[78], extracts from the criminal registry for each of the founders. All the documents must be submitted to the competent Registry Court within 6 months of incorporation, either by the founders directly to the Court, or organized by a notary in form of direct registration[79]. The only significant difference is the speed of process: notary can register a company immediately, while the statutory deadline is 5 working days. The very last step in the process is the creation of Czech Data Box, which is an electronic storage of documents and a mean of

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[77] Magistrát hlavního města Prahy. How to acquire a trade license. Available at: http://www.praha.eu/jnp/cz/potrebuji_resit/zivotni_situace/zivnostnici/how_to_acquire_a_trade_licence.html. Accessed 6 April 2020

[78] Czech Invest. Factsheet 22: Setting up a Business. Available at: mzv.cz. Accessed 6 April 2020

[79] Czech Trade. Registration of legal form of business. Czech Business Web Portal 2019. Available at: https://www.businessinfo.cz/psc/start-your-business/registration-of-legal-form-of-business/ . Accessed 6 April 2020

communication with public authorities. The e-box (Datova Schranka) replaces land-mail, free of charge and delivers legal documents from authorities securely. All Czech legal entities must establish an e-box. Registering a new e-box is done as soon as the entity is registered in the Commercial Register.

Comparing business environment in the Czech Republic and Russian Federation

Regression Analysis

Having described the basic legal requirements for legal entities in both Czech Republic and Russia, as well as administration process of registering a new business entity, this thesis will turn to the practical question of which country has a more fitting business environment for new businesses. By "fitting" is meant the business environment which has a potential to be quantified: to pick the selected variables, analyse their development over time and influence on new businesses. Constructing a reliable econometric model will guide the policymakers in adjusting economic focus, fiscal and monetary policy. Moreover, answering the question of predictability of the development, will allow to estimate the number of new businesses to open in the upcoming years.

Business environment is the core subject of this paper, but in reality, it consists of many variables which influence the number of new businesses opening annually. Some of the variables may not be obvious, others directly influence the decision of entrepreneurs to establish a legal entity. For instance, the higher the corporate tax rates, the lower the number of new businesses established will be in theory. Other indicators, for instance GDP per capita, may not be straightforward. It is a suitable indicator of the economic activity of the country however, the concern is whether it influences the number of new businesses opening annually.

For this matter the regression analysis has been chosen as a tool, as it allows for modelling of the relationship between the dependent and independent variables in the observed model. For the question of the thesis, the Ordinary Least Squares (OLS) method will be used. The justification of this choice follows 2 purposes. Firstly, the analysis can be used for forecasting future trend. Secondly, regression analysis can potentially reveal causal relationships between the dependent and independent variables, hence it can provide a

valuable insight into the question. However, for the second purpose it might be required to conduct a qualitative analysis, to dig dipper into the business policies and initiatives which can influence the dependent variable, but which cannot be quantified into the model easily. For instance, EU directives towards the development of SMEs can provide a valuable overview of initiatives and state support but cannot be quantified for the collection of data.

Economic theory and econometric model

As stated in the Introduction, entrepreneurship is a crucial part of economic development and growth, influential condition for the technological development and a "cushion" during economic stagnation. For this paper the first question arising is how to measure the entrepreneurial activity as well as the business cycle creation. For that matter, the following indicator is being chosen: **New Business Density**[80]. New Business Density (NBD) measures the number of newly registered businesses per a thousand of people aged 15 to 64 years per calendar year. The NBD indicator allows for the comparison of two countries with contrasting number of population: Russia- 141 millions people, Czech Republic- 10.6 millions people. Apart from that, NBD allows for the quantification of the business environment: by definition it takes into consideration the impact of regulatory, political, and macroeconomic institutional changes on new business registration, a vital component of a dynamic private sector.

The definition of entrepreneurship used for the NBD is limited to the formal sector, however the informal sector is being excluded only on the basis of difficulties of quantifying the number of firms that are involved, rather than on its relevance for developing economies. The Entrepreneurship Database facilitates the analysis of the growth of the formal private sector and the identification of factors that encourage firms to begin operations in or transition to the formal sector. Data is collected on the limited

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[80] The World Bank. New Business Density. World Bank Data 2019. Available at: https://data.worldbank.org/indicator/IC.BUS.NDNS.ZS. Accessed 4 March 2020

liability corporations regardless of the size, excluding partnerships and individual entrepreneurs due to the differences with respect to their definition and regulation globally.

For the linear regression model, the regressors are to be identified following the economic theory. For the paper the following explanatory variables have been selected:

1. Cost of business start-up procedures calculated as a percentage of Gross National Product (GNP) per capita. Data is collected by the World Bank using a standardized business case to ensure comparability across countries. The indicator is important for the business environment because it carries the idea that stable business environment requires rules and regulations in place for all, that are efficient and simple to implement. This also provides information on the level of informality[81].

2. Corruption perception index (CPI) measured as a ranking (1-100): the higher the ranking- the lower the perceived level of public sector corruption, according to the panel of experts and business representatives[82]. Early conducted studies illustrate a strong link between the CPI and economic growth, so the analysis is concerned with the question whether CPI is connected to the NBD. High levels of corruption can put additional costs on the establishment of an enterprise or result in higher administrative burden.

3. Total tax and contribution rate- measures the amount of taxes and mandatory contributions (insurance, pension fund) paid by the businesses after deducting the allowances, as a percentage of commercial profits. Basically, it calculates all the taxes payable by the business. This indicator is in line with NBD as it also collects information only on the limited liability companies operating in the formal sector of

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[81] The World Bank. Cost of business start-up procedures 2019. Available at:
https://data.worldbank.org/indicator/ic.reg.cost.pc.zs . Accessed 4 March 2020

[82] Transparency International. Corruption Perception Index 2019. Available at:
https://www.transparency.org/cpi2019 . Accessed 4 March 2020

the economy. For Russia this indicator also takes into account mandatory taxes at both federal and local levels.

Below are listed additional indicators which in personal opinion may have hidden relation to the New Business Density and which can to some extent influence the fit of the business environment.

4. GDP per Capita (GDP/midyear population)[83]. It can be defined as a prosperity rate since it illustrates how much of economic production value is attributed to each individual in the economy. GDP in general is a measure of economic productivity of each country, demonstrating the market value of goods and services produced in the economy. Having used the GDP per capita population gap between Russia and Czech Republic is being eliminated, allowing for more equitable comparison.

5. Research and Development (R&D) expenditures as a percentage of GDP. This indicator illustrates gross expenditures on R&D (expressed as a percent of GDP), including capital and current expenditures in the four sectors: Business enterprise, Government, Higher education and Private non-profit.

6. FDI net inflows. It indicates the direct equity flows in the reporting country, as the sum of equity capital, reinvested earnings and other capital. Recent study[84] conducted on the question of relationship between FDI and new business startups illustrates that FDI boosts the number of startups in the emerging economies, hence the same assumption is being applied for both Russia and the Czech Republic.

7. Unemployment rate as a percentage of total labor force. In theory[85] personal unemployment increases the likelihood of a person to become an entrepreneur.

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[83] The World Bank (2019). GDP per capita (current USD). Available at: https://data.worldbank.org/indicator/NY.GDP.PCAP.CD . Accessed 4 March 2020

[84] ARIF, I. - KHAN, L. FDI & New Business Startups: Does Financial Development Matter? *South Asian Journal of Management Sciences 2019*. Vol.13. Accessed 27 March 2020

[85] TERVO, H. - RITSILÄ, J. Effects of Unemployment on New Firm Formation: Micro-Level Panel Data Evidence from Finland. *Small Business Economics 2002*. Vol.19. Accessed 27 March 2020

However, becoming an entrepreneur involves financial costs which an unemployed person may not be able to bare, especially in times of uncertainties.

8. Inflation rate (in percentage). It reflects the annual percentage change in the cost of the basket of selected consumer goods. Inflation directly affects not only the consumers, but producers (businesses) as well. On the positive side, inflation makes using debt as financing source cheaper in the real terms. However, if production costs are rising because of inflation, then producers will not be able to transfer that increase on consumers, resulting in lower profits. Inflation can also disrupt businesses planning and investment. The question to analyze is whether this indicator can directly influence the New Business Density. For instance, many small businesses are mostly financed by the sources of the owner, and inflation puts the owner in a high financial risk[86].

Theoretical basis

Supposed dependencies derived from the economic theory are:

- As the cost of business start-up procedures increases, new business density will decrease.
- Higher Corruption Perception Index (CPI) will lower the new business density as the informal costs for the businesses to establish will be too high.
- Higher total tax and contribution rate will lead to the decrease of new business density.
- Higher GDP per Capita results in higher number of new businesses, as it promotes the expansion of the economy and more stable fiscal conditions.

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[86] LEDBETTER, J.B. Why inflation matters to small businesses. Capital Professional Services 2018, LLC. Available at: https://inflationdata.com/articles/2018/12/24/why-inflation-matters-to-small-businesses/ . Accessed 7 March 2020

- Higher expenditures on R&D will increase the number of new businesses, coming from the research that R&D expenditures influence primarily new firms' birth[87].
- Higher FDI net inflows will increase the number of newly established entities.
- Increase in unemployment rates results in increasing number of new businesses established. The following assumption arises from an idea that long-term unemployment would in turn motivate an individual to start a new venture.
- Increase in the inflation rate results in decreasing new business density, based on the assumption that high inflation may result in high cost of borrowings for businesses.

Before starting with formulation of the economic theory, limitations to the defined model and issues in data collection should be discussed. First and furthermost, the data analyzed will be presented as a time series for the period from the year 2003 and until 2019. Data provided is a time series data, which suits the choice of the OLS model. However, collected data had several limitations. From the statistical viewpoint, this is a small sample of population and can be statistically insignificant, however, for both Czech Republic and Russia it is not possible to find earlier data for the new business density. For both 2003 and 2004 calculations of NBD were made by using the statistics on business activity. Secondly, the indicator of total tax and contribution rate in the Czech Republic had the earliest data available since 2005, so to eliminate the issues and having observed the trend[88], the number for 2003 and 2004 used will be the same as for 2005. Moreover, the question of data availability arises. The same set of dependent variables was to be chosen, however, due to the limited data available for certain topics for the Russian Federation, some of the

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[87] ALMUS, M. - NERLINGER, E. Growth of New Technology Based Firms: Which Factors Matter?, Small Business Economics, Volume 13 (2), pp 141-154.

[88] Ministry of Finance of the Czech Republic. Macroeconomic Forecast of the Czech Republic. January 2019, ISSN 2533-5588.

independent variables were omitted. For instance, no reliable data was present for Russia for the average monthly salary, as well as for the average EAT for the enterprises (SMEs). The same issue occurred with the indicator total tax and contribution rate for the Russian Federation. Data for this index prior to the year 2013 was not available, and for that reason, as well as not being able to reliably forecast the previous numbers, the indicator was omitted from the model. Another immense complication was to choose the data source to rely on, when collecting data on "Cost of business start-up procedures (as % of GNI per capita)". The World Bank data varied a lot from the Index Mundi Data: for instance, for the Czech Republic in 2013 World Bank data fixated the 10 percent mark, while Index Mundi stated 47.1 percent. Judging by the personal experience, the choice was made in favour of Index Mundi, however, that might in turn affect the purity of the OLS model.

For Russia the situation is more severe - data is only available from 2013 as before that year the Federal State Statistics Service was not reporting. After conducting a research it became clear that no academic or trusted source can be found for that statistics, so the variable will be completely eliminated for the model estimation for Russia. Moreover, official data on unemployment in the Czech Republic is available since 2009, and again the issue will be solved by using unofficial statistics (in this case- Index Mundi). Finally, from 2014 cost of business start-up procedures as a percentage of GNI equals 0, because it includes the official fees as well as fees for the legal or professional services needed, and in both economies, it was a small number (0,01) which in the Doing Business[89] Report was a simple 0.0.

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[89] World Bank Group. Doing Business 2019: Economy Profile Czech Republic. Available at http://www.doingbusiness.org/en/data/exploreeconomies/czech-republic. Accessed 10 September 2019

Following that another issue is data reliability for the Russian Federation: several sources[90],[91] have previously stated that Russian statistics have been altered, or possibly altered, under the political pressure. To eliminate the issue, data prior to preparation for Gretl SW, was compared between World Bank data, OECD data and, where possible, WTO data[92].

Next section will first run an OLS model on the data from the Czech Republic, interpret and verify it, and then the same will be done for the Russian Federation.

OLS model estimation for the Czech Republic

The OLS model for the Czech Republic is estimated in this section. As a dependent variable was chosen New Business Density, and the independent variables are as follows:

y_1- New Business Density in number of new enterprises.

x_2- Cost of start-up procedures as a percentage of GNI per capita.

x_3- Corruption Perception Index (CPI): from 1 to 100 as an individual ranking.

x_5- Total tax and contributions rate, as a percentage of commercial profit.

x_4- GDP per capita in current USD.

x_5- Research and Development expenditures as a percentage of GDP.

x_6- FDI inflow in billions USD.

[90] Bloomberg. *Russia Growth Surprise May Be Poor Data, Not Book-Cooking* [online]. 5 February 2019. https://www.bloombergquint.com/global-economics/data-manipulation-more-likely-russia-just-has-poor-statistics. Accessed 1 March 2020.

[91] MARTINEZ, L. '*How Much Should We Trust the Dictator's GDP Growth Estimates*?'. August 9, 2019. Available at SSRN: https://ssrn.com/abstract=3093296 . Accessed 1 March 2020.

[92] WTO (World Trade Organization). Trade Profile Russia 2018. Available at: https://www.wto.org/english/res_e/stats_e/daily_update_e/trade_profiles/RU_e.pdf. Accessed 10 September 2019.

$_{x7\text{-}}$ Unemployment rate measured in percentage.

$_{x8\text{-}}$ Inflation rate in percentage.

Multicollinearity check for the data for the Czech Republic

First and foremost, our dataset for the regression model should be checked for multicollinearity. Multicollinearity occurs when independent variables in the model are correlated, which by the definition of an independent variable cannot appear. Independent variables are ought to stay independent, otherwise the outcome of the model, namely the relationship of dependent and independent variables, cannot be trusted.

A regression coefficient represents the mean change in the dependent variable for each 1 unit change in an independent variable, holding the rest of independent variables constant. Perfect multicollinearity occurs when the multiple correlation coefficient is equal to 1. If the correlation coefficient is higher than 0.8 it can be problematic when interpreting the results and it illustrates that by changing one independent variable, a change will also happen in another independent variable, which should be avoided. Multicollinearity can be reduced by using dummy variables, transforming underlying data, or by eliminating a variable that causes high multicollinearity[93].

Table 3 below illustrates the result after running the correlation matrix in SW Gretl. High correlation coefficient was seen for the variable **x_3** corruption. One way the issue can be solved is by replacing the variable by the First Difference estimator which is basically the change form one period to the next. However, judging by the data for corruption, as it is presented as a rank, first difference will not be a good independent variable later in the model, and for that reason this variable will be removed completely.

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[93] Wooldridge, J.M. (2013) Introductory Econometrics: a modern approach. South-Western, Cengage Learning. 8th edition, ISBN-10: 1-111-53104-8

Table 3: Correlation matrix for data for Czech Republic

	y_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	x_9
y_1	1								
x_2	-0.9218	1							
x_3	0.9000	-0.8619	1						
x_4	-0.6616	0.5753	-0.4885	1					
x_5	0.7351	-0.5869	0.6968	-0.7705	1				
x_6	0.6905	-0.7719	0.6227	-0.7138	0.5277	1			
x_7	0.1937	-0.1008	0.2643	-0.0206	0.2244	-0.0737	1		
x_8	-0.9235	0.8087	-0.9131	0.4033	-0.6818	-0.4687	-0.2578	1	
x_9	-0.0082	0.2120	0.1431	0.1560	0.3420	-0.2932	0.3716	-0.2194	1

Source: Gretl SW

Table 4 then pictures the new correlation matrix. The issue has been solved and we can proceed with the model estimation.

Table 4: Corrected correlation matrix for the Czech Republic: x_3 has been removed to avoid multicollinearity.

	y_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8
y_1	1							
x_2	-0.9218	1						
x_3	-0.6616	0.5753	1					
x_4	0.7351	-0.5869	-0.7705	1				
x_5	0.6905	-0.7719	-0.7138	0.5277	1			
x_6	0.1937	-0.1008	-0.0206	0.2244	-0.0737	1		
x_7	-0.9235	0.7087	0.4033	-0.6818	-0.4687	-0.2578	1	
x_8	-0.0082	0.2120	0.1560	0.3420	-0.2932	0.3716	-0.2194	1

Source: Gretl SW.

OLS model equation for the Czech Republic

We ran the Ordinary Least Squares Model (OLS) of the dependent variable New Business Density and explanatory variables described previously. This is the most commonly used method for estimating linear regression model parameters. The resulting values of the parameters are listed below.

The final econometric model with the estimated parameters is:

$$y_{1t} = 17.886 - 0.0132124 * x_{2t} - 0.260026 * x_{3t} - 0.0000368257 * x_{4t} - 0.0115952 * x_{5t}$$

$$+0.00492595 * x_{6t} - 0.274508 * x_{7t} + 0.0101457 * x_{8t} + u_{1t}.$$

Table 5: OLS model estimation for the Czech Republic

```
Model 11: OLS, using observations 2003-2019 (T = 17)
Dependent variable: NBD

                 coefficient   std. error    t-ratio    p-value
  -------------------------------------------------------------------
  const          17.8860       3.81414         4.689     0.0011   ***
  cost_start     -0.0132124    0.00571891     -2.310     0.0462   **
  tax_contrib    -0.260026     0.0698412      -3.723     0.0047   ***
  GDP_percap     -3.68257e-05  2.44302e-05    -1.507     0.1660
  RD_exp         -0.0115952    0.213744       -0.05425   0.9579
  FDI_inflow      0.00492595   0.0101555       0.4851    0.6392
  unemploy       -0.274508     0.0422362      -6.499     0.0001   ***
  inflat          0.0101457    0.0413081       0.2456    0.8115

Mean dependent var    3.187824    S.D. dependent var    0.826549
Sum squared resid     0.145300    S.E. of regression    0.127061
R-squared             0.986707    Adjusted R-squared    0.976369
F(7, 9)               95.43837    P-value(F)            1.01e-07
Log-likelihood        16.35645    Akaike criterion     -16.71291
Schwarz criterion    -10.04720    Hannan-Quinn         -16.05032
rho                   0.221297    Durbin-Watson         1.533560

Excluding the constant, p-value was highest for variable 6 (RD_exp)
```

Source: Gretl SW

Economic verification

In the framework of economic verification, the direction and intensity of the explanatory variables on the explained variable are assessed. The correctness of the signs and the magnitude of the numerical values of the estimated parameters are verified.

γ_2 – If cost of business start-up procedures (as a percentage of GNI per capita) increases by 1 percent, then the new business density will decrease by 0.0132124 new businesses.

γ_3 - If total tax and contribution rate increases by 1 percent, then new business density will decrease by 0.260026 new businesses.

γ_4 - If GDP per Capita increases by 1 USD, then new business density will decrease by 0.0000368257 new business units.

γ_5 – If R&D expenditures as a percentage of GDP increases by 1 percent, then new business density will decrease by 0.0115952 business units.

γ_6 – If FDI net inflows increase by 1 billion USD, then the new business density will increase by 0.00492595 business units.

γ_7 – If unemployment rate increase by 1 percent, then the new business density will decrease by 0.274508 business units.

γ_8 – If inflation rate increase by 1 percent, then the new business density will increase by 0.0101457 business units.

The estimated model brings up a number of arguments, the main one is the number of new businesses by 1000 people if all other parameters are held at 0. Judging by the historical data, it seems almost impossible and exaggerated. If we regress the initial model only on one significant parameter, for instance on x_2 (cost of business start-up procedures), then the new business density, holding x_2 at 0, will equal 4.15 business units. The possible explanation can be that all the variables in the selected model have significant negative influence on the new business density in the Czech Republic.

Secondly, parameter γ_4 does not correspond with the economic theory: with higher GDP per capita more businesses are to be established as a result of a more robust private sector. Studies has supported the view that economic growth is strongly related and correlates positively with the new business activity[94]. On the other hand, one can bring the argument

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[94] KLAPPER, L. - AMIT, R. - GUILLÉN, M. - QUESADA, J. Entrepreneurship and Firm Formation Across Countries. Entrepreneurship and Firm Formation Across Countries 2007. DOI: 10.1596/1813-9450-4313.

that with the decreasing GDP per capita a person can be motivated to start a venture, in order to be able to earn higher income.

Moreover, parameter γ_5 also does not correspond with the stated economic assumption: with an increasing spending on R&D we would at least expect a slight increase in the number of new businesses, primarily in the technological spheres. Finally, the positive correlation has been demonstrated between the new business density and parameter γ_8. Previously it has been stated that inflation can be both positive and negative for new businesses, and in this case we can be talking about the demand-pull inflation: aggregate demand rises which can be explained by an expanding economy, and as a result new businesses are being established.

Statistical verification

Statistical verification assesses model compliance with data and statistical significance of the estimated parameters.

- **Statistical Significance of parameters (α=0.05) (p-values)**

Hypothesis:

H_0: $\gamma=0$, statistically insignificant

H_A: $\gamma \neq 0$, statistically significant

For the statistical verification P-values with the significant level $\alpha = 0.05$ should be analysed. If p-value $< \alpha$, we have to reject H_0 and accept H_A, meaning that the parameter is statistically significant, otherwise H_0 is held truth. From the Table 5, it can be seen that the p-value of γ_4, γ_5, γ_6 and γ_8 are higher than the significant level α=0.05, hence these variables are insignificant. While γ_3, γ_2 and γ_7 are greater lower the significant level α=0.05, we reject the H_0 and conclude that these variables are statistically significant.

- **Coefficient of Determination**

Coefficient of Determination R^2 is a statistical measurement that is used to explain how much variability of one factor can be caused by its relationship to another factor. It is given

in percentages, the higher the value, the more variability of the dependent variable is explained by the independent variables. For our model $R^2 = 0.986$ which is a high measurement. To support it, we can also look at the Adjusted R^2 which takes into consideration the number of independent variables. For the described model Adjusted R^2 equals 0.976: 97.6 percent explained by changes in independent variables.

Econometric verification

The econometric verification will include tests of autocorrelation, heteroscedasticity and normality test to verify the conditions necessary for the subsequent application of the econometric model and its validity.

- **Heteroscedasticity test- White's Test**

Heteroscedasticity occurs when the standard errors of the observed variable are non-constant, meaning that it is a violation of the assumption for the linear regression model and the results cannot be trusted. Among other consequences are: significance tests will be either too low or too high, estimators will not be useful, standard errors will be highly biased. Hence, our data should show homoscedasticity. With the help of White's Test in SW Gretl we verified the p-value of 0.463932. P-value is higher than the significance level $\alpha = 0.05$, so no heteroscedasticity is present in the model.

- **Test for normality of the residuals**

The assumption for the econometric model is that the residuals (error term) have normal distribution, otherwise it would mean that our model does not explain all trends in the dataset and has lower predictive ability. To test for the normality, we would use the Jarque-Bera test. The Null Hypothesis states that the residuals have normal distribution across the data set. From the Graph 5 below, p-value of the test equal 0.57497, which is higher than the significance level $\alpha = 0.05$, hence the Null Hypothesis cannot be rejected and the model has normal distribution of the residuals. The following is also supported by the Graph 5, which illustrates the statistics for normality.

Graph 5: Test for normality of the residuals, Czech Republic
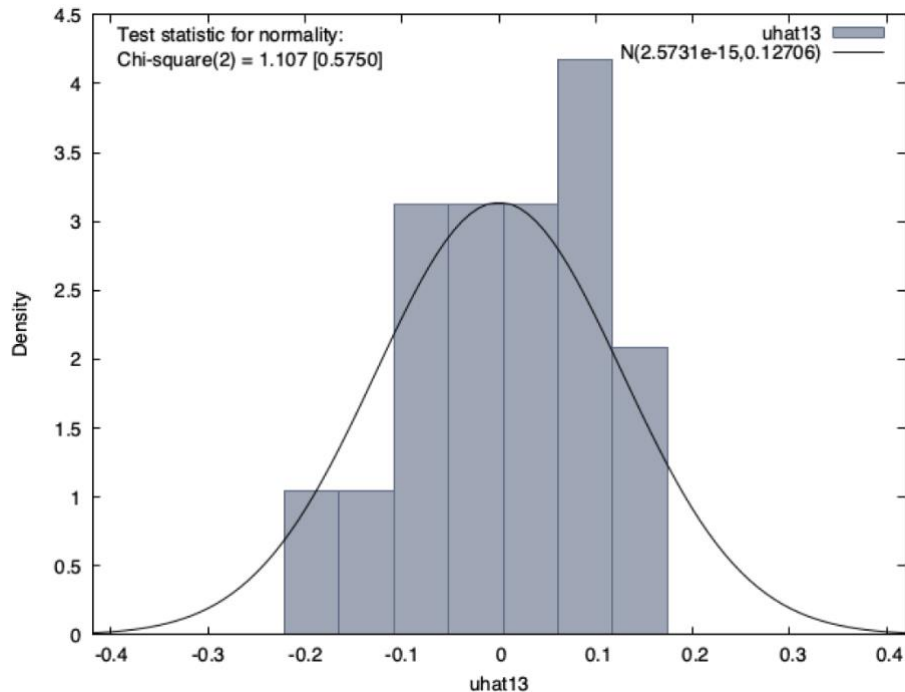
Source: SW Gretl

- **Autocorrelation test (Durbin-Watson test)**

Most commonly used method of testing the model for autocorrelation in the model is the Durbin-Watson test. Time series data is more commonly subjected for the autocorrelation, which means the correlation between values within the same variable, in turn that will affect the error term. In an essence, Durbin-Watson test is the test for serial correlation in error term[95]. From the constructed OLS model it is seen that the value for the Durbin-Watson test is 1.5335. The rule of thumb is that the value above 1.5 and below 2.5 indicate no autocorrelation.

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[95] CHATTERJEE, S.- SIMONOFF, J. *Handbook of Regression Analysis*. John Wiley & Sons 2013. ISBN 1118532813.

Next section will first run an OLS model on the data from the Russian Federation, interpret and verify it.

Multicollinearity check of data for the Russian Federation

As stated before in the paper, a regression coefficient represents the mean change in the dependent variable for each 1 unit change in an independent variable, holding the rest of independent variables constant and perfect multicollinearity occurs when the multiple correlation coefficient is equal to 1. The correlation matrix is checked for a coefficient greater than 0.8, which indicates that a changes in one independent variable will bring a changes in another independent variable. Form the Table 7 it can be seen that no correlation is present in the dataset, the OLS model can now be estimated without omitting any variables.

Table 7: Correlation matrix for the model Russian Federation.

	y_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8
y_1	1							
x_2	0.0154	1						
x_3	0.4944	-0.2794	1					
x_4	-0.2152	-0.7261	0.0622	1				
x_5	-0.0368	0.5612	-0.1758	-0.6785	1			
x_6	-0.2197	-0.0765	-0.5014	0.5353	-0.2746	1		
x_7	-0.3353	0.7896	-0.5242	-0.6708	0.7502	-0.0342	1	
x_8	0.1754	0.5429	-0.3485	-0.5321	0.4732	-0.0388	0.5949	1

Source: Gretl SW

OLS model estimation for the Russian Federation

The OLS model for the Russian Federation was run in this section. As a dependent variable was chosen again New Business Density. The independent variables, however, varied from the previous model run on the Czech Republic, and are as following:

y_1- New Business Density in number of new enterprises.

x_2- Cost of start-up procedures as a percentage of GNI per capita.

x_3- Corruption index. This is the first change from the model for the Czech Republic: the index does not affect the correlation matrix, and for that matter the model will proceed with it.

x_4- GDP per capita in current USD.

x_5- Research and Development expenditures as a percentage of GDP.

x_6- FDI inflow in billions USD.

x_7- Unemployment rate measured in percentage.

x_8- Inflation rate in percentage.

The final econometric model with the estimated parameters is:

$y_{1t} = 4.06345 + 0.08718 * x_{2t} + 0.09202 * x_{3t} - 0.000151 * x_{4t} + 2.43949 * x_{5t} + 0.01434 * x_{6t} - 0.85261 * x_{7t} + 0.08717 * x_{8t} + u_{1t}.$

Table 8: OLS Model estimation of the Russian Federation

```
Model 5: OLS, using observations 2003-2019 (T = 17)
Dependent variable: NBD

                coefficient    std. error    t-ratio    p-value
     ----------------------------------------------------------------
     const         4.06345       3.71389       1.094     0.3023
     cost_start    0.0871832     0.136213      0.6401    0.5381
     corrup        0.0920272     0.0769392     1.196     0.2622
     GDP_percap   -0.000151382   8.46853e-05  -1.788     0.1075
     RD_exp        2.43949       3.02288       0.8070    0.4405
     FDI_inflow    0.0143410     0.0107482     1.334     0.2149
     unemploy     -0.852612      0.315136     -2.706     0.0242    **
     inflat        0.0871703     0.0469336     1.857     0.0962    *

Mean dependent var    3.666059    S.D. dependent var    0.784850
Sum squared resid     2.695973    S.E. of regression    0.547314
R-squared             0.726459    Adjusted R-squared    0.513705
F(7, 9)               3.414551    P-value(F)            0.045274
Log-likelihood       -8.469596    Akaike criterion     32.93919
Schwarz criterion    39.60490     Hannan-Quinn         33.60178
rho                  -0.258830    Durbin-Watson         2.489174

Excluding the constant, p-value was highest for variable 2 (cost_start)
```

Source: Gretl SW

Economic verification

This section focuses on verification of the economic theory stated earlier in the paper based on our produced model. The parameters will be verified both on the sign and the intensity of the influence on the described variable New Business Density.

γ_2 – If cost of business start-up procedures increases by 1 percent, then the new business density will increase by 0.08718 new businesses. This does not support our theory: the lower the costs of start-up procedures, the higher the number of new businesses is. The issue can potentially be in the choice of data sources, as discussed previously.

γ_3 - If corruption index increases by 0.1, then new business density will increase by 0.09202. This also does not support our previously stated economic theory, as higher corruption results in more hidden indirect costs to start a business.

66

γ_4 - If GDP per Capita increases by 1 USD, then new business density will decrease by 0.000151 units. Same as for the Czech Republic, this does not support the economic theory, but there can potentially exist an indirect psychological link. Namely, less income an individual is getting, more motivated he might be to start his own business.

γ_5 – If R&D expenditures as a percentage of GDP increase by 1 percent, then new business density will increase by 2.43949 new businesses. This supports the economic theory and previous research[96]. Moreover, as stated before, this indicator has a direct positive influence on the birth of new firms. Furthermore, it is obvious from the model that this indicator has a significant influence. It can also be explained by the presence and great increase in the number of techno parks. Russian government promotes the commercialization and development of new technologies. One of the instruments is the presence of Techno parks and Special Economic Zones (SEZ)[97].

γ_6 – If FDI net inflows increase by 1 billion USD, then the new business density will increase by 0.01434 business units. That supports our economic theory: firstly, FDI can come in the form of greenfield projects and cooperation projects with the local businesses in order to establish a new venture. Secondly, research shows that FDI inflows produces positive spillovers to new businesses[98].

γ_7 – If unemployment rate increase by 1 percent, then the new business density will decrease by 0.85261 units. This supports the economic theory, since an unemployed person will possibly not be able to bear the cost of the new business formation.

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[96] ALMUS, M.-Nerlinger, E. Growth of New Technology Based Firms: Which Factors Matter? Small Business Economics, Volume 13 (2), pp 141-154.

[97] World Bank Group. Preserving stability; doubling growth; halving poverty how? Russia Economic Report, Issue 40. Available at: http://pubdocs.worldbank.org/en/673631543924406524/RER-40-English.pdf. Accessed 15 September 2019.

[98] ARIF, I.- KHAN, L. *FDI & New Business Startups: Does Financial Development Matter*? South Asian Journal of Management Sciences 2019.

γ_8 – If inflation rate increase by 1 percent, then the new business density will increase by 0.08717 units. This does not support the economic theory which states that higher inflation will increase the cost of borrowing for businesses, which in turn should result in lower number of new businesses. However, it supports the general economic theory that states that rising inflation comes with economic growth, which in turn is the breeding ground for new businesses to open[99].

Statistical verification

Statistical verification assesses model's compliance with data and statistical significance of the estimated parameters. To conduct the statistical verification, significance of parameters, and Coefficient of Determination will be used.

- **Statistical Significance of parameters (α=0.05) (p-values)**

Hypothesis:

H₀: $\gamma=0$, statistically insignificant

Hₐ: $\gamma \neq 0$, statistically significant

To reject the **H₀** and accept **Hₐ,** the p-value $< \alpha,$ meaning that the named parameter is statistically significant, otherwise we accept **H₀** and parameter is statistically insignificant. The significance level is $\alpha = 0.05$. From the Table 8 it is observed that the p-value of γ_2, γ_3, γ_4 and γ_5 are higher than the significant level α=0.05, hence these variables are insignificant. While γ_6, γ_7 and γ_8 are greater lower the significant level α=0.05, we reject the **H₀** and conclude that these variables are statistically significant.

- **Coefficient of Determination**

Coefficient of Determination R^2 is a statistical measurement that is used to explain how much variability of one factor can be caused by its relationship to another factor. It is given

[99] THURIK, R. - WENNEKERS, S. *Entrepreneurship, small business and economic growth*. Journal of Small Business and Enterprise Development, Vol. 11, 2004, No. 1, pp. 140-149. Available at: https://doi.org/10.1108/14626000410519173. Accessed 6 March 2021

in percentages: the higher the value, the more variability of the dependent variable is explained by the independent variables. For our model R^2 = 0.72 which is lower than the indicator for the model for the Czech Republic. Same goes for the Adjusted R^2=0.51. This can be explained by the number of independent variables and number of total observations.

Econometric verification

The following section will run heteroscedasticity White's test, test for the normality of residuals and autocorrelation test on the model constructed for the Russian Federation.

- **Heteroscedasticity test- White's Test**

Heteroscedasticity occurs when the standard errors of the observed variable are non-constant, meaning that it is a violation of the assumption of the linear regression model and the results cannot be trusted. This leads to one of the core consequences which is the non-trustworthiness of the error term, mainly a highly biased standard error. For the linear regression model there should be no presence of heteroscedasticity, on the contrary, it should have homoscedasticity. Having run the White's Test for heteroscedasticity in Gretl SW, it presented the p-value of 0.314164.

Test statistic: TR^2 = 15.987078,

with p-value = P(Chi-square(14) > 15.987078) = 0.314164

P-value is higher than the significance level α = 0.05, so no heteroscedasticity is present in the model.

- **Test for normality of the residuals**

Null hypothesis states the normal distribution of residuals, otherwise the residuals are heavy tailed or skewed. This test is crucial for the constructed model, since it contains only 16 observations. From the graph below it can be concluded that the residuals of the model are normally distributed with one outlier. This conclusion is also supported by the Chi-square at 2 degrees of freedom: p-value of the test equals 0.0537, which is greater than the

significance level α = 0.05, hence the Null Hypothesis cannot be rejected and the model has normal distribution of the residuals.

Graph 6: Test for normality of residuals for Russian Federation.
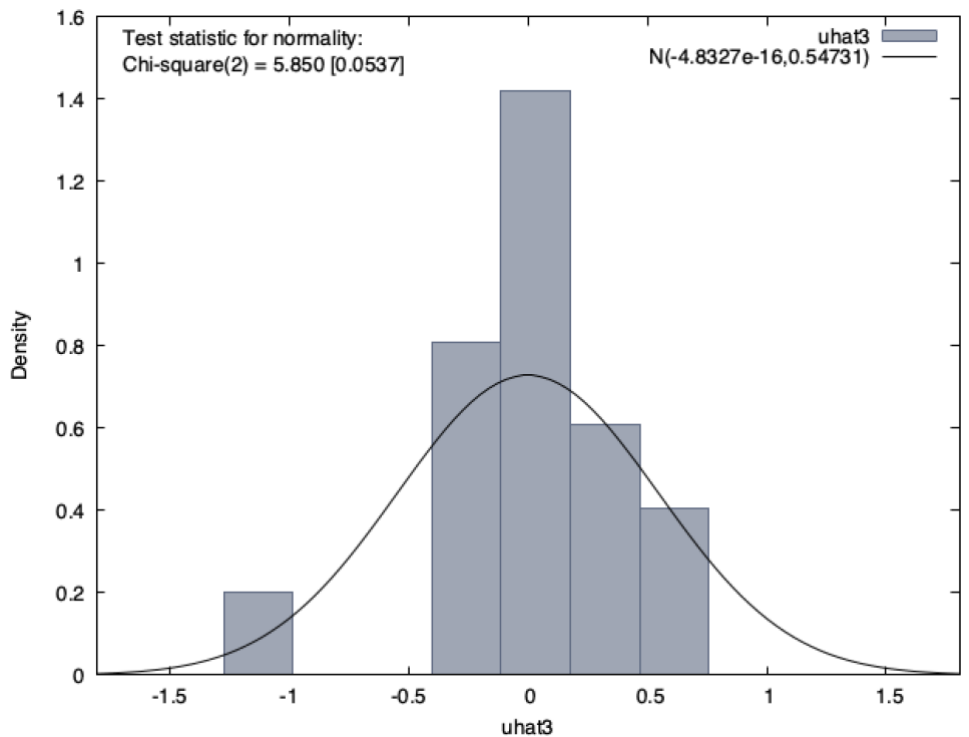
Source: Gretl SW.

- **Autocorrelation test (Durbin-Watson test)**

From the outcome from Gretl SW, Durbin-Watson statistic for the estimated model equals 2.489174, which is <2.5, which indicates no autocorrelation, however, it is closer to the indication of negative autocorrelation.

Comparison of the models

Having constructed the OLS models for both Czech Republic and Russian Federation, the paper will turn to answer the core question of which business environment can be predicted reliably and estimated with more confidence.

A recap of the model for the Czech Republic:

$y_{1t} = 17.886 - 0.0132124 * x_{2t} - 0.260026 * x_{3t} - 0.0000368257 * x_{4tt} - 0.0115952* x_{5tt}$
$+0.00492595* x_{6tt} - 0.274508 * x_{7tt} + 0.0101457* x_{8tt} + u_{1t}.$

Model fort he Russian Federation:

$y_{1t} = 4.06345 + 0.08718 * x_{2t} + 0.09202 * x_{3t} - 0.000151 * x_{4tt} + 2.43949* x_{5tt} +0.01434*$
$x_{6tt} - 0.85261 * x_{7tt} + 0.08717* x_{8tt} + u_{1t}.$

First of all, it can be observed that if all independent variables are held at zero, then the NBD number will be drastically different for both economies. For the Czech Republic the NBD yearly will be 17 new enterprises, which signalizes that currently the chosen indicators play a vital role in the business environment: for the year 2019 NBD in the Czech Republic is 4.5 businesses. The results draw the conclusion that most indicators have a negative influence on the NBD number and hinder the willingness to start a business. As for the Russian Federation, the change is slight: in 2019 NBD was 3.68 and having all independent variables at zero it will grow up to 4.06 new businesses annually. Potentially it means that the indicators selected for the OLS model estimation for Russia are either not statistically significant, thus having little influence on the outcome, or another set of independent variables should be taken into consideration. This conclusion is supported by the outcome of statistical verification: only three explanatory variables-unemployment, inflation and R&D expenditures were statistically significant.

Diving deeper into the economic and statistical verification, the most effect on the business environment in both economies has the indicator of unemployment. For the Czech Republic $\gamma_7 = -0.2745$ and for Russia $\gamma_7 = -0.85261$. This indicator for both models is statistically significant and has reverse effect: the lower the unemployment rate, the higher

the NBD number. However, for the Russian Federation it seems to have more influence: if unemployment rate increase by 1 percent, then NBD will drop by 0.85 new businesses. In reality that is an important link, since judging from the Federate statistics, the unemployment trend can be unpredictable. For the business environment higher unemployment means that population will have less disposable income, thus lower sales for businesses, and thus less motivation for new establishments to open. Another potential threat lies in the effects that unemployment brings. Unemployment rises when economy falls into recession, however, what can boost the economic growth back is the activity of new businesses. However, concluding from the OLS model, higher unemployment will significantly lower the NBD, hence the economy might not be able to expand promptly.

Graph 7: Unemployment rates in Russia and Czech Republic 2003-2019, linear trend.
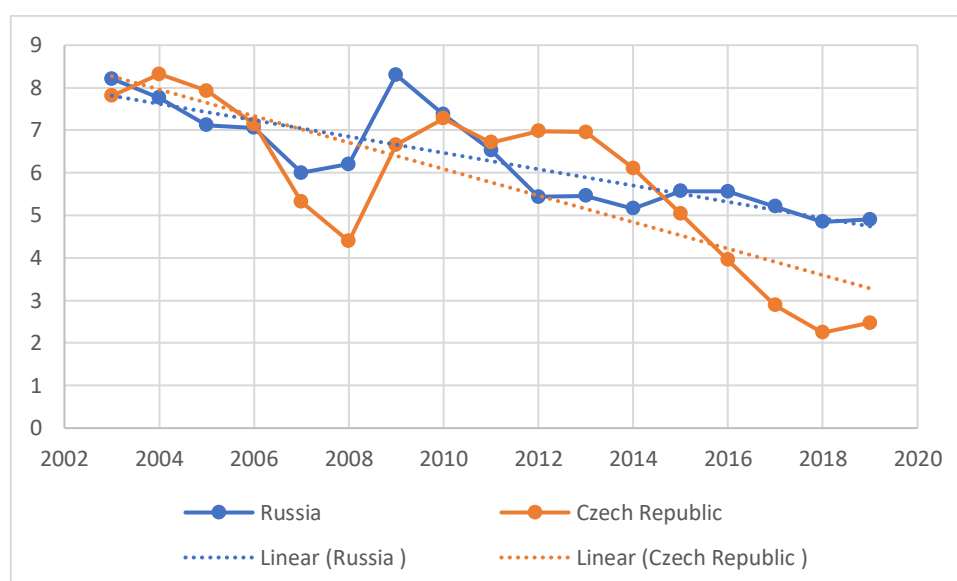
Source: own processing of statistical data

Another statistically significant indicator researched in the model, which in economic theory is directly connected to unemployment is inflation. This case is particularly curious for the OLS model for Russia, since it supports the theory based on the Phillips curve, that inflation and unemployment have an inverse effect. In our estimated model $\gamma_8 = 0.08717$ with a positive sign. On the contrary to unemployment, it has positive effect on NBD, but less strong one. However, the Phillips curve allows to draw a conclusion that in this case,

predictions are possible to be made. Namely, growing unemployment will have a predicted inverse relation on price inflation, thus for policy makers focusing on either of two, will at the same time have an effect on NBD. However, it can be concluded that dependency of NBD on inflation for the Russian model is severe: over the past five years inflation peaked at 15.5 percent in 2015 and dropped as low as 2.8 percent in 2018 (Graph 8 in Appendix).

For research it highlights the inability to reliably estimate neither inflation, nor the number of new businesses. Apart from that, it puts immense pressure on the Russian Central Bank to establish and act on the stable monetary policy. Fluctuating rate of inflation puts new businesses in greater financial risk, since most ventures are often being financed by the owners' own savings. Likewise, it decreases the buying power of the business itself, limiting abilities to hire new employees, expand to new markets or invest in new machinery and equipment.

As for the Czech Republic, unemployment rate seems to affect NBD to a less extent, however, judging from the data, the unemployment rate has been fluctuating, even though not as much as in Russia, and any future predictions can be unreliable. On the other hand, the forecast function used by Excel predicts that unemployment rate will be decreasing for both countries, hence the NBD would be increasing. For the Czech Republic, however, the labour market efficiency depends on the geographical location: lowest unemployment rates are reported in the city of Prague, while northern regions are believed to have higher unemployment rates. Long-term the over-saturation of new businesses in one particular area is possible. Hence, at some point supply can be much higher than demand. On the other hand, it will push for higher competitiveness and as a result lower prices, better product offer and improved quality. As for the northern regions of the country, new investors and multinational companies have a potential to enhance the situation, while also bringing FDI and workplaces into the country.

Another threat which is connected to high dependency on the unemployment rate is population ageing. Population ageing decreases the total number of working population over 65 years old, bringing more economic dependency of the group. Research points out that by the year 2060 33 percent of population of the Czech Republic will be above the

working age[100]. As for Russia, already by the year 2031, 28.8 percent of the population will be above the working age[101]. Ageing population in both economies will bring the following effects on the new businesses: declining economic activity, lower spendings, switched patterns of savings and investments and overall shortage of labour supply. With ageing population and as a result of it declining economic activity, the unemployment rates will begin to increase, thus lowering the number of new businesses. Both economies need to act on both the social and labour policies quickly, to address the upcoming changes in the structure of working population.

On the other hand, this particular trend hides an opportunity for businesses to grow on: changing patterns of spending of the group of people older than 65 years old, creates an opportunity for new businesses to grow and develop in the sectors that are yet to emerge. For instance, healthy ageing and nutrition for older consumers. Apart from that, both Russia and Czech Republic currently have a limited offer of the healthcare devices and biotechnology that would serve the needs of the older generation.

Ageing population will have an adverse effect on the second statistically significant variable- R&D expenditures as a percentage of GDP. With a higher proportion of people relying on pension system and government payments, less will be spent on R&D.

The results of the estimated OLS model propose the second conclusion- NBD can be influenced by R&D expenditures as a percentage of GDP. In case of Russia, the influence is colossal: $\gamma_5 = 2.43949$ and has a positive effect on the dependent variable NBD. For Russia this can be explained by the growing number of national programs aimed at increasing R&D expenditures, as well as the growing development of techno parks. One of

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[100] NÝVLT, O. *The Models of Estimated Development of Labour Market in the Czech Republic up to 2050*. Prague: University of Economics, 2013. 93(4). Available at: https://www.czso.cz/documents/10180/76172525/180213q4046.pdf/b1aee6f6-7ec3-4c5b-9a2b-703aaa9be96f?version=1.1. Accessed 5 March 2021.

[101] WHO (World Health Organization). *Study on global Ageing and adult health (SAGE), Wave 1, Russian Federation National Report*. National Research Institute of Public Health, Russian Academy of Medical Sciences (RAMS). December 2013.

the examples is the latest National Project "Science". "Science" is set to roll out until 2024 and to bring the total of 3.3 billion USD to three separate spheres: development of the scientific infrastructure, advancement of scientific research and development cooperation, and promotion of human potential in the applied scientific spheres. In this way the number of new business opening annually is expected to grow, and by the end of the project "Science", new ventures will be able to benefit from the new and improved infrastructure, skilled workforce and start-ups applying for grants and patents. Coupled with the growing need to serve the ageing population with the medical technology, this opportunity opens a market segment which is yet to be explored in Russia.

As for the Czech Republic, two independent variables were proven to be statistically significant- cost of business start-up procedures as a percentage of GNP per capita and total tax and contribution rate as a percent of commercial profits. The first indicator in the future will remain as low as 1 percent according to World Bank Data[102], or as low as 0.1 percent according to other sources[103]. In this manner the impact on NBD would be neglectable. As for the second independent variable- total tax and contribution rate- the influence on NBD is significant. Having conducted the economic verification, it was established that if the indicator increases by 1 percent, then NBD will drop by 0.26 new businesses.

As already analysed in chapter Taxation of legal entities in the Czech Republic, the corporate income tax is set at 19 percent and the taxation applies to all activities, including those of foreign branches. Additionally, the employer bears the responsibility of the following social security payments: 21.5 percent to the pension insurance, 1.2 percent to unemployment insurance, 9 percent is paid to health insurance and 2.1 percent is to be paid

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[102] World Bank Data. *Cost of business start-up procedures (% of GNI per capita) - Czech Republic*. World Bank, Doing Business project. Available at: https://data.worldbank.org/indicator/IC.REG.COST.PC.ZS?locations=CZ. Accessed 6 March 2021.

[103] Index Mundi. *Cost of business start-up procedures (% of GNI per capita)*. World Bank, Doing Business project. Available at: https://www.indexmundi.com/facts/indicators/IC.REG.COST.PC.ZS/rankings. Accessed 6 March 2021.

towards sickness insurance. Altogether, the business pays 33.8 percent as contributions to social and health security, on top of the income tax. In 2019 the total tax and contribution rate totalled to 46.1 percent, which is above the OECD average of 39.9 percent[104]. The number is relatively high and can potentially be unbearable for small businesses, since during the state of growth the profits are low. Taxes are believed to be the core source of income for the governments, however, in this particular case it is proven by the OLS model to have a negative effect on NBD. For the Czech Republic it is an opportunity to act on the current tax code and reach the OECD average, thus stimulating the competitiveness of the business environment. On the other hand, the last major tax overhaul was conducted in 2003, and even though the speculations arise of the next overhaul to occur during 2021, the businesses are yet to see any major changes.

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[104] The World Bank. Doing Business Report 2020 [online]. International Bank for Reconstruction and Development, The World Bank Group. Washington. ISBN: 978-1-4648-1441-9

Results and Discussion

The estimated OLS models brough to the conclusion, that the number of new businesses being established annually in Russia is mostly influenced by R&D expenditures, unemployment rate and inflation rate. In the Czech Republic the most crucial factors are believed to be cost of start-up procedures as a percentage of GNP per capita, tax and contribution rates as a percentage of commercial profits, and unemployment rate. Apart from the obvious differences, both models contrasted in the value of dependent variable y_1. Holding all independent variables at 0 value, the number of new businesses established annually in Russia would total to 4.06, while under the same condition for the Czech Republic the number will be significantly higher- 17.88 enterprises annually. The figure for both Czech Republic and Russia concludes that there is an additional set of independent variables needed to be considered for the OLS estimation.

One of the more obvious results were estimated in the OLS model for the Czech Republic: both costs of start-up procedures and tax and contribution rates were found to be statistically significant. Derived from statistics, the costs of start-up activities as a percentage of GNI per capita are supposed to stay at the stable level of 0.1 percent, which allows for the estimation of the future development of NBD number. Tax and contributions rate, on the other hand, have more effect on the model, hence influence businesses to the greater extent. Policymakers in turn have an ability to provide wide financial incentives for small businesses to start. For instance, small business loans without the requirement to secure it with property, tax deductions and potentially lower tax rates for companies starting in less developed areas.

As far as the current set of variables is considered, the most alarming one is the influence of inflation on NBD in Russia. One of the concerns is inability of the Russian Central Bank to control inflation over a long period of time[105]. Judging by the statistical data and national laws, it can be concluded that the switch in the monetary policy adjusts to the switch in trade direction and geopolitical tensions, which influences the value of the currency. The monetary

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[105] VOSKOBOYNIKOV, I. Sources of long run economic growth in Russia before and afer the global financial crisis. Russian Journal of Economics 3(4): 348-365. Available at: https://doi.org/10.1016/j.ruje.2017.12.003. Accessed 10 October 2019

policy in Russia is more concerned with keeping the currency rate stable, taking into account the volatility of the prices of natural resources, not with the consumer prices or keeping the healthy rate of inflation needed for the economic development. Only recently has the focus legitimately switched towards inflation-targeting, however, another shock in oil prices threatens to switch the monetary policy target once again. Inflation in the Czech Republic, as concluded by the OLS model, is statistically insignificant, which can potentially be explained by the more stable and predictable rate, with the fluctuations not exceedingly more than 4 percent (Graph 8).

As for the unemployment rate, both economies seem to follow similar statistical trend, as well as constantly promoting policies to target rising unemployment by the means of encouraging education and skill-sharing, investment incentives for Transnational corporations, freezing of the minimum wage, highly reduced interest rates and exercising independent monetary policy.

Since the beginning of the market transformation unemployment rates in Czechia remained at the 3 percent target and did not exceed 9 percent during the years of restrictive monetary policy[106]. All this possible due to the greater level of industrialization of the economy, proximity to Germany and Austria and labour movement to the manufacturing sector. Over the past 10 years the efforts of the government also prepared the ground for rapid economic development and low unemployment. Namely, in 2012 the minimum wage freeze and increase of the limit on working hours for selected activities helped to abate the wage increase, thus making Czech firms more competitive in the Eurozone. Furthermore, Czech Republic, even though being a EU member, can adapt an independent monetary policy to follow national interests. Thus, the Czech National Bank took active steps to intervene in the currency market and interest rate policy. By the end of 2012 Czech National Bank lowered the interest rates to 0.05 percent and maintained it at this level until the end of 2017. Meantime, as the prices of goods started declining, the National Bank (CNB) introduced regular currency interventions to keep the fixed exchange at the relatively stable rate below the 27 CZK/EUR threshold. Nevertheless, the core target of the CNB was to maintain stable prices to control inflation, the described policies had spillovers to the economic policy as well. The measures were greatly made to support the exporting companies, hence the

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[106] Eurostat statistics. Unemployment in the EU and Euro area. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/Unemployment_statistics#Unemployment_in_the_EU_and_the_euro_area. Accessed 10 March 2021

employees of these companies benefitted from the rapid growth. On the other hand, the polices benefitted the companies serving primarily the domestic market, since the increase of the import prices rejuvenated the demand for domestic products, further limiting unemployment. The historical trend and policy measures signalize the ability of the government to spot and tackle the issue of unemployment, which in return suggests stability for new businesses. As for the Russian Federation, the labor market is believed to be effective and able to adjust itself and bounce back in times of crisis, provided by the numbers which demonstrate almost the state of full employment. However, a slight issue might be the widespread of labor force across the country. For the businesses choosing to start operating outside of the metropolitan area it might be an issue to find skilled workforce, given the history of labor focused primarily in heavy industries or energy sector.

The limited number of statistically significant variables suggest that there is a set of other variables that have a potential to estimate the model to a greater degree. For instance, more consideration should be given to trade balance as well as the structure of export and import. Czech Republic in 2019 exported 198 billion USD worth of products, while imports totaled to 174 billion USD[107], leaving the country with positive trade balance of 24 billion USD. Among the top export products are Vehicles and their parts, Machinery, Electrical equipment, plastics and items thereof and iron or steel articles. Czech Republic has a well-developed manufacturing industry, which benefits from lower paid but educated and skilled workforce and FDI coming to the country from the closest partners. As for Russia, exports in 2019 totaled to 407 billion USD, exporting mainly Mineral fuels (59.1 percent), Iron and steel (4.86 percent) and Precious metals (4.38 percent). Value of exports is thus directly connected to the world price for the petroleum and gas. Therefore, most government support is linked to stimulating the production and export of products of the energy sector[108]. This brings to the discussion of the major threat for the business environment associated with the predominance

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[107] WTO (World Trade Organization).Trade Profile: Czech Republic. Available at: http://stat.wto.org/CountryProfile/WSDBCountryPFView.aspx?Country=CZ&Language=F. Accessed 22 March 2020.

[108] EVSEEVA, A. Investment climate in Russia in energy and agricultural sectors from the perspective of opportunities for foreign direct investment (Bachelor's thesis). Supervisor: doc. Ing. Ludmila Sterbova, CSc. University of Economics, Prague, June 2018.

of the energy sector. The issue is the threat and present symptoms of the Dutch Disease[109].
Dutch Disease is an economic term for the situation on which the rise in production, exploitation, export and subsequent dependence on natural resources results in crowding out of other sectors of the economy. Essentially it leads to the advancement of the exporting sector of the economy, and steady decline of other sectors. This results from a sudden switch of the economy towards exporting natural resources and greatly increasing the value received from exports. This creates the demand for local currency and real exchange rate appreciation as a result. However, it ties up the exchange rate to the price of traded commodity, which results in spikes in appreciation and depreciation of exchange rate depending on the world price of the said commodity. In addition to that, it puts pressure on the Central Bank to control the monetary policy to prevent rapid currency appreciation. Even though for the trade balance trade in natural resources is advantageous, it leaves out non-exporting sectors of the economy. With all finances focusing on natural resources, other industries become less competitive over time, and production, for instance, of manufactured goods, is eventually being outsourced to lower income countries, or these goods start to be imported. In case of Russia, the symptoms of Dutch Disease are present: Crude Petroleum alone totals to 30.3 percent of overall exports. Statistics show that the Rubble exchange rate is tied to the price of the crude oil on the market (Graph 9 and Graph 10 in Appendix).

As soon as price of oil drops, rubble follows the case. For businesses it indicates several issues. Firstly, inability to predict and calculate trade exchanges based on the currency. Secondly, exchange rate depreciation leads to imports being more costly. In the current trade atmosphere, most businesses would import machinery, raw materials or final products for selling on the local market. Over the time, high-cost import-dependent businesses will become less competitive and lose market share. Additionally, currency appreciation will subsequently put pressure on inflation: higher import prices result in higher prices overall in the economy for businesses and consumers. Finally, local industries become less competitive and have to serve the local market only. One of the examples can be the LADA car company, which only exported approximately 5000 cars to Europe, with main export destinations still being the closest bordering countries- Belarus and Kazakhstan.

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[109] The World Bank. *Dealing with Dutch Disease* [online]. Poverty Reduction and Economic Management (PREM) network. Available at: http://documents1.worldbank.org/curated/en/794871468161957086/pdf/548670BRI0EP160Box349431B01PUBLIC1.pdf. Accessed 12 March 2021

Following with the issue of international trade, for businesses to grow and be competitive it is vital to be able to export products to international markets. It allows for the development of industries with comparative advantage, process standardization and as a consequence achievement of economies of scale, decrease of unit costs, likewise higher quality and greater selection of products for the consumers. International trade amounted to 19 trillion USD in 2019, approximately 20-25 percent of the World GDP (app. 81 trillion USD). In this sense, trade restrictions, export and import volumes and Regional Trade Agreements, as well as export and import barriers should be considered for future OLS estimations. For instance, since Czech Republic is a EU member, businesses can benefit from the EU Single Market and EU Free Trade Agreements. These instruments allow EU to negotiate the best trade conditions for the member states, including the reduced or zero-rate tariffs, introducing fair barriers to trade to support local businesses. In the Common Commercial Policy EU acts as a single representative of the States to negotiate the trade deals. Hence, Czech businesses can rip the benefit of 46 Regional Trade Agreements (RTA) connected to trade in goods and services. At the same time, Russia only has 11 RTAs in place, none of which are related to the core trade partners. For the businesses it means that exports and imports will be expensive, barriers to trade will be high and support for the local businesses in the foreign markets might eliminate foreign competition. Apart from that, trade restrictions can come in the form of rules of origin, special labelling and packaging regulations and exchange rate manipulation.

Conclusion

Since the beginning of the market transformation both former centrally controlled economies of the Czech Republic and Russian Federation followed the different set of rules and procedures to achieve the market economy. As a consequence, both economies achieved the market economy at distinct times, to the distinct degree and with different outcomes for the business environment.

The diploma thesis analysed the administrative procedures to start a business in both countries and drew the conclusion that both the time and procedures do not possess any major differences: the process in both economies follows a set of steps and does not require nor extensive resources, not time or foreign partner. Following that, the tax laws and regulations for businesses were broken down: starting from the corporate tax and VAT, deductibles and reduced VAT rates, and concluding with social and security contributions. In general, the differences are slight.

The core objective of the thesis was to analyse and compare business environments in both Czech Republic and Russian Federation. The aim was achieved by selecting the most relevant aspects for starting a business in order to prepare the OLS model and estimate it. First task was the identification of the relative aspects, which were the following: Cost of business start-up procedures as a percentage of GNI per capita, Corruption Perception Index (CPI), total tax and contribution rate as a percentage of commercial profits, GDP per capita in current USD, R&D expenditure as a percentage of GDP, FDI net inflows in billions USD, unemployment and inflation rates. Next, data observations were collected for the years 2003 until 2019. Finally, both models were estimated and verified.

In conclusion, both models contained a very limited number of statistically significant variables. For the Russian Federation most influence on the model has R&D expenditures, inflation and unemployment. As discussed in the paper, both unemployment and inflation, as well as their inverse relation and substantial spikes in statistics were considered to be a threat to the businesses and future estimation of the NBD number. Neither the unemployment nor inflation allow for future predictions and forecasts. Moreover, neither of two seem to be actively targeted by the policymakers in Russia. For that matter, the businesses environment in Russia is considered very uncertain and the forthcoming number of SMEs cannot be estimated reliably. Additionally, to allow for better predictions and analysis of the situation in

future research additional variable should be considered, i.e. structure of exports, international trade barriers and exchange rate fluctuations.

On the subject of OLS estimation for the Czech Republic, statistically significant variables were the cost of start-up procedures, tax and contribution rates after deductions and unemployment rate. Keeping the costs of setting up a start-up at the constant level of 0.1 percent, only two remain under question. In discussion part the examples of government policies to tackle unemployment were presented, concluding the active attempts of the government to tackle unemployment. With the speculation of the major tax overhaul coming in the next years, it provides a promising conclusion that the NBD number in the Czech Republic can be estimated reliably and can also be increased with the correct set of policies. However, same as for the OLS model for the Russian Federation, structure of home economy and trade should be analysed, as it withholds the absolute advantage when compared to Russia.

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Appendix

Graph 3: Inflation, Consumer Prices, percentage, annual. Russian Federation 1993-2003.

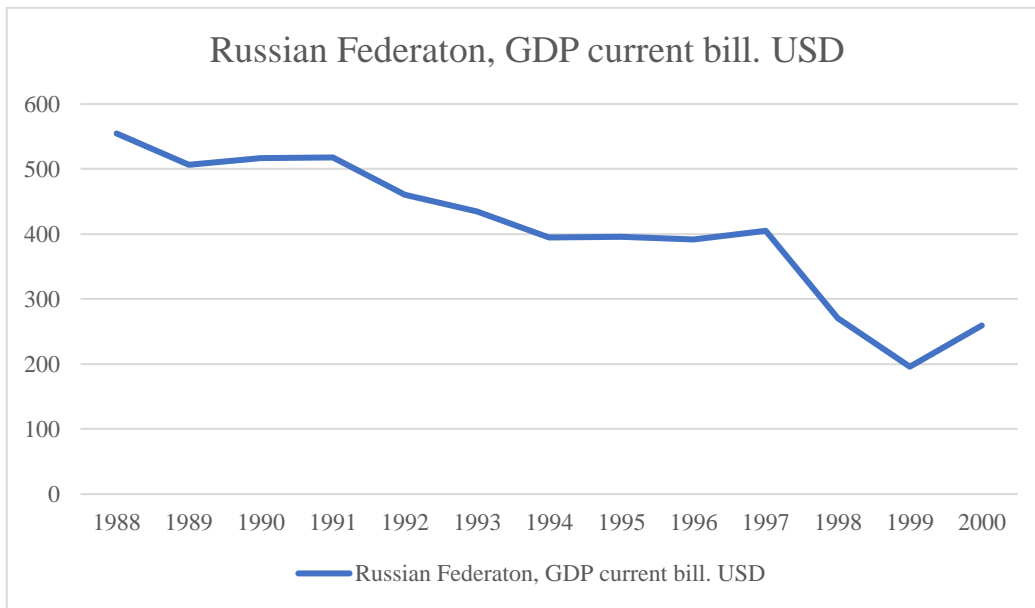Source: World Bank Data, 2019

Graph 4: Unemployment, percentage of total population. Russian Federation.

Source: World Bank Data, 2019

Graph 5: GDP Current USD, billion USD, Russian Federation

Russian Federaton, GDP current bill. USD

Source: World Bank Data, 2019

Graph 4: GDP, current bilUSD, Czech Republic 1991-2003.

Czech Republic, GDP curent bil USD
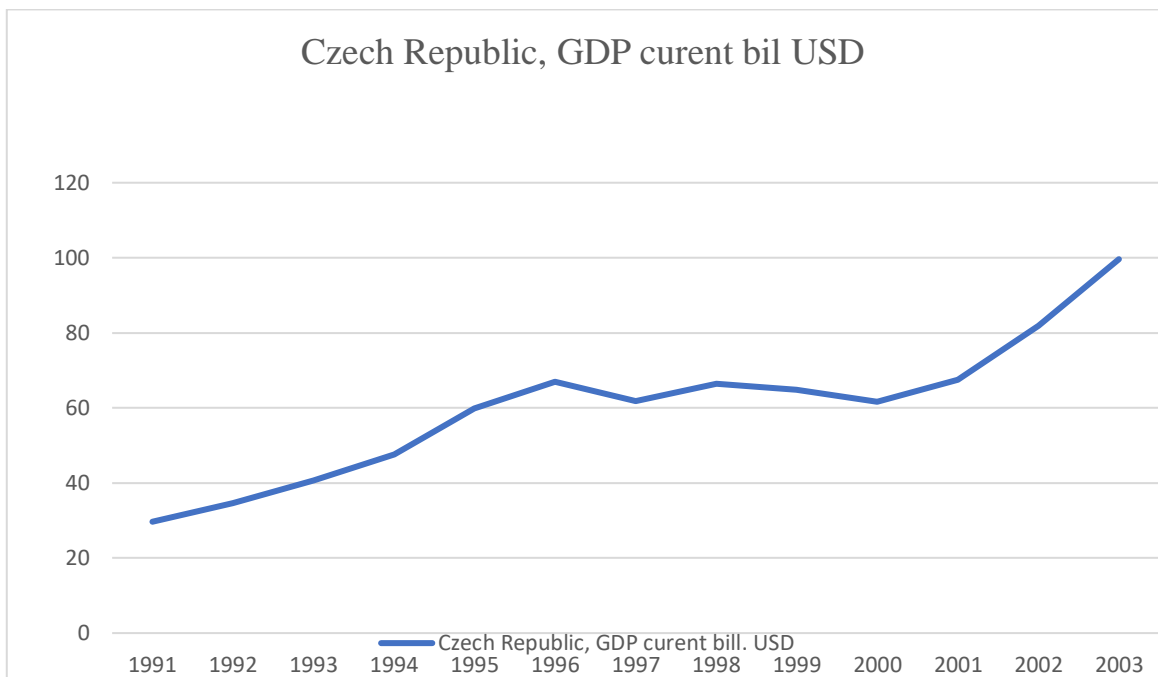
Source: World Bank Data, 2019

Table 6: White 's test for the Czech Republic

```
White's test for heteroskedasticity
OLS, using observations 2003–2019 (T = 17)
Dependent variable: uhat^2
```

	coefficient	std. error	t-ratio	p-value
const	9.63438	30.7414	0.3134	0.7836
cost_start	−0.00330023	0.00456216	−0.7234	0.5446
tax_contrib	−0.494562	1.29314	−0.3825	0.7389
GDP_percap	7.40053e−05	6.96994e−05	1.062	0.3996
RD_exp	1.13138	0.942408	1.201	0.3528
FDI_inflow	0.00546955	0.00652044	0.8388	0.4898
unemploy	−0.0590391	0.0807121	−0.7315	0.5406
inflat	−0.0278141	0.0302930	−0.9182	0.4555
sq_cost_start	0.000127829	0.000155665	0.8212	0.4979
sq_tax_contrib	0.00551169	0.0137637	0.4005	0.7276
sq_GDP_percap	−1.91224e−09	1.73302e−09	−1.103	0.3849
sq_RD_exp	−0.345165	0.284747	−1.212	0.3492
sq_FDI_inflow	−0.000411154	0.000396780	−1.036	0.4090
sq_unemploy	0.00525202	0.00812609	0.6463	0.5843
sq_inflat	0.00359956	0.00459839	0.7828	0.5157

```
  Unadjusted R-squared = 0.812375

Test statistic: TR^2 = 13.810372,
with p-value = P(Chi-square(14) > 13.810372) = 0.463932
```

Source: Gretl SW

Graph 8: Inflation, Consumer Prices, Czech Republic and Russian Federation, 2003-2019

Source: World Bank Data, 2019

Graph 9: Exchange rate historical RUB to USD, March 2011-March 2021

RUB to USD Chart
Russian Ruble to US Dollar

● **1 RUB = 0.0136046 USD** Mar 12, 2021, 23:29 UTC

| 12H | 1D | 1W | 1M | 1Y | 2Y | 5Y | **10Y** |

0.0366407

0.0342116
Mar 19, 2012, 00:00 UTC

0.0251534

0.0186534

0.0121534

Mar 2011 Apr 2012 Jan 2013 Sep 2013 Jun 2014 Mar 2015 Jan 2016 Sep 2016 Jun 2017 Mar 2018 Dec 2018 Oct 2019 Mar 2021

Source: XE. Historical currency rates [online]. https://www.xe.com. Accesssed 12 Macrh 2021

Graph 10: Crude oil prices, USD, historical chart. March 2011- March 2021

Source: Macrotrends LLC [online]. Available at: https://www.macrotrends.net/1369/crude-oil-price-history-chart. Accessed 12 March 2021.

Table 9: Data set for econometric model, Russian Federation.

	y_1 (business units)	x_1 Unit Vector	x_2 (% GNI per capita)	x_3 (1-100)	x_4 (current USD)	x_5 (% of GDP)	x_6 (bilUSD)	x_7 (%)	x_8 (%)
2003	3.7	1	6.8	27	2975.113	1.29	7.929	8.21	13.663
2004	3.88	1	5.6	28	4102.372	1.15	15.4	7.763	10.889
2005	3.98	1	4.4	24	5323.474	1.07	15.5	7.124	12.685
2006	4.144	1	3.4	25	6920.194	1.07	37.595	7.055	9.669
2007	3.951	1	3.2	23	9101257	1.12	55.874	6.002	9.007
2008	4.053	1	2.2	21	11635.274	1.04	74.783	6.205	14.111
2009	2.501	1	1.8	22	8562.814	1.25	36.585	8.301	11.647
2010	2.513	1	1.8	21	10674.997	1.13	43.168	7.369	6.849
2011	1.534	1	1.6	24	14351.212	1.013	55	6.536	8.44
2012	3.897	1	1.4	28	15434.575	1.027	50.588	5.436	5.075
2013	3.926	1	1.2	28	16007.09	1.025	69.219	5.458	6.755
2014	4.235	1	0	27	14100.729	1.07	22.031	5.16	7.82
2015	4.549	1	0	29	9313.788	1.097	6.8	5.571	15.534
2016	4.363	1	0	29	8745.375	1.096	32.5	5.559	7.042
2017	3.987	1	0	29	10750.587	1.107	28.577	5.212	3.683
2018	3.26	1	0	28	11288.872	1.01	8.785	4.846	2.787
2019	3.68	1	0	28	11510.425	1.01	10.32	4.9	4.47

Source: Federal State Statistics Service, 2019; World Bank Data, 2020

Table 10: Data set for econometric model, Czech Republic

	y_1 (business units)	x_1 (Unit vector)	x_2 (% of GNI per capita)	x_3 (1-100)	x_4 (% of profits)	x_5 (current USD)	x_6 (% of GDP)	x_7 (bilUSD)	x_8 (%)	x_9 (%)
2003	2.089	1	47.4	39	48.7	9773.118	1.15	2.021	7.812	0.119
2004	2.112	1	44.5	42	48.7	11685.877	1.15	6.423	8.321	2.76
2005	2.18	1	39	43	48.7	13346.176	1.17	13.73	7.927	1.857
2006	2.25	1	36.8	48	48.2	15183.636	1.23	7.132	7.148	2.534
2007	2.86	1	34.9	52	47.7	18373.649	1.3	13.816	5.32	2.853
2008	3.072	1	31.8	52	47.7	22698.854	1.239	8.815	4.392	6.359
2009	2.941	1	30.5	49	46.4	19741.598	1.29	5.272	6.662	1.019
2010	3.049	1	30.9	46	45.4	19808.071	1.34	10.168	7.279	1.473
2011	2.894	1	30.7	44	45.7	21717.458	1.556	4.189	6.711	1.917
2012	2.972	1	29.7	49	45.7	19729.871	1.782	9.433	6.978	3.288
2013	3.093	1	29.5	48	45.6	19917.169	1.9	7.358	6.953	1.438
2014	3.424	1	0	51	46.5	19744.559	1.973	8.089	6.108	0.344
2015	3.695	1	0	56	46.5	17715.617	1.93	1.7	5.046	0.309
2016	3.982	1	0	55	46.1	18463.387	1.687	10.851	3.951	0.684
2017	4.487	1	0	57	46.1	20379.896	1.792	11.235	2.89	2.451
2018	4.593	1	0	59	46.1	23078.573	1.9	8.494	2.243	2.149
2019	4.5	1	0	56	46.1	23344	1.5	9.87	2.47	2.848

Source: Czech Statistical Office (CZSO), 2019; World Bank Data, 2019; Index Mundi, 2019.