

Czech University of Life Sciences Prague

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Diploma Thesis

Ease of doing business

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DIPLOMA THESIS ASSIGNMENT

Ondřej Josíf

Economics and Management

Thesis title

Ease of doing business

Objectives of thesis

The goal of the diploma thesis is to conduct evaluation and global comparison of setting up and running firms in selected countries around the globe. It deals with factors, regulations and indicators of domestic firms in different economies and it describes opportunities and threats of businesses operating in today's globalized business environment. The areas of the ease of doing business are for instance: starting a business, dealing with construction permits, getting electricity, registering property etc. Thesis broadens the scope of focus by adding extra indicators and observing the shift of selected economies on the index. The indicators are annual GDP growth, corruption rate and unemployment rate.

Methodology

Literature review is analyzed using methods of synthesis, extraction, deduction and induction. Practical section makes use of comparative methods, observation and analysis.

The proposed extent of the thesis

60 pages

Keywords

Domestic firms, regulations, constraints, global economy, opportunities and threats, construction, external surroundings, home environment, GDP growth, unemployment rate, corruption rate

Recommended information sources

Bank, W. (2008). Doing Business. Washington: The World Bank
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Declaration

I declare that I worked on my diploma thesis titled "Ease of doing business" 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 third person.

In Prague on the 20.3.2016

Ondřej Josíf

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Index snadnosti podnikání

Ease of doing business

Souhrn

Tato práce se zabývá jedním z indexu sestavovaných Světovou bankou jménem "Index snadnosti podnikání". Jedná se o hodnocení jednotlivých států z pohledu podmínek pro podnikání, regulací v podnikání a atraktivitu pro zahraniční investory. Čím vyšší index je, tím je situace příznivější. Index byl však kritizován pro předmětnost jeho zkoumání a bylo řečeno, že v indexu chybí významné indikátory, které určují podnikatelské podmínky v té dané zemi. Tato práce se zabývá právě tímto problémem a přidává k indexu některé z chybějících indikátorů, které by potenciálně mohli ovlivnit hodnocení jednotlivých ekonomik a sleduje právě jejich pohyb po indexu.

Klíčová slova: Domácí firmy, předpisy, omezení, globální ekonomika, příležitosti a hrozby, sestavení, vnější vlivy, domácí prostředí, růst HDP, míra nezaměstnanosti, míra korupce

Summary

This thesis deals with one of the indexes done by the World Bank called the "ease of doing business index". It ranks individual countries from the point of view of regulatory environment of such country. It examines the ease of setting up a business, regulations in entrepreneurship, and attractiveness for foreign investors. The higher the index the better is the situation in a country. However there have been much criticism focused on the objectivity of its measurements. It has been suggested that some indicators that are vital to picture the real economic situation are missing. This thesis will deal with adding some of these missing indicators that could potentially influence the rating of individual economies and observe their shift on the index.

Keywords: Domestic firms, regulations, constraints, global economy, opportunities and threats, construction, external surroundings, home environment, GDP growth, unemployment rate, corruption rate

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1. Introduction

One of the factors for improving the quality of life is an economic growth. The more money the economy has the better living conditions it can provide for its citizens; better education, healthcare, social services, these are all examples of what an economy can provide their citizens with. If the economy is doing well the unemployment declines and the living standards are improving. Improving a business environment is therefore very important and most of the developed economies are striving for better conditions for entrepreneurs. Some countries however develop better at a faster pace and some do not. There are many factors why this phenomenon is happening and no unique answer. What can be done is to look at individual businesses, the environment in which they are set and what factors affect them, because private sector growth is essential for any countries and especially developing countries to create jobs and raise incomes. These factors include both economic factors such as natural resources, human capital, investment in capital goods and entrepreneurship and non-economic factors such as social factors or political stability. The most common way of measuring an economic growth is by comparing the level of Gross National Product from one to the level of GDP from the year before, but that alone is not going to give the answer to how easy it is to set up a business in a country. For that there are regulatory factors, which are very important and this thesis is focused on combination of such factor with macroeconomic factors that are larger in scope.

Some 15 years ago there were no globally available indicator sets for monitoring microeconomic factors regarding private firms entering markets, making investments and mainly promoting growth and creating more opportunities for entrepreneurs. This has changed with an index that was designed by World Bank and it is called "*the ease of doing business*". The Ease of doing business Index is a system of ranking that evaluates how business-friendly

regulations a particular country has. Up to date this index rates 189 countries with number 1 for being the most friendly and 189 the least friendly. Basically the higher ranking, represented by low numerical value, characterizes more favorable regulatory environment for business operations. This index is calculated annually can be found in a report called "*Doing Business*", which is also updated annually and contains all the necessary information regarding the regulatory environment within an individual economy as well as its global comparison. In this thesis, the ease of doing business index is going to be further expanded by other macroeconomic indicators and its impact will be analyses of four selected economies.

1 Objectives of thesis and methodology

1.1 Objectives

This work focuses on the level of difficulty with which a private firm can enter a market in domestic country. This difficulty is expressed by an index that is consisted of various indicators. Doing Business however does not reflect every indicator required for the real estimate of country's business environment. There are few factors not included on the ease of doing business ranking that could influence the economy's position on the index. In this thesis these factors will be added and possible shift in the ranking of beforehand chosen countries will be observed.

1.2 Research questions and hypothesis

Indicators on the ease of doing business index are largely focused on the restrictions that a firm may find along its way to opening of business. These indicators are of a very specific character. Indicators added in this thesis will be of a more general character, though I believe they have a major influence on the ease of doing business. These indicators are the real gross domestic product growth, corruption rate and unemployment rate. Data will be gathered for all the available countries, however only 4 countries are selected for further analyses. These countries are Argentina, Russia, South Africa and Singapore. Therefore the research questions are:

- Does an annual GDP growth change the country's ranking on the index?**
- Does a level of unemployment change the country's ranking on the index?**
- Does a level of corruption change the country's ranking on the index?**

After analyzing each of the indicators and adding it to the index by doing a simple average based on the proportion weight of such indicator, all the indicators will be put in the index at the same time and the final change will be evaluated. This will show the overall position shift of selected countries. Change will be discussed and evaluated. Last hypothesis is then:

- A country's position on the index changes after averaging all added indicators with the original indicators for such country.

The main idea behind the theoretical part is to make the reader familiar with the index, its development and point out certain inadequacies among the indicators that are described many times in this chapter. Practical part will then subsequently focus on the explanation of these inadequacies. The main goal of this part will be to implement these indicators in the calculations for specific countries on the index.

1.3 Indicators

Selected indicators are influencing a business environment in every individual country. They are broadening the scope of focus by moving away from the concentration on individual procedures required for a firm and focusing on the environment that the firm is going to be set into. These indicators will be later on described more thoroughly in the practical part. Data in each indicator are always collected in the latest available year, which has the highest number of countries involved.

Corruption rate

Data for this indicator are retrieved from Transparency International, non-profit and non-governmental organization fighting against corruption, which defines corruption as: “the abuse of entrusted power for private gain which eventually hurts everyone who depends on the integrity of people in a position of authority” (e.V., 2016). The data are available in 174 countries from the year 2014.

Unemployment rate

Data are collected from the database of the World Bank and they are available in 172 countries. The data on unemployment used in this thesis are current as of January 1, 2015.

Annual GDP growth

This indicator is also gathering information through the World Bank’s website, this ensures the consistency with the original DB data, that are as well published by the World Bank. Data are only available in 178 countries and they are current as of the beginning of the year 2015.

1.4 Methodology

Big part of this thesis is dedicated to creating an extended index that will use the data already computed by World Bank, used in Doing Business report. In addition to these existing indicators, additional indicators will be added and a final index including these indicators will be created. In order to ensure consistency, the methodology in this thesis is done based on the methodology of Doing Business created by the World Bank. The methodology of Doing Business is later described in

detail in the literature review. In my research I have used aggregated data from official sources in order to analyze the extended ease of doing business index.

For the purposes of the research in this thesis, firstly the 10 of the existing indicators starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency were added in a table with data from “Distance to Frontier” (DTF) calculator. Distance to frontier score shows how far on average an economy is at a point in time from the best performance achieved by any economy. This number is corresponding with the overall ranking on DBI. DTF is calculated for every individual indicator and the final ranking is an average of the Distance to Frontier of such indicator but in rank. In order to unify the data, every DTF score was adjusted into percentage ratio on a scale from 0 to 100%. Every percentage value corresponds to the Distance to Frontier score or to the ease of doing Business ranking for that particular indicator respectively. In order to avoid deviations from the actual ranking after such alternation, this data were put into what is going to be called “Data Set B”. In regard to this an additional set of data was made for the purposes of the thesis, where the original ranking was kept by doing a simple average of the DTF values and them ranking them accordingly from 1 to 189, this is going to be called “Data set A”. Ranking is done by using following excel formula:

$$((x1-MIN(\$x\$1:\$x\$189))*100)/(MAX(\$x\$1:\$x\$189)-MIN(\$x\$1:\$x\$189))$$

Values MINIMUM and MAXIMUM vary according to whether described value is desired to be low or high. Both of the data sets are computed and compared in the thesis, with the main focus oriented on the data set A.

The extended index will be created through data collection from various official sources. Data collection in this thesis is of a quantitative character, which means

that they are first collected from its source, systematically recorded and then structured so that they can be used in the database, which will result into an index. For each country where data is available the percentage proportion is going to be computed. The country with the highest number for chosen phenomena, depending on indicator examined is going to be assigned 100% and vice versa. Consequently a percentage amount for each country is computed, ranked and set into the index. In the end an average for all the indicators included is counted and expressed by percentile into the final ranking. The lower is the number in the ranking the better is the ease of doing business for such country.

The entire ranking is done under the presumption that every indicator has the same weight like the other one. The shift is observed both with the individual indicators separately and with all the indicators together and then compared with the ranking of the 10 original indicators to be able to follow possible shift in the ranking of the countries.

2 Literature review

2.1 Index

The lack of globally available indicator sets for monitoring microeconomic factors, regarding private firms entering markets and other regulations with this connected, has led to the creation of ease of doing business index. A market research and the importance of favorable business environment are essential factors for private firm to enter any market. Doing Business project done by the World Bank has since its start in the year 2003, and its fast expansion, soon been ranking almost 200 countries in terms of their business environment and the “ease of doing business” in these economies. In order for a firm to achieve a high level of wealth and productivity, relatively easy and flexible business environment is very important. By jumping to a conclusion of Doing Business report we can find a proof of this statement. All the top countries in the world have ranked highly in terms of GDP, on the scale of the ease of doing business index over last years when the research has been done.

The ease of doing business index, as mentioned above, is an index created by the World Bank Group. This index was created by project called Doing Business also done by World Bank. This project looks at domestic, primarily small and medium sized companies and measures the regulations and restrictions applying to them through their life cycle. It presents quantitative indicators on business regulation that can be compared across 183 economies¹ and over time (Doing Business 2012, 2011).

¹ Number of economies being compared varies with different sources. This is due to the fact that every year new economies, as well as criteria are added and therefore for instance in 2012 report cannot be mentioned all 189 economies as a base number, since 6 of them were added only in following years.

In order to examine the index of ease of doing business thoroughly in following chapters, an index as it is must first be specified. This chapter gives an overview of what an index is through an example of other indexes that are based on a similar principle. According to Business dictionary, index is a “statistical device, which summarizes a collection of data, usually related to the price or quantity of a 'basket' of goods and services, in a single base figure. This composite figure serves as a benchmark for measuring changes in the price or quantity data over a certain period. Usually, the base is assigned an arbitrary value of 100 and all subsequent data is expressed in relation to this base” (BusinessDictionary.com, 2015). Index is therefore a single number calculated from any range of quantities. It should not be confused with indicator, which is a measure that is actually a part of some index, while index is working with these measures and lists them in a particular order.

Giving an example of Human Development Index, just like ease of doing business HDI reflects overall well being. It summarizes a country’s total achievement in three dimensions of human development: health, education and standard of living. “Within these dimensions, the indicators used are life expectancy at birth, a weighted average of the literacy rate and per capita GDP adjusted for purchasing power parity to represent command over resources for a decent life” (Deneulin and Shahani, 2009). Country ranks higher in the Human Development Index if the life expectancy is longer, education period longer and individual income higher.

Another example of index can be a type of index that always analyzes only a single subfolder of business environment. This can be for instance an area of quality of living conditions in Human Development Report, or Corruption Perception index analyzed by Transparency International. Nowadays this index observes the level of corruption in public institutions in approximately 180 economies. Another index can be Democracy index done by Economist Intelligence

Unit and Freedom in the World done by organization called Freedom House. Democracy index divides about 170 countries and territories according to approximately 60 criteria that are focused on existence of free elections, level of political culture and civil freedom into 4 categories – full democracies, flawed democracies, hybrid regimes and authoritarian regimes. Freedom in the World divides more than 210 countries and territories into 3 groups – free, partially free and not free. (Štěřbová, 2013)

Similar composite statistics apply to ease of doing business Index. This index ranks economies from 1 to 185. “For each economy the ranking is calculated as the simple average of the percentile rankings on each of the 10 topics included in the index in Doing Business 2013: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency.” (Doing Business 2014, 2013). Each of these topics will be examined in one of the following chapters in detail as well as broader explanation on how the construction of the ease of doing business is done. The higher the ranking for each country is, which is represented by lower number, the better environment and usually more simple regulations are there for businesses. Therefore the higher ranking there is, the more likely would a company be willing to conduct a business in that economy.

2.1.1 Criticism of DBI

Just like any other index, ease of doing business cannot capture every factor that there is to give the exact estimate for the domestic market. Going back to the case of Human Development Index, it has also been criticized for many biases from a side of those who suggest the criteria. Among these can be included not stating any ecological factors or technical development. Ease of doing business is facing

similar criticism and accusations of being biased. There have been many critics who have been focusing on the reliability and objectivity of its measurements. Not only some of the indicators have allegedly been captured in a way that does not provide the public with the accurate idea of how the economy is actually doing in such topic, but also it has been suggested that some indicators that are vital to picture the real economic situation are completely missing. “Critics allege that it forces attention on mundane business regulation instead of what they consider more important matters, such as poverty alleviation and economic development. The controversy boiled over during 2012 when Bin Han, China’s deputy executive director at the World Bank, stated that the index ‘used wrong methodologies, failed to reflect facts, misled readers, and added little value to China’s improvement of the business environment.’ One concern was the fact that DBI [Doing Business Index] failed to account for macroeconomic conditions, including readily available statistics on annual GDP growth or rising foreign direct investment. Others argue that important indicators related to corruption were not included in the ranking” (Karolyi, 2015). Olga Kuryatnikova, a leading expert of corporate and investment ratings at Expert Rating Agency on different occasion stated that “So far there’s not a substitute for what was viewed as a key investor barometer, now it’s the index components that can serve as a guideline for companies and investors,” and that “the aggregate “Doing Business” index is an average of very different indicators. This makes the final figure quite difficult to interpret,” she added.

As it has been mentioned in the introduction part, this thesis will deal with some indicators that could be added to the index and how they would potentially influence the rating of individual economies. Some of the indicators that will be added to the index in this thesis are the ones that have been criticized for being omitted.

2.2 Doing business Index

2.2.1 Development

The World Bank Group Doing Business project started in 2002 and the report began in 2003 with the publication of Doing Business 2004. Every year's report always covers the information of the year preceding the year of publication. Doing Business 2004 is the very first of a series of reports investigating the regulations that enhance business activity and those that constrain it. In the 2004 publication data only on five topics were collected and analyzed—starting a business, hiring and firing workers, enforcing a contract, getting credit, and closing a business. “First published in 2004 measuring business regulation in 133 economies, the report has grown into an annual publication covering 10² indicator sets and 189 economies” (Doing Business 2013, 2012). Doing Business 2016 called: “*Measuring Regulatory Quality and Efficiency*” is the 13th and last in a series of annual reports. Data in Doing Business 2016 are current as of June 1, 2015.

The project was the first of its kind to offer this form of measuring business regulation on a microeconomic level. All the indicators are updated yearly as of June 1. Goal of the report is to give an overview on which of the economies analyzed, have improved their regulatory environment and vice versa. Simeon Djankov, the creator of the Doing Business series, worked as a Deputy Prime Minister and Minister of Finance of Bulgaria from 2009 to 2013. He works in World Bank for over 10 years and his paper called “The Regulation of Entry” that he has together with other authors published in the year 2002, became one of the starting points for establishing Doing Business report. This paper described the required governing entry regulations, together with the time required and cost of these

² Doing Business also analyzes labor market regulation, which is not included in the distance to frontier score or ease of doing business ranking.

procedures, before the firm can operate legally on a market. They have done this research in 85 economies (Djankov, McLiesh & Klein, 2004).

The original idea of the project remains to capture important role of the government and government policies with the impact of small and medium-size firms. When regulations are efficient, accessible and simple to implement in doing business, they are being encouraged. On the other hand when the index shows having too many restrictions it can advice the entrepreneurs to divert their businesses from such economy. It shows what country provides a favorable environment for newly entering business people, where they will receive a fair treatment and where their business will prospectively grow. Another reason for the report was to be a source of information for anyone that it may concern such as academics, journalists or private sector researchers. By providing a unique set of data that enables better understanding of business regulations in economy of a country. "Doing Business relies on four main sources of information: the relevant laws and regulations, Doing Business respondents, the governments of the economies covered and the World Bank Group regional staff" (Doing Business 2016, 2015).

2.2.2 Focus

The index focuses on domestic small and medium-size companies that operate in the formal sector; they are domestically owed and conduct official and legal transactions and processes. DB measures the regulations applying to them through their life cycle. These measures are generally collected in in the largest business city of each economy. In countries with population over 100 million it also collects data from second largest business city and subsequently makes a population-weighted average for the 2 largest cities. What the index does not focus on are microenterprises and state-owned enterprises, enterprises in the informal

sector, foreign-owned firms and foreign investors, illegal, corrupt and informal transactions and processes, firms outside the capital city and sole proprietorships.

Whether an enterprise falls into a group that is defined as small and medium-size (SME) is determined by few factors. SMEs are not uniform in terms of size and shape. They are generally defined based on the stages of economic development and the broad policy purposes for which the definition is used. Generally the SME definition is based on two criteria (Ndubisi & Nwankwo, 2013):

- 1) The total turnover by business a year**
- 2) The number of full-time employees by a business**

In terms of size category, SMEs are grouped into three categories:

- 1) Micro**
- 2) Small**
- 3) Medium sized**

According to EU recommendation 2003/361, SME is defined in a following way.

1) Micro sized enterprise is considered to be such enterprise when:

- a) Employs less than 10 employees
- b) His turnover/balance sheet total does not exceed 2 million Euros

2) Small sized enterprise is considered to be such enterprise when:

- a) Employs less than 50 employees
- b) His turnover/balance sheet total does not exceed 10 million Euros

3) **Medium sized enterprise** is considered to be such enterprise when:

- a) Employs less than 250 employees
- b) His turnover/balance sheet total does not exceed 50 million Euros

These limits apply to the figures for individual firms only. A firm that is part of larger group may need to include staff headcount/turnover/balance sheet data from that group too (Ec.europa.eu, 2015). In addition to this there are also different limits do individual countries. According to OECD in The United States SMEs are enterprises that consist from up to 500 employees.

To understand why Doing Business is focusing on SMEs an overview of proportion of these enterprises in world economies is given. A research paper called *The new SME definition* said that micro, small and medium-sized enterprises play a central role in the European economy. They are a major source of entrepreneurial skills, innovation and employment. As of 2005 enlarged European Union of 25 countries, some 23 million SMEs provide around 75 million jobs and represent 99% of all enterprises (2005). Another paper published by World Bank in 2010 provides an overview of data on SME for 132 economies. There are 125 million formal SMEs in this set of economies, including 89 million in emerging markets (Kushnir, Mirmulstein & Ramalho, 2015). These numbers alone give an idea of the representation of SMEs on the markets and DBI selection of such focus.

2.3 Methodology of DBI

If a private sector is energetic and is expanding, it attracts firms and investors. This quickly results in creation of jobs and overall productivity of economy is improved together with new opportunities being created for people. Such private sector however does not happen over night and without some political or economic integration. To help create such environment governments in

countries around the world have been implementing various regulations and strategies. These are for example reforms, price liberalization, macro-stabilization programs, privatization, and trade-barrier reductions etc. (Doing Business 2004, 2003). Some countries are showing positive results and doing well in starting and expanding business environment while not following these regulations. On the other hand there are some countries that do implement these regulations and yet the business growth is stagnant, entrepreneur activity limited and poverty is high.

“Although macro policies are unquestionably important, there is a growing consensus that the quality of business regulation and the institutions that enforce it are a major determinant of prosperity” (Doing Business 2004, 2003). Every country to a certain extent follows some of these macro policies without which a country could hardly prosper, but the question is how much further beyond the necessary policies does a country expand its regulations, or even tries to develop and improve the regulations with regard to other countries.

There has been a very few measures that were capturing the indicators that are reaching beyond the ones mentioned in the paragraph above. Doing Business index is measuring specific aspects of regulation and analyses their impact on economic outcomes such as productivity. DBI gives a status of well-doing that can be used not only for the government of the particular country itself but also to be able to see where other countries outweigh that country in terms of simplicity and ease of doing business.

The Doing Business report provides results for 2 aggregate measures:

- 1) Ease of doing business**
- 2) Distance frontier**

The ease of doing business ranks the economies with one another at a point in time. This measure is the original one and it has been implemented since the very beginning of the project. Distance to frontier was only introduced in the year 2011 respectively in the report Doing Business 2012 that has been issued for the year 2011. The reason behind this was to collect more data over preceding years, so that the measure can be implemented. This is because it shows how much have the regulations changed for entrepreneurs in each economy over time. Distance to frontier is not measured every year, therefore some data that this measure shows, may not be accurate until another distance to frontier is done.

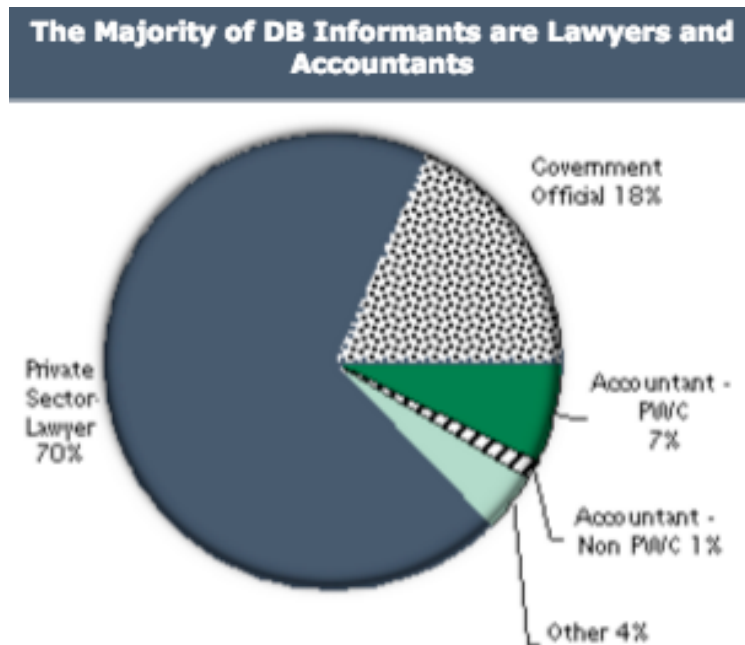
The aim of Doing Business is to improve the World Bank Group's private sector development agenda:

- Motivating reforms through country benchmarking.
- Informing the design of reforms.
- Enriching international initiatives on development effectiveness.

Doing Business report will probably be expanding in terms of countries and indicators in coming years. Therefore these aims will continue to develop over time. For example new indicators might be introduced to get a better estimate for the regulatory environment.

As it was mentioned the indicators are not measured on perception bases. Perception measuring makes it difficult to compare outcomes outside of a country and they also do not facilitate its interpretation into a policy making process. Doing Business relies on assessment of laws and regulations and collection of data from expert informants in each country. These are always experts in the area of focus and they provide information for free.

Figure 1 - Informants for Doing Business report



Source: Web.worldbank.org, 2015

From the graph above it is visible that the informants are mostly government officials, lawyers, business consultants and accountants. The methodology of doing business has however some limitations. The following paragraph contains information available at <http://www.doingbusiness.org/Methodology>.

- The data collected concern only business activities done in the biggest business center of each country so it does not necessary reflect situation in other areas of the country.

- Focus is often put on specific organizational structure of entrepreneurship, such as a company with limited liability. Standards for such organization may not be the same as in other types of businesses. A sole proprietor can have different regulations for their business.

- The methodology assumes that the company has complete information about all the regulations and requirements necessary for entrepreneurship and does not lose time when dealing with procedures. In reality the company often lacks information, which requires longer period of time.

- Data reliability is based on a limited number of informants. Some of these informants may be from only few firms therefore a bias can occur. Selecting more informants can lead to more accurate data.

- The ranking of DB indicators work under the presumption that less regulation is better. On the ranking however it is difficult to tell whether the top-ranked countries have good and efficient regulations or if they are simply lacking some regulation, therefore scoring higher

- The input is realistic, because people who deal with practical situations of this kind provide it. It is transparent and easily replicable. This is one of the reasons why Doing Business is easy to update annually and easy implementation is other countries.

“It covers regulatory outcomes, such as the time and cost of meeting regulatory requirements to register a business, as well as measures of actual regulations, such as an index of the rigidity of employment law or the procedures to enforce a contract. It also investigates the efficiency of government institutions, including business registries, courts, and public credit registries. Most important, the methodology builds on extensive and detailed information on regulations—information directly relevant to identifying specific problems and designing reforms.” (Doing Business 2004, 2003).

Also, the small informant base makes it difficult to measure confidence in the accuracy of the individual indicator values and thus in the aggregate rankings. These flaws can lead to undermining the credibility (Web.worldbank.org, 2015)

Figure 2 - How many experts does Doing Business Consult?

Indicator set	Respondents	Economies with given number of respondents (%)		
		1-2	3-5	5+
Starting a business	1,857	11	26	63
Dealing with construction permits	1,136	15	44	41
Getting electricity	1,094	12	44	44
Registering property	1,295	18	35	47
Getting credit	1,596	7	26	67
Protecting minority investors	1,175	21	35	44
Paying taxes	1,321	5	45	50
Trading across borders	933	20	47	33
Enforcing contracts	1,437	20	34	46
Resolving insolvency	1,191	19	42	39
Labor market regulation	1,198	17	43	40
Total	14,233	15	38	47

Source: Doing Business 2016 (2015)

2.3.1 How is DBI measured

Latest index of Doing Business includes 189 countries; therefore the ranking ranges from 1 to 189. For each country the index is determined by sorting the simple average of the percentile rankings on each of the topics included in the index. In last two year the ease of doing business was also counted by sorting the aggregate distance to frontier scores rounded to 2 decimals. If a data for particular indicator are missing in a country a specific score is added, which brings the country in this particular rating to the very bottom.

Distance to frontier as it has been already mentioned is a measure that illustrates how the regulatory environment for local businesses has changed over time. “The distance to frontier measure illustrates the distance of an economy to

the “frontier” and shows the extent to which the economy has closed this gap over time” (Doing Business 2012, 2011). A frontier is a score that derives from the most efficient regulation or highest score on the individual indicator.

Once it is calculated what are the highest possible scores achieve by any of the countries in the rating, distance to frontier is then calculated in two steps. Firstly individual component indicators³ are normalized to a common unit where each of the 36 component indicators y . The equation then looks:

$$\frac{(worst - y)}{(worst - frontier)}$$

The frontier is then pictured as the best performance across all economies since the year the data for the indicator were collected. The worst and the best performance are established every 5 years. There is a risk of outliers that could deteriorate the data ranking so DBI calculates the worst performance only after the removal of outliers.⁴

The second step is for calculating the distance to frontier score. Every score of each indicator in each country is combined through averaging into once score. This is done for all the 10 topics. All the topics and all component indicators are weighted equally. Distance to frontier is found on a scale from 0 to 100, with 0 being the worst performance and 100 being the frontier. The score measures how far from the best performance the economy is at any given year.

In this theses I will only focus on the ease of doing business ranking and that simply because the results will be possible to interpret more easily. Data used in

³ Each indicator has few components. For instance “Getting electricity” consists of the amount of *procedures* required, amount of *days* necessary to get the electricity, *cost* (% off income per capita) and *reliability of supply and transparency of tariffs index* (1-8). In the 2016 report there is 36 component indicators.

⁴ Definitions of outliers vary from each indicator.

data sets will however contain data from distance to frontier calculator as they are the same for ease of doing business.

A nation's ranking on the index is based on the average of 10 indicators:

Table 1 - Ease of doing business ranking

Indicator	Content
Starting a business	Procedures, time, cost and minimum capital to open a new business.
Dealing with construction permits	Procedures, time and cost to build a warehouse, ease of dealing with construction permits.
Getting electricity	Procedures, time and cost required for a business to obtain a permanent electricity connection for a newly constructed warehouse, reliability of supply and transparency of tariff index.
Registering property	Procedures, time and cost to register commercial real estate, quality of land administration index.
Getting credit	Strength of legal rights index, depth of credit information index
Protecting investors	Extent of conflict of interest regulation index, extent of shareholder governance index, strength of minority investors protection index.
Paying taxes	Number of taxes paid, hours per year spent preparing tax returns and total tax payable as share of gross profit.
Trading across borders	Number of documents, cost and time necessary to export and import.
Enforcing contracts	Quality of judicial process, time and cost to enforce a debt contract.
Resolving insolvency	The time, cost and recovery rate, strength of insolvency

	framework.
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Source: Tiku, 2014

2.4 Change in annual DB reports

Ever since the start of the project and the first volume of Doing Business report in 2005, a new report is done annually with new changes coming every year. In this chapter I will make a summary about what has every new edition of DB report brought every year. This will include number of added new economies, new indicators and changes in methodology. In addition I will focus on one country, namely the Czech Republic and focus on its movement on the index since the beginning till the last edition. All the information and data in this chapter are always collected from the Doing Business report for that particular year.

Doing Business 2004

The first report was done in the year 2004 with the data from the year 2003. That year's edition name was "Understanding Regulation" and it contained general information about Doing Business index, the reasons for launching and aims of this project. The 2004 report has focused on **5 topics** - starting a business, hiring and firing workers, enforcing a contract, getting credit, and closing a business. Data were collected in **133 countries**. For the first 2 years the ease of doing business rating was not available to all the countries making it impossible to put Czech republic on a scale.

Doing Business 2005

The second in a row, 2005 report with the name "Removing Obstacles to Growth" has examined **145 countries** and added 2 extra topics to the 5 topics that

already existed. These new topics were *registering property* and *protecting investors*. In total there was then **7 topics**. Since the informants for DBI usually work and base their information from once city, which then becomes a representative indicator for the specific economy one change in methodology had been implemented in that year's report. Indicators were developed at the regional level in several large countries. In Brazil 9 cities other than São Paulo have been studied. In India 8 cities other than Mumbai and in Pakistan 4 cities other than Karachi were studied (Doing Business 2005,2004). Details for the Czech republic are available in next report.

Doing Business 2006

Doing Business 2006 "Creating Jobs" brought not only changes in number of economies examined but again in the indicators as well. Expanded to **155**, Doing Business once again updated all previous measures and adds three more sets: dealing with licenses, paying taxes and trading across borders, to create a total of **10 areas** measured. The indicators are used to analyze economic outcomes and identify what reforms have worked, where, and why (Doing Business 2006, 2005). Until now with two previous editions, economies focus on improving their constraints when starting a business and 185 reforms were done in various countries since first publication. With expanding job markets Doing Business 2006 focuses on employment and absorbing people into a workforce. In this year's edition we can see the position of the Czech Republic in ease of doing business rank to be **41**.

Doing Business 2007

A big leap in economies examined has been done in the Doing Business 2007 report with expanding the economies base to **175**. This year the name is "How to

reform". No change in the topics has been done in this year's edition and here on until the year 2015. The only difference is change of the topic "Hiring and firing workers" to "Employing workers". The methodology for 4 of the Doing Business topics changed in this edition. For paying taxes, the total tax rate now includes all labor contributions paid by the employer and excludes consumption taxes. For enforcing contracts, the case study was revised to reflect a typical contractual dispute over the quality of goods rather than a simple debt default. For trading across borders, Doing Business now reports the cost associated with exporting and importing cargo in addition to the time and number of documents required. And for employing workers, nonwage labor costs are no longer included in the calculation of the ease of employing workers (Doing business 2007, 2006). The Czech Republic has fell in ranking by 11 positions to **52nd** place.

Doing Business 2008

Doing Business 2008 is the fifth in a series of annual reports investigating different regulations in economies around the world. This year 3 countries were added into the base resulting in total number of **178**. Regulations remained the **same**. The methodology for 3 of the Doing Business topics changed for Doing Business 2008: dealing with licenses, employing workers and enforcing contracts. "For dealing with licenses it only applies to builders that are fully licensed and insured at the start of the project. Inspections are assumed to take 1 day to complete and preconstruction inspections were added to the list". For employing workers the change is that "the calculation of firing costs was modified so that 8 or fewer weeks of salary now receives a score of 0 for purposes of calculating the rankings on the ease of employing workers." And lastly for enforcing contracts "the list of procedures was revised to accommodate procedural differences between civil and common law" (Doing Business 2008, 2007). The Czech republic has ranked **56**.

Doing Business 2009

In 2009 three economies were added to have **181 countries**. Topics remained the **same** like in preceding years. The methodology for the legal rights of lenders and borrowers, part of the getting credit indicators, changed for Doing Business 2009. In getting credit a standardized case scenario was introduced and the indicator now focuses on revolving movable collateral instead of tangible movable collateral.⁵ The Czech republic is on the **75th** place this year.

Doing Business 2010

As a 7th in a row there is Doing Business 2010. This report has **183 economies** that are examined in **10 stages** of the life of a business. Methodology for employing workers was changed for this year. “The assumptions for the standardized case study were changed to refer to a small to medium size company with 60 employees rather than 201. Legally mandated wage premiums for night and weekly holiday work up to a threshold are no longer considered a restriction and the calculation of the redundancy cost was adjusted so that having severance payments or unemployment protections below a certain threshold does not mean a better score for an economy” (Doing Business 2010, 2009). The Czech Republic has scored on 74th place this year.

Doing Business 2011

Doing Business 2011 was published under the name “Making a Difference for Entrepreneurs” with data as of June of the preceding year just like every edition of Doing Business report. For the first time the number of economies did not rise and

⁵ Revolving collateral means accounts receivable or inventory which changes from day to day (Masoom, 2014). Unlike regular tangible collateral which is any equipment or property with long term physical existence.

stayed at **183**. Dealing with licenses indicator is now called Dealing with construction permits and one more topic called getting electricity was added to have **11 topics** in total. “Methodology only changed for employing workers in a way that the calculation of the minimum wage ratio was changed to ensure that no economy can receive the highest score if it has no minimum wage at all.” Also “a minimum threshold was set for paid annual leave and a ceiling for working days allowed per week to ensure that no economy benefits in the scoring from excessive flexibility in these areas” (Doing Business 2011, 2010). The Czech Republic has scored on the **63rd** place this year.

Doing Business 2012

In Doing Business 2012: Doing Business in more transparent world introduced a brand new measure that has already been discussed in previous chapters in more detail. “The ‘distance to frontier’ is a measure that illustrates how the regulatory environment for business has changed in absolute terms in each economy over the 6 years since Doing Business 2006 was published in 2005.” Number of regulations (**11**) has not changed as well as number of countries investigated, which is still **183**. Closing business topic is however substituted for a topic called resolving insolvency. “The methodology for the dealing with construction permits, getting credit and paying taxes indicators changed for Doing Business 2012” (Doing Business 2012, 2011). The Czech Republic has ranked **64th**.

Doing Business 2013

Smarter Regulations for Small and Medium-Size Enterprises is the name of the Doing Business 2013 report. Two countries were added this year so the number is **185 economies**. **11 areas** of the life of a business remained the same. “Methodology for paying taxes was updated this year; specifically the threshold for

the total tax rate introduced last year for the purpose of calculating the ranking on the ease of paying taxes was updated” (Doing Business 2013, 2012). The Czech Republic ended on **65th place**.

Doing Business 2014

Doing Business 2014 called “Understanding Regulations for Small and Medium-size Enterprises” has expanded country base by Libya, Myanmar, San Marino and South Sudan to **189 countries**. “**11 indicators** starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency and employing workers stayed the same like years before.” The methodology for 2 indicator sets: trading across borders and paying taxes, was updated this year. “For trading across borders, documents that are required purely for purposes of preferential treatment are no longer included in the list of documents. For paying taxes, the value of fuel taxes is no longer included in the total tax rate because of the difficulty of computing these taxes in a consistent way across all economies covered” (Doing Business 2014, 2013). The Czech Republic has fallen again to the 75th place this year.

Doing Business 2015

Last but one DB report is Doing Business 2015 “Going Beyond Efficiency”. For the first time this year, Doing Business collected data for 2 cities in 11 economies with more than 100 million inhabitants. The economies are: Bangladesh, Brazil, China, India, Indonesia, Japan, Mexico, Nigeria, Pakistan, the Russian Federation, and the United States. “The added city enables a subnational comparison and benchmarking against other large cities.” **189 economies** and **11 areas** of the life

of a business remained the same. “For the first time the ease of doing business ranking as well as topic level rankings are now computed on the basis of distance to frontier scores” (Doing Business 2015, 2014). Another change is that the name of employing workers indicator set has been changed to labor market regulation as well as its scope. The Czech Republic has moved up a lot this year from the 75th place to **44th**.

Doing Business 2016

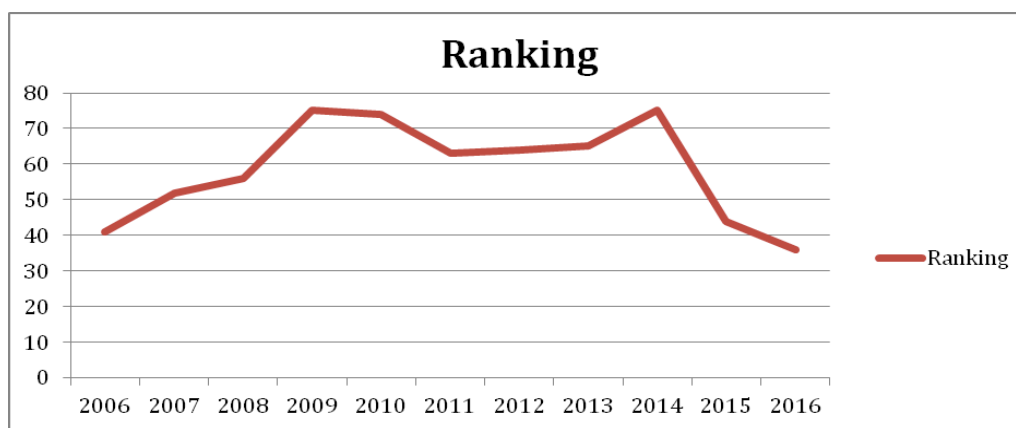
Doing Business 2016 is last in a series of annual reports up to date. Its name is Measuring Regulatory Quality and Efficiency. As no other economies have been added until now the number of countries remains **189** and since indicator set of labor market regulation is not included in this year’s ranking, the total number of indicators is **10**. This year 5 indicators were expanded and more focused on but “despite the changes in methodology introduced this year, the data under the old and new methodologies are highly correlated.” Correlation between these two years reaches 0.97. (Doing Business 2016, 2015). The Czech Republic reached the highest rank in all of the reports yet with **36th position**.

Doing Business report is an important source of inspiration for changes in regulation reforms for individual economies worldwide. More than 2600 reforms in the measured areas have been made since its launch in 2003 (Doing Business 2016, 2015). As an example can serve a summary from DB 2015, which found out that Tajikistan, Benin, Togo, Côte d’Ivoire, Senegal, Trinidad and Tobago, the Democratic Republic of Congo, Azerbaijan, Ireland and the United Arab Emirates are among the economies that improved the most in 2013/2014 in areas tracked by Doing Business. “Together, these 10 top improvers implemented 40 regulatory reforms making it easier to do business.” Reports have met with both criticism and admiration. Criticism mostly due to limited scope of focus and admiration due to

good transparency. High-income economies have generally higher rankings, but they still implement reforms. “Lower-income economies however have improved more in the areas measured by the report than high-income economies that started with a fairly strong regulatory framework when Doing Business was first launched in 2003. Among the areas measured by the report, starting a business has seen the most improvements. In 2003 it took an average of 51 days worldwide to start a business; by 2015 this number had been more than halved, to 20 days” (Doing Business 2016, 2015). Over last 12 years Singapore has been the best ranking economy together with New Zealand until 2011 when it lost its 2nd place to Hong Kong and China after this economy has been gradually rising in rankings over the past years. New Zealand has won its 2nd place back in the 2015 and kept it. It is obvious that in these 3 countries doing business is apparently the easiest. The Czech Republic as a country that this chapter focused on has been generally moving between 50th and 70th place. When it comes to reforms done by the Czech Republic then by far most reforms has been done in the area of starting business and registering property respectively. This was followed by reforms done in paying taxes and employing workers. The Czech Republic is however still mostly behind in areas of starting business, paying taxes and enforcing contracts.

On the graph below we can see the fluctuation of the Czech Republic between the ratings since the year 2006.

Figure 3 - fluctuation of the Czech Republic between the ratings since the year 2006



Source: Own graph

2.5 The construction of indicators

Before the indicators itself will be described in the practical part of the chapter and idea behind the indicators is going to be described. This chapter gives and introduction to the indicators and explains the indicators of Doing Business index from an investment climate as well as private sector development point of view. It provides an analysis of the main principles that identify what the indicators measure. In the latest report 10 indicators that annually provide consistent cross-country data are analyzed. These indicators are based on research that deals with connection of better regulations and improved investment climate. The better the regulations are the better the climate is and subsequently there is an economy growth. Regulations are in general supposed to benefit the society, some of these more than other. These benefits to society however are not necessarily a benefit for the firms (Bank, 2008). Some countries are over-regulated and some are under-regulated and it is only upon the policy makers to find the desired level of regulations and law that will both benefit public and not limit the firms.

According to Doing Business team, there are three main ideas behind the indicators. These ideas were tested in 13 economies with the constraints the business leaders face the most. It is apparent that for instance a statement “the less restrictions there are the better the economy is” is not applicable to all the indicators in DB report. Therefore the three ideas are mentioned.

1. Fewer regulations are preferable.

This principle is embedded in 7 of the 10 indicators (Bank, 2008). These are starting a business, dealing with licenses, registering property, paying taxes, trading across borders, enforcing contracts and closing a business. This is a majority of the indicators but only in 3 they are especially obvious.

Employing workers: “The fewer the restrictions on hours of work and the more easily a firm can lay off redundant workers, the better the ranking. The 10 top-ranked countries on this indicator are 5 developed countries with high quality labor laws” (Bank, 2008). The other 5 were however small island states where there is not enough labor protection so that the indicator cannot capture the possible offsetting benefits of job protection.

Dealing with licenses: A score is higher once there are fewer steps that are required to get a permit to construct a building. The indicator measures the steps needed to get a construction permit to build a warehouse but it does not deal with licenses, permits and authorizations in general.

Paying taxes: “The lower the overall the overall tax rate as a share of a firm’s profit, the higher the score” (Bank, 2008). The top 10 countries include Maldives, Oman, Singapore and UAE. These countries are however not a very good example as they have certain special characteristics.

To define the point at which the costs of regulation exceed the benefits is difficult, but despite this fact 7 out of the 10 indicators find it logical that the highest ranking belongs to the economies with the least regulations.

2. Property rights and debt enforceability are important determinants of lending and investment.

This is another assumption behind the indicators from DB report that is proven by 5 indicators out of the 10 indicators.

Getting credit: If there is fewer restrictions on what is used as a collateral the more likely it is for lenders to make loans and to collect them.

Enforcing contracts: The debt will be easier to collect if the court system would operate more effectively.

Registering property: When it is easier to register property it is also easier for the owner of such property to use it as collateral.

Closing a business: “The easier it is to close a business through formal bankruptcy, the greater the likelihood that creditors can collect on their loans” (Bank, 2008).

Dealing with licenses: Once the restrictions on using a constructed warehouse as collateral, the higher the score on the index.

Doing Business has taken as an example an extract from a paper written by Hernando de Soto. He states that poor property owners are displaced from the formal economy, as they do not possess the legal rights to their land and therefore cannot use it as collateral to further expand their business.

3. Lighter regulation and taxation can encourage non-formal firms to shift into the formal economy.

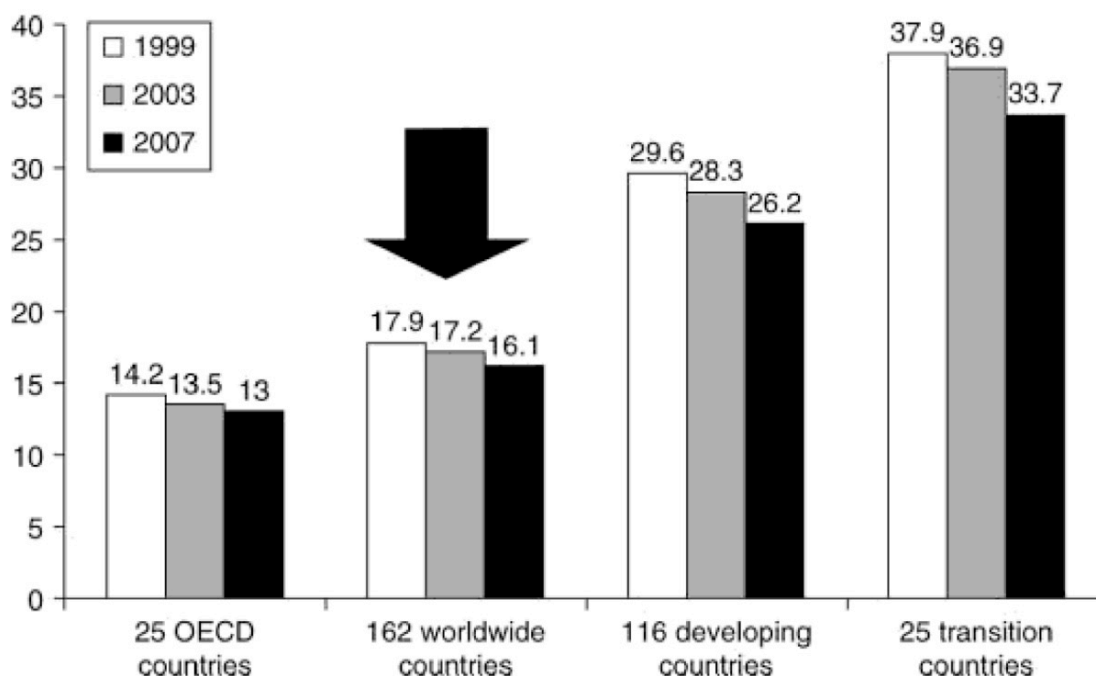
Starting a business: Simpler procedures to start a business will encourage informal enterprises to formalize.

Paying taxes: If the procedures for paying taxes are easier, a firm will more likely pay the taxes than avoiding them.

Employing workers: When the working hours for employees are less strictly defined the easier it will be for a firm to lay off redundant workers. It will also increase the amount of formally employed workers rather than those employed informally.

Doing Business is focusing on the matter of too many regulations existing in private sector, which prevents the transition from informal to formal economy. There are proofs of countries with heavier regulations having lower firm entry and lower growth, but yet there is still not enough evidence on the actual effects. On the figure below are visible the significant differences in the size of the shadow economy across OECD countries, developing countries and transition countries.

Figure 4 - Size and development of the shadow economy of various country groups. Measured as a percentage of total GDP of the respective country group.



Source: Williams, C., Schneider, F., (2016)

The indicators themselves cannot fully capture every country's context as they are designed to provide cross-country comparisons that are based on uniform criteria. At the same time not all the reforms will have the same effect in every economy, it all depends on the way a country is set, so the relevance of each indicator will necessarily vary by country. What matters is how the country is

changing on the ranking by where it is located on the distribution of countries on a specific indicator. “Some regulatory constraints are like to be relatively unimportant for informal and microenterprises, which in some countries account for a significant share of private sector activity” (Bank, 2008) as visible in the figure above. Also what is good for a one firm may not be good for the other firm and it may also not be good for the economy as a whole.

If the economy in a country is doing well the unemployment declines and the living standards are improving. Improving a business environment is therefore very important and most of the developed economies are striving for better conditions for entrepreneurs. (Reuvid, 2005) In this study World Bank is ranking 10 key indicators, where the final index is a simple average of these 10 indicators. The scope of an index is limited as it does not reflect other relevant factors, such as gravity model and proximity to markets, quality of infrastructure, strength of financial system of a country, all the macroeconomic conditions, corruption or unemployment.

3 Analysis

3.1 Existing Indicators

Doing Business Index as mentioned in previous chapters is a simple average of ratings for each of the 10 indicators analyzed in 189 countries. Ranking for each individual indicator is a simple average of its percentile rating. In case that an economy is missing regulations for some areas of business it will be assigned a score “no practice”. This score brings the economy in a particular ranking to the bottom of relevant indicator. This chapter will describe each one of the 10 indicators with up to date information from DB 2016 and 1 extra index that has been derived from the original regulation of employment index, called “Labor market regulation”.

Every indicator measures three main points, which are slightly adjusted for each indicator. These are:

- **Procedures**
- **Time**
- **Costs**

Procedures are described as “as any interaction of the company founders with external parties (for example, government agencies, lawyers, auditors or notaries)” (Doing Business 2011, 2010). Every procedure, whether it happens in the same office building but is of a different nature, is counted as a separate procedure. Only procedures that are common for all businesses are covered. Those that are specific for a certain type of industry are excluded.

Time is recorded in calendar days. “The measure captures the median duration that local experts indicate is necessary to complete a procedure in practice” (Doing Business 2011, 2010). If a procedure can be expedited for a higher cost, such method is taken into consideration. It is assumed that the minimum time required for each procedure is 1 day. The time that the entrepreneur spends on gathering information is ignored. This was after all criticized and already mentioned in chapter “criticism”.

Cost is recorded as a percentage of the economy’s income per capita. “It includes all official fees and fees for legal or professional services if such services are required by law” (Doing Business 2011, 2010).

3.1.1 Starting a business

Starting business indicator describes all the necessary procedures, time requirements and costs that an entrepreneur must fulfill in accordance with law when setting up business. This includes acquiring licenses and permits and completing any required notifications, verifications or inscriptions for the company and its employees. In order to make data comparable across economies certain assumptions are considered. For the purpose of analyzing additional indicators in the practical part of the thesis, these assumptions are mentioned below.

- Is a limited liability company (or its legal equivalent).
- Operates in the economy’s largest business city.
- Is 100% domestically owned and has five owners, none of whom is a legal entity.
- Has start-up capital of 10 times income per capita.

- Performs general industrial or commercial activities, such as the production or sale to the public of products or services. The business does not does not handle products subject to a special tax regime.
- Leases the commercial plant or offices and is not a proprietor of real estate.
- Does not qualify for investment incentives or any special benefits.
- Has at least 10 and up to 50 employees one month after the commencement.
- Has a turnover of at least 100 times income per capita.

Indicator is subsequently broken into sub-indicators explained in the table below.

Table 2- What does the “starting a business” indicator measure?

Starting a business
<i>Procedures to legally start and operate a company (number)</i>
Preregistration (for example, name verification or reservation, notarization)
Registration in the economy’s largest business city
Postregistration (for example, social security registration, company seal)
<i>Time required to complete each procedure (calendar days)</i>
Does not include time spent gathering information
Registration process considered completed once final incorporation document is received or company can start operating
No prior contact with officials takes place
Each procedure starts on a separate day
<i>Cost required to complete each procedure (% of income per capita)</i>
Official costs only, no bribes
No professional fees unless services required by law or commonly used in practice
<i>Paid-in minimum capital (% of income per capita)</i>
Funds deposited in a bank or with a notary before registration

Source: Doing Business 2016, 2015

3.1.2 Dealing with construction permits

In Doing Business Index this process is understood as building warehouse along with the time and cost to complete each procedure. The information in this indicator is focused on businesses in the construction industry and due to

comparability reasons there are also set assumptions. In the case of dealing with construction permits assumptions are broader and they are divided into categories such as assumptions about the construction company, assumptions about the warehouse and assumptions about the connections of utilities. Due to specificity of these topics, detailed description of these assumptions will be omitted. Additionally in 2016 a new measure, the building quality control index, has been added. It evaluates the quality of building regulations, the strength of quality control and safety mechanisms.

Summary of sub-indicators of dealing with construction permits indicator are in a table below.

Table 3 - What does the “dealing with constructions” indicator measure?

Dealing with construction permits
<i>Procedures to legally build a warehouse (number)</i>
Submitting all relevant documents and obtaining all necessary clearances, licenses, permits and certificates.
Submitting all required notifications and receiving all necessary inspections
Obtaining utility connections for water and sewerage
Registering the warehouse after its completion
<i>Time required to complete each procedure (calendar days)</i>
Does not include time spent gathering information
Each procedure starts on a separate day—though procedures that can be fully completed online are an exception to this rule
Procedure considered completed once final document is received
No prior contact with officials
<i>Cost required to complete each procedure (% of warehouse value)</i>
Official costs only, no bribes

Source: Doing Business 2016, 2015

3.1.3 Getting electricity

Doing business report looks at all the procedures required for a business to be able to get permanent electricity connection and supply for a standardized warehouse. These procedures include application and contracts with electricity

utilities as well as all the required inspections and clearances from the utility and other agencies for the electricity to work properly. This year two new measures are added: the reliability of supply and transparency of tariffs index. These will not be described in the detail. Getting electricity indicator works with assumptions about the warehouse just like in the preceding indicator, assumptions about the electricity connection and assumptions about the monthly consumption.

Summary of sub-indicators of getting electricity indicator are to be found a table below.

Table 4 - What does the “getting electricity” indicator measure?

Getting electricity
<i>Procedures to obtain an electricity connection (number)</i>
Submitting all relevant documents and obtaining all necessary clearances and permits
Completing all required notifications and receiving all necessary inspections
Obtaining external installation works and possibly purchasing material for these works
Concluding any necessary supply contract and obtaining final supply
<i>Time required to complete each procedure (calendar days)</i>
Is at least one calendar day
Each procedure starts on a separate day
Does not include time spent gathering information
Reflects the time spent in practice, with little follow-up and no prior contact with officials
<i>Cost required to complete each procedure (% of income per capita)</i>
Official costs only, no bribes
Value added tax excluded
<i>Reliability of supply and transparency of tariffs index (0-8)</i>
Duration and frequency of power outages
Tools to monitor power outages
Tools to restore power supply
Regulatory monitoring of utilities’ performance
Financial deterrents aimed at limiting outages
Transparency and accessibility of tariffs
<i>Price of electricity (cents per kilowatt-hour)</i>
Price based on monthly bill for commercial warehouse in case study

Source: Doing Business 2016, 2015

3.1.4 Registering property

Doing Business also works with whole sets of procedures that a business must fulfill when buying property from another business and making the ownership transfer in such way that it will be possible for that business to use that property for expanding its entrepreneurship, using it as a collateral or use it for a further sale.

Furthermore Quality of land administration index is added. It is measured as the sum of the scores on four other indices: the reliability of infrastructure, transparency of information, geographic coverage and land dispute resolution indices. To ensure comparability across the countries, assumptions about the parties and about the property are specified.

Sub-indicators for transferring and registering property are in a table below.

Table 5 - What do the indicators on the efficiency of transferring property measure?

Registering property
<i>Procedures to legally transfer title on immovable property (number)</i>
Preregistration procedures (checking for liens, notarizing sales agreement, etc.)
Registration procedures in the economy's largest business city
Post-registration procedures (for example, filing title with municipality)
<i>Time required to complete each procedure (calendar days)</i>
Does not include time spent gathering information
Each procedure starts on a separate day—though procedures that can be fully completed online are an exception to this rule
Procedure considered completed once final document is received
No prior contact with officials
<i>Cost required to complete each procedure (% of warehouse value)</i>
Official costs only, no bribes
No value added or capital gains taxes included

Source: Doing Business 2016, 2015

3.1.5 Getting credit

Getting credit index is divided into two measures. One that measures the legal rights of borrowers and lenders with respect to secured transactions and the other one deals with reporting credit information. First set of indicators shows whether certain features that facilitate lending exist within the applicable collateral and bankruptcy laws. The second set measures the scope, volume and accessibility of credit information; available through public or private credit registries. While analyzing these issues a case study is created. In such case study company is applying for credit in a bank and as a collateral uses its movable assets.

The strength of legal rights index measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. It includes 10 aspects related to legal rights in collateral law and 2 aspects in bankruptcy law.

Table 6 - What does the “getting credit” indicators measure?

Getting credit
<i>Strength of legal rights index (0-12)</i>
Protection of rights of borrowers and lenders through collateral laws
Protection of secured creditors’ rights through bankruptcy laws
<i>Depth of credit information index (0-8)</i>
Scope and accessibility of credit information distributed by credit bureaus and credit registries
<i>Credit bureau coverage (% of adults)</i>
Number of individuals and firms listed in the largest credit bureau as percentage of adult population
<i>Credit registry coverage (% of adults)</i>
Number of individuals and firms listed in a credit registry as percentage of adult population

Source: Doing Business 2016, 2015

3.1.6 Protecting minority investors

Doing Business evaluates the level of protection of minority investors from conflicts of interest. This is aiming at a case where directors would like to misuse the profits of a business in their own favor and it is done by distinguishing three dimensions of regulation that address conflicts of interest: transparency of related-party transactions (extent of disclosure index), shareholders' ability to sue and hold directors liable for self-dealing (extent of director liability index) and access to evidence and allocation of legal expenses in shareholder litigation (ease of shareholder suits index). Assumptions about the business vary in this case as the business is assumed to be a publicly traded company listed on economy's most important stock exchange. Protecting minority investors has many sub-indicators described in table below.

Table 7 - What does the “protecting minority investors” indicators measure?

Protecting minority investors	
<i>Extent of disclosure index (0-10)</i>	<i>Extent of shareholder rights index (0-10)</i>
Review and approval requirements for related-party transactions	
Internal, and periodic disclosure requirements for related-party transactions	
<i>Extent of director liability index (0-10)</i>	
Minority shareholders' ability to sue and hold interested directors liable for prejudicial related party transactions	
Available legal remedies	
<i>Ease of shareholder suits index (0-10)</i>	
Access to internal corporate documents	
Evidence obtainable during trial	
<i>Extent of conflict of interest regulation index (0-10)</i>	
Simple average of the extent of disclosure,	
<i>Extent of shareholder rights index (0-10)</i>	
Shareholders' rights and role in major corporate decisions	
<i>Extent of ownership and control index (0-10)</i>	
Governance safeguards protecting shareholders from undue board control	
<i>Extent of corporate transparency index (0-10)</i>	
Corporate transparency on ownership stakes, audits and financial prospects	
<i>Extent of shareholder governance index (0-10)</i>	
Simple average of the extent of shareholder rights,	
<i>Strength of minority investor protection index (0-10)</i>	
Simple average of the extent of conflict of interest regulation and extent of shareholder governance indices	

Source: Doing Business 2016, 2015

3.1.7 Paying taxes

Besides others Doing Business also examines taxes and mandatory contributions that company must pay every year. Tax rate levels and administrative burden connected with paying taxes are analyzed. “Taxes and contributions measured include the profit or corporate income tax, social contributions and labor taxes paid by the employer, property taxes, property transfer taxes, dividend tax, capital gains tax, financial transactions tax, waste collection taxes, vehicle and road taxes, and any other small taxes or fees” (Doing Business 2016, 2015). The study is not based on the concept of “optimal tax rate”

because it only evaluates the contributions that influence companies and not government.

Doing Business uses a case scenario to measure the taxes and contributions paid by a standardized business and the complexity of an economy’s tax compliance system. This scenario is done for transactions made over the course of the year by tax experts from a number of different firms within an economy.

Table 8 - What does the “paying taxes” indicators measure?

Paying taxes
<i>Tax payments for a manufacturing company in 2014 (number per year adjusted for electronic and joint filing and payment)</i>
Total number of taxes and contributions paid, including consumption taxes
Method and frequency of filing and payment
<i>Time required to comply with three major taxes (hours per year)</i>
Collecting information and computing the tax payable
Completing tax return forms, filing with proper agencies
Arranging payment or withholding
Preparing separate mandatory tax accounting books, if required
<i>Total tax rate (% of profit before all taxes)</i>
Profit or corporate income tax
Social contributions and labor taxes paid by the employer
Property and property transfer taxes
Social contributions and labor taxes paid by the employer
Dividend, capital gains and financial transactions taxes
Waste collection, vehicle, road and other taxes

Source: Doing Business 2016, 2015

3.1.8 Trading across borders

Doing Business measures the logistical process connected with export and import of various commodities. All the officially required procedures for completing the export or import, starting with entering into contracts and ending with the delivery of goods are considered. Required time and cost are stated but tariffs are excluded in latest edition of the report. These factors are associated with three sets of procedures – documentary compliance, border compliance and

domestic transport. “**Documentary compliance** captures the time and cost associated with compliance with the documentary requirements of all government agencies of the origin economy, the destination economy and any transit economies.” “**Border compliance** captures the time and cost associated with compliance with the economy’s customs regulations and with regulations relating to other inspections that are mandatory in order for the shipment to cross the economy’s border, as well as the time and cost for handling that takes place at its port or border.” “**Domestic transport** captures the time and cost associated with transporting the shipment from a warehouse in the largest business city of the economy to the most widely used seaport, airport or land border of the economy” (Doing Business 2016, 2015).

Table 9 - What do the indicators on the time and cost to export and import cover?

Trading across borders
<i>Documentary compliance</i>
Obtaining, preparing and submitting documents during transport, clearance, inspections and port or border handling in origin economy
Obtaining, preparing and submitting documents required by destination economy and any transit economies
Covers all documents required by law and in practice, including electronic submissions of information as well as non-shipment-specific documents necessary to complete the trade
<i>Border compliance</i>
Customs clearance and inspections by customs
Inspections by other agencies (if applied to more than 10% of shipments)
Port or border handling at most widely used port or border of economy
Obtaining, preparing and submitting documents during clearance, inspections and port or border handling
<i>Domestic transport</i>
Loading and unloading of shipment at warehouse, dry port or border
Transport by most widely used mode between warehouse and terminal or dry port for clearance and inspections
Transport by most widely used mode between terminal or dry port and most widely used border or port of economy
Obtaining, preparing and submitting documents during domestic transport
Traffic delays and road police checks while shipment is en route

Source: Doing Business 2016, 2015

3.1.9 Enforcing contracts

The indicators of enforcing contracts evaluate efficiency of judicial system in resolving a commercial dispute. Similarly to other indicators time and cost for resolving such disputes are measured, but instead of number of procedures this year a new measure called the quality of judicial processes index is included. This measure focuses on improvements of individual economy regarding the quality and efficiency of their court systems. Every dispute is assumed to be a legal transaction, equal to 200% of the economy's income per capita or \$5,000, whichever is greater. The dispute is between two business located in economy's largest city. After the seller delivers the goods to the buyer, the buyer refuses to pay for the goods due to insufficient quality but seller cannot sell them again as the goods was custom made. The dispute is therefore about the quality. The dispute is being solved by an adequate court and consulted with experts. The final judgment is 100% in favor of the seller. The buyer does not appeal the judgment and the seller decides to start enforcing the judgment as soon as the time allocated by law for appeal lapses. The money is successfully collected through a public sale of Buyer's movable assets.

Table 10 - What do the indicators on the efficiency of resolving a commercial dispute cover?

Enforcing contracts
<i>Time required to enforce a contract through the courts (calendar days)</i>
Time to file and serve the case
Time for trial and to obtain the judgment
Time to enforce the judgment
<i>Cost required to enforce a contract through the courts (% of claim)</i>
Average attorney fees
Court cost
Enforcement costs

Source: Doing Business 2016, 2015

Quality of judicial processes consists of indexes like:

- Court structure and proceedings index (0-5)

- Case management index (0-6)
- Court automation index (0-4)
- Alternative dispute resolution index (0-3)

3.1.10 Resolving insolvency

In resolving insolvency chapter the Doing Business report measures the time, cost and outcome of insolvency proceedings applicable to domestic companies. It also measures the strength of legal framework with regard to liquidation and reorganization proceedings. Assumptions about company are specified in the report. A case where such insolvency occurs can be a situation where the business is experiencing liquidity problems.

Table 11 - What do the indicators on debt recovery in insolvency measure?

Resolving insolvency
<i>Time required to recover debt (years)</i>
Measured in calendar years
Appeals and requests for extension are included
<i>Cost required to recover debt (% of debtor's estate)</i>
Measured as percentage of estate value
Court fees
Fees of insolvency administrators
Lawyers' fees
Assessors' and auctioneers' fees
Other related fees
<i>Outcome</i>
Whether the business continues operating as a going concern or whether its assets are sold piecemeal
<i>Recovery rate for secured creditors (cents on the dollar)</i>
Measures the cents on the dollar recovered by secured creditors
Present value of debt recovered
Official costs of the insolvency proceedings are deducted
Depreciation of furniture is taken into account
Outcome for the business (survival or not) affects the maximum value that can be recovered

Source: Doing Business 2016, 2015

Strength of insolvency framework index is based on four other indices: commencement of proceedings index, management of debtor’s assets index, reorganization proceedings index and creditor participation index.

3.1.11 Labor market regulation

This index has been derived from the original regulation of employment index. Employing workers has been criticized a lot in past and that mostly from the side of individual experts. This index had focused hiring, working hours and redundancy of employees. In the latest report the scope of the labor market regulation has been expanded by adding 16 new questions. Data on employment cover three areas: hiring, working hours and redundancy. Each one of these areas is divided in 5 other sub-areas.

Table 12 - What does the “labor market regulation” indicator measure?

Labor market regulation
<i>Employment</i>
Hiring
Working hours
Redundancy
<i>Redundancy cost</i>
Notice requirements and severance payments due when terminating a redundant worker, expressed in weeks of salary
<i>Job quality</i>
Whether the law mandates equal remuneration for work of equal value
Whether the law mandates nondiscrimination based on gender in hiring
Whether the law mandates paid or unpaid maternity leave
Minimum length of paid maternity leave (calendar days)
Whether employees on maternity leave receive 100% of wages
Availability of five fully paid days of sick leave a year
Availability of on-the-job training at no cost to employee
Whether unemployment protection is available after one year of employment
Minimum duration of contribution period (in months) required for unemployment protection
Whether an employee can create or join a union

3.2 Added indicators

Doing Business index has been criticized for many inadequacies and lack of accuracy. One form of criticism towards DB was focused on the reliability and objectivity of its measurements. To disprove such problem would require scrutinized investigation of the reliability of sources of information and the informants themselves. Informant sources are accessible to wide public, but such investigations would be too vast for a thesis of this kind. Other criticism was however aimed at absence of certain indicators. It was said that not only some of the indicators have allegedly been captured in a way that does not provide the public with the accurate idea of how the economy is actually doing in such topic, but also it has been suggested that some indicators that are vital to picture the real economic situation are completely missing. Such economic indicators give a statistic about economic activity and performance in a country. The issue was that in order to create a picture of what environment for entrepreneurs entering a market would be like, the focus should be shifted more towards the macroeconomic part of the economy. That the business regulations themselves only provide a skewed image of what the situation is like. Out of many indicators that Doing Business Index was criticized for some were brought up more often. Among these belong:

- **Real Gross Domestic product growth**
- **Corruption rate**
- **Unemployment rate.**

For this reason I have chosen these three indicators for this thesis and added to them to an existing Doing Business Index to see how a ranking of certain countries would change. A new ranking including these three indicators is going to be added together with the original rating in order to see a possible shift in each and every country, but it would be difficult to analyze a shift in every country and therefore 4 countries are chosen for further detail analysis. These are Argentina, Russia, Singapore and South Africa. On the example of these countries we will observe what shift has been done, find out what indicator has contributed the most to this shift and discuss the importance of added indicators for these particular countries. Closer attention to the choice of these countries will be paid in the following chapter where the countries are going to be analyzed. This chapter describes the additional indicators used in this work.

3.2.1 Annual real GDP growth

Gross domestic product growth was leading the criticism when it comes to omitting indicators. Gross domestic product (GDP) is defined as “the market value of all finished goods and services produced in a country during a certain period of time” (Jochumzen, 2010). In order to be able to compare GDP over time we have take into consideration inflation, because then GDP would increase for as much as the price of product would change even though the same amount of product is produced. “To eliminate the effect of inflation we divide GDP by a price index and we define real GDP as GDP divided by a price index” (Jochumzen, 2010). This way real GDP shows only the real increase in the volume of products during set period. To get the same number without using price index, we can also use GDP deflator instead. This metric shows how much does a change in the year, which GDP is based on, relies upon change in the price level. This method has a certain advantage because in it not based on a fixed basket of goods and services.

Real GDP growth is then an indicator showing how much has an economy grown over particular period in percentage. Because it is real GDP, influence of inflation is removed.

Data for this indicator were collected from the World Bank's website <http://data.worldbank.org/> in order to ensure maximum consistency of data. All data are current as of the January 1, 2015. The country with the lowest annual GDP growth is Lybia, with the decline in growth being -24. That is on this index represented by 0% and scores lowest on the annual GDP growth rank. Ethiopia on the other hand with its annual GDP growth being 10,3 scores highest on the rank and is represented by 100%.

3.2.2 Unemployment rate

Another indicator that is included into "new" Doing Business Index is unemployment. "Better performance on the ease of doing business is associated with more jobs" (Doing Business 2006, 2005). That basically means that greater ease of doing business is associated with fewer people unemployed. Singapore, one of the leading global leaders on the ease of doing business, has 1.9% unemployment rate. In Greece, the OECD country with the worst ranking (60) on Doing Business indicators, unemployment is 27.9%. Similar phenomena can be observed if we would continue with such research. However unemployment rate is not included among Doing Business indicators, so following this hypothesis is going to be enabled by making unemployment rate on of the indicators. According to the source of data, the definition of unemployment for the purposes of this thesis is counted as the percentage of the labor force that is without jobs. Unemployment is a major issue especially in African countries, where it often exceeds 20%.

Data are also collected from the database of the World Bank and they are available in 172 countries. The data on unemployment used in this thesis are current as of

January 1, 2015. The country with the highest unemployment rate being 31% is Mauritania, and is represented by 0% and scores therefore lowest on the unemployment rate rank. Qatar on the other hand with its unemployment rate being 0.3 scores highest on the rank and is represented by 100%.

3.2.3 Corruption

Last but not least of the indicators, which is not included in Doing Business index and could have effect on the position of a country on the index is corruption. For the purposes of this index I have used the data done by the website Transparency International and its Corruption Perception Index⁶. Transparency international is nonprofit nongovernmental organization that monitors, publicizes and tackles corporate and political corruption in international development. Corruption is here defined as the abuse of entrusted power for private gain.

The Corruption Perceptions Index aggregates data from a number of different sources that provide perceptions of business people and country experts of the level of corruption in the public sector. A source to be credible must be based on a reliable and valid methodology, which scores and ranks multiple countries on the same scale and also it quantifies perceptions of corruption in the public sector. Only a credible institution performs as source.

The organization then standardize data sources to a scale of 0-100 where a 0 equals the highest level of perceived corruption and 100 equals the lowest level of perceived corruption. A country's rank indicates its position relative to the other countries in the index. For the year 2015 index includes 168 countries and territories (e.V., 2016). The country with the highest corruption rate is Afghanistan,

⁶ The Corruption Perceptions Index (CPI) was established in 1995 as a composite indicator used to measure perceptions of corruption in the public sector in different countries around the world. The CPI scores and ranks countries/territories based on how corrupt a country's public sector is perceived to be. It is a composite index, a combination of surveys and assessments of corruption, collected by a variety of reputable institutions. The CPI is the most widely used indicator of corruption worldwide. (e.V., 2016)

which ranked 11 on Corruption Perception Index. Somalia ranked even worse with ranking 8, but it is not included in the Doing Business Index, and therefore it is not included. Afghanistan is then represented with 0% and last 189th place. Country with the lowest corruption is Denmark with CPI ranking 91. In our index it is represented by 100%.

Data source is not the same with all the indicators but they are always collected from credible official sources. From the consistence point of view choosing World Bank as a source of information for all three indicators would be most ideal. This is because the World Bank group also collects data for Doing Business index. In case of corruption, Transparency International was however more extensive source than then the one done by World Bank and its aim was narrower. For that reason this data source was chosen with level of corruption indicator.

For the purposes of the research in this thesis, first the 10 of the existing indicators starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency were added in a table with data from “Distance to Frontier” (DTF) calculator. Distance to frontier score shows how far on average an economy is at a point in time from the best performance achieved by any economy. This number is corresponding with the overall ranking on DBI. DTF is calculated for every individual indicator and the final ranking is just an average of the Distance to Frontier of such indicator but in rank. In order to unify the data, every DTF score was adjusted into percentage ratio on a scale from 0 to 100%. Every percentage value corresponds to the Distance to Frontier score or to the ease of doing business ranking for that particular indicator respectively. This has however skewed the ease of doing business ranking, in a way that a position of a country after such alternation does not correspond to the

position on the original ease of doing business ranking. Giving an example of Brazil, Brazil has scored 116 on the ease of doing business indicator, in order to make the data consistent by adjusting into percentage ratio on a scale from 0 to 100%, the position has shifted to a 90th place. After this change it is however possible to follow the actual shift of a country on the ranking. Such methodology could raise questions in a matter of inconsistency, because the adjusted ease of doing business ranking is not corresponding with the original ranking. An additional set of data was made for the purposes of the thesis, where the original ranking was kept by doing a simple average of the DTF values and then ranking them accordingly from 1 to 189. This rank then corresponds to the ranking done by Doing Business. Added indicators – Annual GDP growth, corruption rate and unemployment were adjusted by the original methodology. In the end the original ranking was compared to the new ranking and shift could be observed between the real ranking of countries and the ranking computed through data set. This data set is shown in a chapter “Data sets A”. Data set with all the values that were attributed values from 0% to 100% using Excel formula is shown in chapter” Data sets B”. Both of these sets of data will be included in this thesis for the reader to look at. Since the scope of the index is too vast, only first 20 countries, countries, the 4 countries analyzed in this thesis and the 10 countries with most significant shift will be shown.

The additional indicators were added in the similar way. Data for individual indicators were collected from above-mentioned sources and assigned to a country that already exists in Doing Business Index. If one of the data sets of added indicator contained data for more than 189 countries that are in DBI, these countries were omitted. Subsequently just like with the preceding indicators, the number representing the best standard for that exact indicator, was given 100%. This occurrence was described above in the paragraphs under each added indicator. Excel formula “MIN” and “MAX” were then used to rank these countries on the scale from 1 to 189, where 189 stands for the worst performing country on that indicator. Ranking has been done for every indicator together with the 10

already existing indicators separately and in the end a final ranking including all the indicators was done. The entire ranking was done under the presumption that every indicator has the same weight like the other. The shift was observed both with individual indicators and all the indicators together and then compared with the ranking of the 10 original indicators to follow possible shift in the ranking of the countries.

3.3 Selected countries

To follow the shift in rating of every individual country, after including indicator of the annual GDP growth, unemployment and corruption is unnecessary for the purposes of the thesis. The new ranking itself is attached in an appendix of the thesis, where a reader can see a shift of a desired country. In the introduction it was mentioned that 4 countries are going to be chosen for more detailed analysis, these are Argentina, Russia, Singapore and South Africa. In this chapter each of these chosen countries will be scrutinized. I will mention the reason for the choice of such country, data for each of the indicators, the shift on a ranking and the main causes of the shift. The general choice of countries was however based on GDP and location. For South America and Africa I chose the second country on GDP ranking for the year 2015. For Europe I chose Russia due its GDP and square area ratio and lastly Singapore as a leader of the ease of doing business index for past years. In order to make the analysis more synoptic, only the data from "Data Set A" will serve as a base for the description of the ranking of added indicators for that particular country. "Data set B" is only going to be mentioned for the overall shift in ranking. Later in the chapter the countries that did undergo the most significant shift will be described together with listing of the new top 20 countries on the ease of doing business index. This list is going to be compared to the original index rating.

3.3.1 Argentina

First country that was chosen for analysis is Argentina. Argentina, officially names La República Argentina, covers an area of 1,7 million square miles. It is bordered by Atlantic Ocean, Chile, Bolivia, Paraguay, Brazil and Uruguay. Argentina is the 8th largest country in the world and after Brazil the second largest country in South America. In 2014 the population was 42,98 million making it the 5th most populous nation in the Americas. The capital Buenos Aires with its surrounding suburbs is by far the largest city in the country, with an estimated population of 12,8 million. Argentina is formally a federal republic. Its main industry is considered to be agriculture, in which the country is one of the leaders in export.

Argentina has great natural resources and the country's industrial base is relatively diversified. Its main industries are food processing, motor vehicles, consumer durable, textile and steel (Edwards, 2008). It is one of the most developed countries in South America. In 2014 Argentina ranked 24th country with highest GDP in the world. Its total GDP was \$537,7 billion and GDP per capita was \$ 12,509 in the same year.

I have chosen Argentina based on its significance amongst South American countries. I was trying not to focus on the strongest economy in the area, but rather on the one following it. From each continent I tried to choose one country upon which I could show the shift with added indicators and Argentina seemed like a good candidate for the analyses. An element of arbitrariness was also meant to play a certain role in the choice of countries for further scrutiny.

On the ease of doing business 2016 ranking, Argentina has ended in 121st place. This was 4 points drop compared to the previous year. Argentina's real GDP growth in the 2015 was 0,5%, which scored on the Annual GDP growth rank as a 126th country, this has caused a 5 places drop in the ranking with regard to the original DB ranking. Unemployment rate in the same year was 8,2%, this led to the 5 point rise in the ranking and therefore ended in the 116th place. Corruption Perception Index was 32. This has moved Argentina 4 places down to 125th place.

All added indicators kept Argentina relatively consistent to the original ranking, despite this being said, overall drop was 8 positions, moving Argentina from the original 121st place to 129th place. Information from the “Data Set B” gives only a little different results. Computed thought MIN and MAX formula and in the end done by simple average of the 10 original indicators, Argentina ranked 112. After adding the new indicators and averaging them with the original indicators Argentina ranked 115, so the drop was here only 3 points.

Argentina has not proved to be very much affected by annual GDP growth, corruption and unemployment indicators in the final ranking. It has suffered a little change but nothing that would be worth a further investigation of why such shift has happened.

3.3.2 South Africa

South Africa or officially the Republic of South Africa is located in the southern tip of Africa. It has three capital cities: Cape Town, Pretoria, and Bloemfontein each connected with different responsibilities like law, business and court. Johannesburg is the South Africa’s largest city. South Africa belongs to a region called Sub-Saharan Africa and Doing Business index describes it as a country with upper middle income. With its population of 54 million people, it is the 5th largest country in Africa and 25th largest country in the world. Data for the ease of doing business were collected in the city of Johannesburg. The country itself takes up a space of 1, 2 million square kilometers, which makes it also the 25th largest country in the world and it is divided into 9 provinces out of which each has its own government and leader (Murphy, 2004). Its government is a constitutional multiparty, three-tier democracy. Official language is English but many other languages are considered official as well.

“South Africa is a middle-income, emerging market with an abundant supply of natural resources; well-developed financial, legal, communications, energy, and transport sectors; and a stock exchange that is Africa’s largest and among the top

20 in the world” (Cia.gov, 2016). Economic growth has been fluctuating between -2 to 2% in last 5 years and stopping at 1.5% in 2014, which is unlike unemployment, poverty and inequality rather positive factor. The last three mentioned factors are a major problem with their numbers belonging to one of the highest in the world. Country is being recognized for its modernized infrastructure and so distribution of goods is relatively efficient. With regard to the Getting electricity indicator, it is worth to mention vast power black outs that are very common in South Africa and have negative influence on the economy growth. According to the World Factbook available at cia.gov South Africa is trying to control inflation, which has been 4,8% in the year 2015, but at the same time faces many structural constraints, such as shortage of skilled labor, declining global competitiveness and frequent work stoppages due to frequent strikes.

In the beginning of 2015, South Africa’s GDP was \$350 billion and GDP per capita was \$ 13,200. Amongst the main industries belongs mining as South Africa is the world’s largest producer of gold) and automobile assembly together with machinery and for instance metalworking. Most people are employed in the service industry (over 60%).

South Africa was chosen as another country that was chosen for more detailed analysis. As I intended to include in this comparison a country from Africa, South Africa with its 2nd largest economy on this continent, behind Nigeria and right above Egypt is a good candidate for such analysis as it has struck me with its significant shift on the ranking after including the new indicators.

On the ease of doing business 2016 ranking, South Africa has ended in 73rd place. Much like with Argentina this was a four points drop compared to the previous year. South Africa’s annual GDP growth in the 2015 was 1,5%, which scored on the Annual GDP growth rank as a 74th country, this has caused a single place drop in the ranking with regard to the original DB ranking. Where the numbers are alarming is however the unemployment rate. In the same year it was

25,1%, this led to a big 27 points drop in the ranking and therefore ended in the 100th place on the ease of doing business rank for that indicator averaging with the 10 original Doing Business indicators. This drop is what brought the country down the ranking in the final rank as well. According to the World Factbook, unemployment is mostly common with young black males and it is generally very high among the young population (15-24 years), representing almost double the country's unemployment rate. Since 2010 till 2015 was oscillating between 6th and 8th countries with highest unemployment on Africa's continent. This goes hand in hand with income inequality, which is very high in South Africa, scoring 63 on Gini Index in 2013⁷. Corruption Perception Index for South Africa was 44, therefore a little below the mediocre point. This has moved South Africa 4 places down to 77th place. There is no doubt that if it wasn't for the high unemployment rate South Africa would probably keep its ranking, but that is why the average is done for all 13 indicators and on this rank the overall shift was 28 places down. Information from the "Data Set B" gives only a little different results. Computed through MIN and MAX formula and in the end done by simple average of the 10 original indicators, South Africa ranked 91st. After adding the new indicators and averaging them with the original indicators it ranked 112, so the drop was here 27 points, which is only one point difference to the "Data Set A". Unemployment was also a determining factor here.

South Africa has not proved to be very much affected by the annual GDP growth or corruption rate, but certainly by the unemployment indicator in the final ranking. It has suffered quite a significant change on the new ease of doing business ranking.

⁷ Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality (Data.worldbank.org, 2016).

3.3.3 Russia

Russian Federation is the third out of four countries analyzed in this thesis. Russia occupies much of the world's largest landmass, Eurasia; it stretches across 11 time zones and covers over 17 million km². This makes it by far the largest country in the world, covering 11% of the world's landmass. It is 6 times larger than Argentina and 14 times larger than South Africa. Russia is rich in precious and semi-precious metals; it has millions of pounds of iron ore, bauxite and coal (Blinnikov, 2011).

Russia has very diverse society with numerous Languages being spoken. Russian language is the official language and it is among the world's 10 most common languages. Among 144 millions of people, there is more than 60 ethnic groups living in Russia in 22 republics, 46 provinces, 9 territories and 4 autonomous districts. Russia also has 3 federal cities – Moscow, Saint Petersburg and Sevastopol.

“The process of transition from Soviet-type system to market-oriented economies was arguably the most important development in the last quarter of the twentieth century. Russia is one of the two most important countries undergoing this transition. Russia boasts the world's second most powerful military force, making it an important player in a wide range of regional conflicts around the globe. After a steep decline during most of the 1990s, Russia's economy was growing at almost 7 percent per year beginning in 1999, reaching eleventh place in the world gross domestic product rankings by 2008. In 2011, Russia was ranked ninth in nominal GDP and sixth in purchasing power parity GDP. The country has immense natural resources. It is the world's second largest producer and exporter of oil and the largest producer and exporter of natural gas.

Energy and minerals exports allowed Russia to accumulate the third largest stock of foreign exchange reserves in the world, behind only China and Japan” (Alexeev and Weber, n.d., 2013).

The reason behind choosing Russia was to include a former centrally planned economy that has been through transition and is now a market oriented economy. Russia has become a developed high-income market economy and therefore I would like to observe its shift on the ease of doing business ranking, since once being government controlled, it may still contain some characteristics of the time before transition. Another reason was the size and importance of the economy, belonging to one of the most important ones in the world and its geographical position.

On the ease of doing business 2016 ranking, Russia has ended on 51st place. This was a 3 points growth compared to the previous year. Russia's real GDP growth in the 2015 was 0,6%, which scored on the Annual GDP growth rank as a 53th country, this has caused a 2 places drop in the ranking with regard to the original DB ranking. Unemployment rate in the same year was 5,1%, this led to the 5 point rise in the ranking and therefore ended on the 46th place. Corruption Perception Index was 29. This has moved Russia 8 places down to 59th place. All added indicators kept Russia relatively consistent to the original ranking, however the overall drop was 7 positions, moving Russia from the original 51st place to 58th place. Information from the "Data Set B" gives only a little different results. Computed thought MIN and MAX formula and in the end done by simple average of the 10 original indicators, Russia ranked 41st. After adding the new indicators and averaging them with the original indicators Russia ranked 43, so the drop was here only 2 points.

Annual GDP growth, corruption and unemployment indicators in the final ranking have not affected Russia very much. Worth mentioning would can be the corruption perception index level measured for Russia, which is 29. This figure led to an 8-point drop in the ratings, which is ultimately the reason for overall drop in the rank. According to Transparency International the most significant worsening of corruption in Russia has happened between the year 2004 and 2005, where

Russia dropped from 90th place to 126th place. This has been also the year in which current president Vladimir Putin entered his second presidential term. Nowadays Russia is ranking 119th on corruption perception index done by Transparency International. “In Russia, investors are confronted with rather high levels of corruption when entering the market, nevertheless this market attract continuously increasing amount of foreign direct investments” (Alexeev and Weber, n.d., 2013).

3.3.4 Singapore

Last country scrutinized in this research is going to be Singapore and that for an obvious reason of being the leader of the ranking in 13 consecutive years. In no year has Singapore been surpassed by any other country. New Zealand has been in many years on a second place until it was replaced by Hong Kong in 2011, but shortly gained its 2nd place again in the year 2015. Singapore is a country belonging to East Asia and Pacific and has population in 5.5 million people. It is a high-income economy with its \$307.9 billion taking a 36th place in the world but with its GDP per capita being \$83000 is ranking 3rd in the world if Macau⁸ is not counted. (GDP per capita, PPP (current international \$) | Data | Table, 2016)

Singapore is one of the world's most prosperous countries with strong international trading links. Singapore's port is one of the world's busiest in terms of tonnage handled. With per capita GDP Singapore equals to that of the leading nations of Western Europe. With is 687 square kilometers it belongs among the smallest countries in the world but it has a population of 6,7 million people.

Singapore has a well develop free market economy with stable GDP growth, low corruption rate and very low unemployment rate. It relies mostly on export and that particularly of consumer electronics, information technology products,

⁸ Macao is a special administrative region on the southern coast of the People's Republic of China and therefore some rank do not include it in it ranking as an individual country, but rather as a part of China.

medical and optical devices, pharmaceuticals and financial services sectors. (The World Factbook, 2016).

As it was mentioned Singapore has continuously ended on the 1st place throughout all the years of Doing Business and therefore there has been no change in the ranking for this country. Singapore's real GDP growth in the 2015 was 2,9%, which scored on the Annual GDP growth rank as a 2nd country. This was the only indicator in which Singapore did not take the lead and ranked worse than New Zealand after averaging it with the 10 original indicators. If annual GDP growth would be considered as a single indicator then in 2015 Singapore would rank the 99th in the world. Ethiopia with its 10.3% growth took the first place here. Unemployment rate in the same year was 3%, which is again rather an average number but with original DBI indicators Singapore kept the first position in the ranking. In the first paragraph it was mentioned that Singapore is doing well regarding corruption. Corruption Perception Index for Singapore is 85 and that means 8th best in the world. Even with the added indicators Singapore kept its position as the best country for the ease of setting up business. Information from the "Data Set B" gives the same results. Computed thought MIN and MAX formula and in the end done by simple average of the 10 original indicators, Singapore ranked the 1st. After adding the new indicators and averaging them with the original indicators Singapore ranked the 1st again.

3.3.5 Countries with the most significant shift

In previous chapters, beforehand selected countries were scrutinized in detail despite their shift on the index. In this chapter countries with the most significant shift are going to be mentioned, together with the determining indicator for such shift.

A shift could have been positive or negative. The ratio between countries that shifted up and down was however almost 1:1, even though it is important to mention that the negative shift was, with the countries that shifted the most, more

steep that for the countries where the shift was positive. This was the case especially in the “Data Set A”, where the biggest shift was 44 negative points. For the reminder “Data Set A” is where the original ranking was kept by doing a simple average of the DTF values and then ranking them accordingly from 1 to 189. This rank then corresponds to the ranking done by Doing Business. Added indicators – Real GDP growth, corruption rate and unemployment were adjusted by the original methodology.

Among the top five countries with biggest negative shift in “Data Set A” belong Bosnia and Herzegovina, Serbia, South Africa, Greece and Ukraine. On the other hand countries with the biggest positive shift were Vietnam, Luxembourg, Uruguay, Fiji and Rwanda.

Bosnia and Herzegovina	-44
Serbia	-28
South Africa	-28
Greece	-26
Ukraine	-23

Bosnia and Herzegovina has the most significant shift from among all the countries on both sets. It went from the 79th place on the ease of doing business to the 123rd, dropping 44 points. The determining indicator was here the unemployment rate, which is 27.9 and belongs among the highest in the world.

With Serbia, which shifted 28 points, it was unemployment rate as well. Serbia dropped from the 59th place to the 87th place. South Africa has been described in previous chapter and last country in the described table is Greece. Greece has dropped from 60th place to the 86th place, moving 26 negative points. As unemployment is a big problem in Greece in recent years, it has been exactly this factor that contributed to such shift. Lastly Ukraine moved downwards from the

83rd place to the 106th place. Important factor initiating this shift was in Ukraine its very low annual GDP growth, which was in 2015 -6.8%. Also a big problem is corruption, which here belongs among one of the highest in the world.

Five countries with the most significant positive shift in “Data Set A” were following: Uruguay, Luxembourg, Ghana, Rwanda and Bhutan.

Uruguay	+24
Luxembourg	+23
Ghana	+20
Rwanda	+20
Bhutan	+19

Uruguay has shifted in a positive direction the most on both data sets. This is an interesting finding for this thesis, as it proves that indicators have influence on a country in a same way when using both methodologies. Uruguay, scoring 21st out of 168 countries, where CPI was measured, is a country with very low corruption rate. From the Table 3 can be read that this indicator has shifted Uruguay by 16 point upwards and overall shift of the country was 24 point moving it to the 68th place on the index.

Luxembourg shifted by 23 points to the 38th position, where deciding factor was again the low rate of corruption and slight jump on a ranking thanks to unemployment.

Third most significant positive shift was done by Ghana and Rwanda. Both of these African countries moved up the ranking by 20 points and in both of these cases the reason was unemployment rate, which is in these countries surprisingly low, in Ghana being 0.6% and in Rwanda 2.4%. Due to this score Rwanda managed to move in the first 50 states by scoring on the 42nd place. Lastly Bhutan moved

from the 71st place to the 52nd place by 19 points. This South Asian country had a steady rise in all three of the indicators.

In the Data Set B the results, where countries did undergo the negative shift, were following:

Bosnia and Herzegovina	-30
West Bank and Gaza	-24
Serbia	-23
Greece	-21
South Africa	-21

As we can see the raking remained were similar, with the exception of the West Bank and Gaza, which experienced the second most significant negative shift, and the other difference is the lower amount of points, by which the countries have shifted.

Countries that undergo positive shift on the index in Data Set B were:

Uruguay	+24
Bhutan	+19
Ghana	+20
Luxembourg	+23
Cape Verde	+20

Here the differences are just as similar as they were between countries with negative shift in Data Set B and Data set B.

In tables 19 and 20 a new index for both data sets can be observed, with the main changes that were done by adding the new indicators: annual GDP growth, unemployment rate and corruption rate. Shift with every particular country can be observed by comparing tables 13 and 16 with the tables 19 and 20. Worth mentioning can be an obvious change with country such a Macedonia, that in both data sets was shifted out of the top 20 countries due to its high unemployment rate and relative high corruption rate in comparison to the countries this high up the index.

In this final chapter of practical part and of the whole the whole theses as well, a focus was put on the actual impacts of the added indicators on the selected countries. Tables with data sets are undeniable proofs of the fact that added indicators do have an effect on the position of the country on the ranking. From just the basic point of view it is possible to see how some countries did not appear on the positions where they were before including the additional indicators, but with more closer look it is also possible to see what was the reason for such shift and observe an extent of this shift. Not all the countries have changed their positions, but those that were selected for further analysis in most cases did and closer attention was paid to the cause of these changes. Going back to the purpose of this research, if the country has worsened on the ranking it hypothetically means that it will be more difficult for a company to enter the market and perform its business there. In the case of selected countries it means that it would in fact be more difficult to enter such market then it may originally seem before including the added indicators.

The new indicators have not affected Argentina too much. All the indicators are showing very average scores, except maybe for unemployment rate, which is 8.2%. Entering businesses in Argentina may therefore be affected by negative outcomes coming from the rising unemployment, such as lower demand for income-elastic products or possibility of rising crime rate due to unemployment.

The unemployment indicator in the final ranking has certainly affected South Africa. It has suffered quite a significant shift on the new ease of doing business ranking. With Russia the indicators had similar impact like in Argentina, with the difference that overall it is doing better regarding individual indicators.

Lastly Singapore even with the added indicators it kept its position as the best country for the ease of setting up business. Very much like Uruguay being the country with the most positive shift in ranking, Singapore also scored first in both of the data sets.

4 Conclusion and recommendations

Over the 13 years since its commencement the Doing Business report has become one of the world's most influential policy publications. It is an annual report that gives an idea of the state of health of economies. It captures many economic areas, from the less visible ones such as regulatory system, the efficiency of the bureaucracy and the nature of business governance to the more obvious ones such as growth of the economy. The trend is to facilitate starting business, where the financial costs connected to setting up a business are decreasing together with the paperwork connected with this indicator.

4.1 Trend

In recent years Asian countries are rising up in the index. The best business is in Singapore 10th year in a row. This is due to innovations, new technologies and entrepreneurs investing a lot of time in their businesses. Minimal administration, lower regulation and efficient legislative are the keys to successful business environment in a country. In the top ten economies on the index we can find countries like New Zealand, USA, Denmark, Norway, Iceland, Hong Kong, Great Britain, Korea or Ireland. These are all countries that are generally known for good conditions for entrepreneurs. It is an undoubted fact that the best business environment is in wealthy countries, while countries with insufficient legal awareness and unpredictable governance are lacking behind.

4.2 Focus

In Doing Business report World Bank is ranking 10 key indicators, where the final index is a simple average of these 10 indicators. The scope of an index is

limited as it does not reflect other relevant factors, such as gravity model and proximity to markets, annual GDP growth, strength of financial system of a country, all the macroeconomic conditions, corruption rate or unemployment. Throughout this work I came to realize how important this index can be for many recipients and I tried to get closer to the expansion of the scope of this index, perhaps also disprove the statements of generally better environment in wealthy countries. This has been attempted by the lessening the limitation of the index in terms of not reflecting other relevant factors. Therefore the index was extended of three economic indicators; among these are the annual GDP growth, unemployment rate and corruption rate. These indicators have been applied by above described formula into the index to every country and a final shift was observed. The goal was to see how a country would change on the ranking after including separately the indicator annual GDP growth of the country, the level of unemployment and the level of corruption and finally all of these combined.

4.3 Main findings

Almost every country had changed its position with every one of these indicators. With individual indicators the shifts were ranging between a 34-points drop to a 17-point raise, depending on the value of each indicator for individual country. This also means that some countries stayed in the same place like before even after including the indicator, however here we are talking about approximately 10% of the countries. This eventually indicates that the hypothesis has proved to be correct. Since the shift occurred with individual indicators separately, then after adding them up and averaging them with the existing indicators the shift has naturally remained. In some cases was the overall shift, which can be observed in the tables 13 through 18 in the column called "Difference ranks", a sum of individual shifts after including additional indicators separately. In most cases however this was not the rule and because there were other countries

experiencing shifts as well, the final shift was skewed. Final shifts varied from a 44-points drop to a 24-point raise.

The top three countries on the original Doing Business rank kept their positions and generally there were no major shifts among the top 20 countries. This proves the statement that the best business environment prevails in wealthy countries. Most significant shifts happened between countries that originally ranked on places from 60 to 90. Not much change was observed among countries that ranked towards the end of the index. This is mostly due to the fact that countries with hostile regulatory environment also score worse with the other indicators like unemployment. This being said, there were still important negative shifts among countries that once were high up the index, such as Macedonia or with larger economies such as South Africa.

4.4 Recommendations

Despite certain insufficiencies in this thesis, one of which being the correct methodology applied or possible doubts regarding the comparability of regulatory and macroeconomic factors, I believe that it gives a good look at what could be done in future with the ease of doing business index, how it can be extended and what could it focus on more. And again this index, however it may not be perfect, is certainly a great way to show the countries with lower rankings, where to turn for advice and perhaps enlightenment too as it has already been done in hundreds of regulatory reforms worldwide. Doing business met with praise just as much as with criticism, but in reality there is no unique way how to correctly measure one of the most complex scopes of the economy such as the ease of doing business.

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6 Appendix

Country	Starting business	Dealing with construction permits	Getting electricity	Registering Property	Getting credit	Protecting Minority Investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving Insolvency	Annual GDP growth %	Unemployment %	Corruption %
Singapore	96.5	93.0	94.3	85.7	75	83.3	96.6	89.3	84.9	74.8	78.4	91.2	92.5
New Zealand	100	87.9	84.0	94.5	100	83.3	88.1	84.6	74.3	71.4	78.7	82.7	96.3
Denmark	94.0	86.3	90.2	89.9	70	68.3	91.9	100	68.6	84.8	73.2	79.5	100
Korea, Rep.	94.4	77.8	99.9	76.2	65	73.3	84.5	92.5	84.8	90.3	79.6	89.6	56.3
Hong Kong	98.1	84.8	91.6	69.8	75	83.3	98.7	87.8	72.6	75.1	77.3	90.6	80.0
United Kingdom	94.6	78.9	89.1	74.5	75	78.3	91.3	91.4	69.4	82.0	78.4	80.5	87.5
United States	91.2	76.7	81.5	76.9	95	64.7	80.8	92.0	72.6	90.1	77.0	80.8	81.3
Sweden	94.6	80.4	93.1	88.9	55	71.7	83.5	99.3	72.0	78.8	76.7	74.9	97.5
Norway	94.3	78.0	87.5	87.7	55	71.7	91.4	87.8	77.1	85.7	76.4	89.9	95.0
Finland	93.1	77.9	89.0	82.9	65	56.7	89.4	92.4	70.3	93.8	68.8	73.0	98.8
Taiwan, China	94.4	86.3	99.4	83.9	60	66.7	82.8	80.1	73.5	78.4		100	63.8
Macedonia, FYR	99.9	83.1	81.3	73.6	65	71.7	94.2	93.9	71.4	67.7	81.0	10.1	
Australia	96.5	86.6	82.3	74.2	90	56.7	82.3	70.8	79.7	81.7	77.3	81.4	85.0
Canada	98.2	73.7	63.8	75.1	85	76.7	93.0	88.4	65.5	81.4	77.0	78.5	90.0
Germany	83.4	81.4	98.8	69.4	70	60.0	77.0	91.8	75.1	91.9	74.6	84.7	87.5
Estonia	95.1	80.9	83.2	91.0	70	55.0	84.3	94.9	75.2	65.3	78.4	75.9	73.8
Ireland	94.2	75.0	84.2	76.3	70	73.3	95.0	87.2	57.9	78.4	85.1	63.2	80.0
Malaysia	95.3	81.1	90.1	76.3	70	78.3	84.3	86.7	66.6	62.5	87.5	94.5	48.8
Iceland	92.4	74.9	92.2	86.6	60	68.3	83.7	80.3	69.1	81.6	75.2	84.7	85.0
Lithuania	97.7	80.4	79.0	93.0	70	61.7	81.4	97.7	79.8	48.1	78.7	64.2	62.5

Table 13 – “Data Set A” - Top 20 countries

Original DP indicators rank	Annual GDP growth rank	Unemployment rank	Corruption rank	New Rank	Difference Ranks	Difference Annual GDP	Difference Unemployment	Difference corruption
1	1	2	1	1	0	-1	0	0
2	2	3	2	2	0	1	0	0
3	4	4	3	3	0	-1	-2	0
4	3	5	10	8	-4	1	1	-6
5	5	6	4	4	1	0	1	1
6	6	7	6	6	0	0	-2	0
7	7	9	9	9	-2	0	-2	-2
8	8	10	5	7	1	0	-2	3
9	9	11	7	5	4	0	2	2
10	12	12	8	10	0	-2	-2	2
11	10	1	16	11	0	1	5	-6
12	11	8	12	29	-17	1	-26	-2
13	14	14	13	14	-1	-1	-1	0
14	15	13	11	12	2	-1	-1	3
15	17	15	14	13	2	-2	2	3
16	18	17	18	16	0	-2	-1	-2
17	16	16	17	19	-2	1	-2	1
18	13	20	23	17	1	5	7	-6
19	20	19	15	15	4	-1	3	4
20	19	18	20	23	-3	1	0	-2

Country	Starting business	Dealing with construction permits	Getting electricity	Registering Property	Getting credit	Protecting Minority Investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving insolvency	Annual GDP growth %	Unemployment %	Corruption %
Singapore	96.5	93.0	94.3	85.7	75	83.3	96.6	89.3	84.9	74.8	78.4	91.2	92.5
Russia	92.3	65.2	84.2	90.5	65	6.7	81.6	37.4	8.6	58.4	71.7	84.4	22.5
South Africa	81.2	69.0	42.0	60.8	60	71.7	8.7	58.0	53.2	64.3	74.3	19.2	41.3
Argentina	73.4	49.7	70.0	56.3	50	60.0	45.0	53.0	67.6	42.9	71.4	74.3	26.3

Table 14 - Countries for the purposes of the thesis

Country	Starting business	Dealing with construction permits	Getting electricity	Registering Property	Getting credit	Protecting Minority Investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving insolvency	Annual GDP growth %	Unemployment %	Corruption %
Bosnia and Herzegovina	63.5	51.5	60.0	61.5	65	56.7	57.6	93.6	61.3	66.4	72.3	10.1	33.8
Serbia	88.9	61.5	76.0	66.9	60	55.0	61.9	95.1	60.3	58.5	64.7	28.7	36.3
South Africa	81.2	69.0	42.0	60.8	60	71.7	88.7	58.0	53.2	64.3	74.3	19.2	41.3
Greece	90.7	72.6	80.6	49.6	50	61.7	78.4	93.7	50.2	56.3	72.0	15.3	43.8
Ukraine	93.9	61.4	54.8	69.4	75	53.3	70.7	63.7	57.1	31.0	50.1	75.9	20.0
Uruguay	89.9	54.7	82.1	58.0	60	45.0	65.2	48.8	56.0	52.4	80.2	78.2	78.8
Luxembourg	86.5	81.2	84.3	63.8	15	45.0	88.6	100	73.3	45.4	81.9	81.1	87.5
Ghana	83.7	62.3	59.5	66.1	65	56.7	71.2	36.5	54.0	21.9	81.6	93.2	45.0
Rwanda	83.0	76.3	60.0	87.8	95	53.3	81.5	45.2	51.2	47.8	90.4	99.0	53.8
Bhutan	85.6	70.1	80.1	73.4	50	46.7	85.5	95.5	65.4	0.0	86.0	91.9	67.5

Table 15 - The top 10 most significant changes

Original DP indicators rnk	Annual GDP growth rank	Unemployment rank	Corruption rank	New Rank	Difference Ranks	Difference Annual GDP	Difference Unemployment	Difference corruption
1	1	2	1	1	0	0	-1	0
51	53	52	57	58	-7	-2	5	-8
73	74	70	76	101	-28	-1	-27	-4
121	126	124	125	129	-8	-5	-5	-4

Original DP indicators rank	Annual GDP growth rank	Unemployment rank	Corruption rank	New Rank	Difference Ranks	Difference Annual GDP	Difference Unemployment	Difference corruption
79	83	113	84	123	-44	-4	-34	-5
59	64	79	63	87	-28	-5	-20	-4
73	74	100	77	101	-28	-1	-27	-4
60	61	87	61	86	-26	-1	-27	-1
83	102	83	93	106	-23	-19	0	-10
92	93	92	76	68	24	-1	0	16
61	59	56	44	38	23	2	5	17
114	111	98	11	94	20	3	16	4
62	56	50	57	42	20	6	12	5
71	69	63	64	52	19	2	8	7

Country	Starting business %	Dealing with construction permits %	Getting electricity %	Registering Property %	Getting credit %	Protecting Minority investors %	Paying taxes %	Trading across borders %	Enforcing contracts %	Resolving insolvency %	Annual GDP growth %	Unemployment %	Corruption %
Singapore	93.5	100	93.5	90.7	90.7	100	96.7	89.3	100	79.8	78.4	91.2	92.5
Korea, Rep.	100	83.7	100	80.7	80.7	86.4	82.9	92.5	99.9	96.3	79.6	89.6	56.3
Denmark	88.5	92.8	88.5	95.1	95.1	79.5	91.4	100	79.2	90.4	73.2	79.5	100
Sweden	92.0	86.5	92.0	94.1	94.1	84.1	81.7	99.3	83.7	84.0	76.7	74.9	97.5
New Zealand	81.2	94.6	81.2	100	100	100	87.0	84.6	86.5	76.1		82.7	96.3
Norway	85.3	83.9	85.3	92.8	92.8	84.1	90.7	87.8	90.1	91.4	76.4	89.9	95.0
Taiwan, China	99.5	92.8	99.5	88.8	88.8	77.3	80.9	80.1	85.5	83.6		100	63.8
Hong Kong	90.2	91.2	90.2	73.9	73.9	100	99.2	87.8	84.3	80.0	77.3	90.6	80.0
United Kingdom	87.3	84.9	87.3	78.9	78.9	93.2	90.7	91.4	80.3	87.5	78.4	80.5	87.5
Finland	87.1	83.8	87.1	87.8	87.8	63.6	88.5	92.4	81.5	100	68.8	73.0	98.8
Iceland	91.0	80.6	91.0	91.7	91.7	79.5	81.9	80.3	79.9	87.0	75.2	84.7	85.0
Germany	98.7	87.6	98.7	73.4	73.4	68.2	74.3	91.8	87.5	98.0	74.6	84.7	87.5
Austria	85.6	80.5	85.6	85.5	85.5	72.7	73.7	100	91.5	84.1	71.1	84.7	81.3
UAE	94.6	95.5	94.6	94.5	94.5	68.2	100	66.3	85.2	46.6	83.4	89.3	73.8
Estonia	80.3	87.0	80.3	96.4	96.4	61.4	82.7	94.9	87.6	69.6	78.4	75.9	73.8
Malaysia	88.4	87.2	88.4	80.8	80.8	93.2	82.7	86.7	76.8	66.6	87.5	94.5	48.8
Portugal	82.1	82.2	82.1	85.0	85.0	63.6	76.0	100	84.9	90.4	72.6	54.7	65.0
Macedonia, FYR	78.1	89.4	78.1	77.9	77.9	84.1	94.0	93.9	82.8	72.2	81.0	10.1	
United States	78.3	82.5	78.3	81.4	81.4	74.5	78.6	92.0	84.4	96.1	77.0	80.8	81.3
Lithuania	75.3	86.5	75.3	98.5	98.5	70.5	79.3	97.7	93.5	51.2	78.7	64.2	62.5

Table 16 – “Data Set B” - Top 20 countries

Original DP Indicators rank	Annual GDP growth rank	Unemployment rank	Corruption rank	New Rank	Difference Ranks	Difference Annual GDP	Difference Unemployment	Difference corruption
1	1	1	1	1	0	0	0	0
2	2	2	6	6	-4	0	0	-4
3	4	3	2	3	0	-1	0	1
4	5	7	3	5	-1	-1	-3	1
5	3	6	4	2	3	2	-1	1
6	7	5	5	4	2	-1	1	1
7	6	4	10	7	0	1	3	-3
8	8	8	8	8	0	0	0	0
9	9	9	9	9	0	0	0	0
10	11	12	7	10	0	-1	-2	3
11	10	10	11	11	0	1	1	0
12	12	11	12	12	0	0	1	0
13	15	13	13	14	-1	-2	0	0
14	13	14	15	13	1	1	0	-1
15	16	16	17	17	-2	-1	-1	-2
16	14	15	25	18	-2	2	1	-9
17	21	22	21	26	-9	-9	-4	-5
18	17	38	16	31	-13	-13	1	-20
19	20	18	18	16	3	3	-1	1
20	19	20	23	24	-4	-4	1	0

Country	Starting business	Dealing with construction permits	Getting electricity	Registering Property	Getting credit	Protecting Minority investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving insolvency	Annual GDP growth %	Unemployment %	Corruption %
Singapore	93.5	100.0	93.5	90.7	90.7	100.0	96.7	89.3	100	79.8	78.4	91.2	92.5
Russia	81.5	70.2	81.5	95.8	95.8	63.6	79.5	37.4	91.9	62.2	71.7	84.4	22.5
South Africa	31.5	74.2	31.5	64.4	64.4	84.1	87.7	58.0	59.7	68.5	74.3	19.2	41.3
Argentina	64.7	53.4	64.7	59.6	59.6	68.2	37.6	53.0	78.1	45.7	71.4	74.3	26.3

Table 17 - Countries for the purposes of the thesis

Original DP indicators rank	Annual GDP growth rank	Unemployment rank	Corruption rank	New Rank	Difference Ranks	Difference Annual GDP	Difference Unemployment	Difference corruption
1	1	2	1	1	0	0	-1	0
41	42	36	47	43	-2	-1	5	-6
91	93	112	93	112	-21	-2	-21	-1
112	112	106	117	115	-3	0	6	-4

Country	Starting business	Dealing with construction permits	Getting electricity	Registering Property	Getting credit	Protecting Minority investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving insolvency	Annual GDP growth %	Unemployment %	Corruption %
Bosnia and Herzegovina	52.8	55.4	52.8	65.1	65.1	63.6	52.0	93.6	70.1	70.8	72.3	10.1	33.8
West Bank and Gaza	68.1	58.0	68.1	65.8	65.8	43.2	78.0	72.1	66.3	0.0	65.6	15.6	51.3
Serbia	71.7	66.1	71.7	70.9	70.9	61.4	56.9	95.1	68.7	62.4	64.7	28.7	36.3
Greece	77.2	78.1	77.2	52.5	52.5	70.5	75.9	93.7	55.9	60.0	72.0	15.3	43.8
South Africa	31.5	74.2	31.5	64.4	64.4	84.1	87.7	58.0	59.7	68.5	74.3	19.2	41.3
Uruguay	79.0	58.8	79.0	61.4	61.4	47.7	60.8	48.8	63.3	55.8	80.2	78.2	78.8
Bhutan	76.6	75.4	76.6	77.7	77.7	50.0	84.0	95.5	75.2	0.0	86.0	91.9	67.5
Ghana	52.2	67.0	52.2	70.0	70.0	63.6	67.7	36.5	60.8	23.3	81.6	93.2	45.0
Luxembourg	81.6	87.3	81.6	67.6	67.6	47.7	87.5	100	85.3	48.4	81.9	81.1	87.5
Cape Verde	45.8	72.3	45.8	70.6	70.6	36.4	70.1	64.7	75.7	0.0	78.1	71.0	58.8

Table 18 - The top 10 most significant changes

Original DP indicators rank	Annual GDP growth rank	Unemployment rank	Corruption rank	New Rank	Difference Ranks	Difference Annual GDP	Difference Unemployment	Difference corruption
83	85	109	88	113	-30	-2	-26	-5
111	114	133	102	135	-24	-3	-22	9
61	69	75	65	84	-23	-8	-14	-4
64	68	83	64	85	-21	-4	-19	0
91	93	112	92	112	-21	-2	-21	-1
97	97	93	79	74	23	0	4	18
68	61	58	58	46	22	7	10	10
119	115	107	119	102	17	4	12	0
43	39	39	33	28	15	4	4	10
126	130	124	117	111	15	-4	2	9

Country	Starting business %	Dealing with construction permits %	Getting electricity %	Registering Property %	Getting credit %	Protecting Minority investors %	Paying taxes %	Trading across borders %	Enforcing contracts %
Singapore	96.5	93.0	94.3	85.7	75.0	83.3	96.6	89.3	84.9
New Zealand	100.0	87.9	84.0	94.5	100.0	83.3	88.1	84.6	74.3
Denmark	94.0	86.3	90.2	89.9	70.0	68.3	91.9	100.0	68.6
Hong Kong SAR, China	98.1	84.8	91.6	69.8	75.0	83.3	98.7	87.8	72.6
Norway	94.3	78.0	87.5	87.7	55.0	71.7	91.4	87.8	77.1
United Kingdom	94.6	78.9	89.1	74.5	75.0	78.3	91.3	91.4	69.4
Sweden	94.6	80.4	93.1	88.9	55.0	71.7	83.5	99.3	72.0
Korea, Rep.	94.4	77.8	99.9	76.2	65.0	73.3	84.5	92.5	84.8
United States	91.2	76.7	81.5	76.9	95.0	64.7	80.8	92.0	72.6
Finland	93.1	77.9	89.0	82.9	65.0	56.7	89.4	92.4	70.3
Taiwan, China	94.4	86.3	99.4	83.9	60.0	66.7	82.8	80.1	73.5
Canada	98.2	73.7	63.8	75.1	85.0	76.7	93.0	88.4	65.5
Germany	83.4	81.4	98.8	69.4	70.0	60.0	77.0	91.8	75.1
Australia	96.5	86.6	82.3	74.2	90.0	56.7	82.3	70.8	79.7
Iceland	92.4	74.9	92.2	86.6	60.0	68.3	83.7	80.3	69.1
Estonia	95.1	80.9	83.2	91.0	70.0	55.0	84.3	94.9	75.2
Malaysia	95.3	81.1	90.1	76.3	70.0	78.3	84.3	86.7	66.6
Austria	83.4	74.9	87.7	80.8	60.0	63.3	76.5	100.0	78.2
Ireland	94.2	75.0	84.2	76.3	70.0	73.3	95.0	87.2	57.9
Switzerland	88.5	73.4	94.4	86.1	60.0	50.0	89.1	90.2	66.1

Table 19 - New "Data Set A" Doing Business Ranking

Country	Starting business %	Dealing with construction permits %	Getting electricity %	Registering Property %	Getting credit %	Protecting Minority investors %	Paying taxes %	Trading across borders %	Enforcing contracts %
Singapore	93.5	100.0	93.5	90.7	90.7	100.0	96.7	89.3	100.0
New Zealand	81.2	94.6	81.2	100.0	100.0	100.0	87.0	84.6	86.5
Denmark	88.5	92.8	88.5	95.1	95.1	79.5	91.4	100.0	79.2
Norway	85.3	83.9	85.3	92.8	92.8	84.1	90.7	87.8	90.1
Sweden	92.0	86.5	92.0	94.1	94.1	84.1	81.7	99.3	83.7
Korea, Rep.	100.0	83.7	100.0	80.7	80.7	86.4	82.9	92.5	99.9
Taiwan, China	99.5	92.8	99.5	88.8	88.8	77.3	80.9	80.1	85.5
Hong Kong SAR, China	90.2	91.2	90.2	73.9	73.9	100.0	99.2	87.8	84.3
United Kingdom	87.3	84.9	87.3	78.9	78.9	93.2	90.7	91.4	80.3
Finland	87.1	83.8	87.1	87.8	87.8	63.6	88.5	92.4	81.5
Iceland	91.0	80.6	91.0	91.7	91.7	79.5	81.9	80.3	79.9
Germany	98.7	87.6	98.7	73.4	73.4	68.2	74.3	91.8	87.5
United Arab Emirates	94.6	95.5	94.6	94.5	94.5	68.2	100.0	66.3	85.2
Austria	85.6	80.5	85.6	85.5	85.5	72.7	73.7	100.0	91.5
Switzerland	93.5	79.0	93.5	91.2	91.2	54.5	88.2	90.2	76.1
United States	78.3	82.5	78.3	81.4	81.4	74.5	78.6	92.0	84.4
Estonia	80.3	87.0	80.3	96.4	96.4	61.4	82.7	94.9	87.6
Malaysia	88.4	87.2	88.4	80.8	80.8	93.2	82.7	86.7	76.8
Ireland	81.4	80.7	81.4	80.7	80.7	86.4	94.9	87.2	65.7
Netherlands	78.4	74.6	78.4	84.7	84.7	63.6	84.4	100.0	65.9

Table 20 - New "Data Set B" Doing Business Ranking