



THE ECONOMIC UPRISING OF BULGARIA, SOFIA AT THE CENTRE STAGE

University of Groningen
European Study Research: Sofia
2020 – 2021

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EUROPEAN STUDY RESEARCH 2021 FDI & BUSINESS CLIMATE IN SOFIA



FDI & Business Climate

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Introduction

Sofia's growing economy is a major contributor to Bulgaria's economy. Namely, Sofia contributes to more than 40% of the Bulgarian GDP and is still experiencing a continuing economic growth. An important feature of this growing economy of Sofia is its FDI level. The level of FDI in Sofia is nearly 3 times the size than in the rest of the country. The geographical location of the city contributes to this high level of FDI. However, there are more factors that influence its level which will be examined in this research. For example, the business climate of Sofia will contribute to the level of FDI in the city. The business climate of the city will influence the attractiveness for FDI in the country. Specifically, research shows that there are various factors that determine whether a business climate is advantageous or disadvantageous for a company to settle in. These factors of advantageous or disadvantageous business climate will be examined in this research.

Hence, in this part of the research, the business climate and foreign direct investment of Sofia (Bulgaria) will be examined. This will be done on the basis of theoretical research and interviews. These interviews will be conducted with various authorities. Both the theoretical research and interviews will answer the following research question: what is the influence of Bulgaria's business climate on FDI in Sofia, Bulgaria?

To answer this question, the focus will be on the following external factors: the governmental incentives, the level of economic growth, and research and development. First, the influence of these factors on FDI will each be investigated on a theoretical basis. In addition, questions will be asked about each factor during the interviews we will conduct at several different companies in May. Together, the theoretical research and the interviews, will provide a complete answer to the research question.

Main research question and sub-questions

Our main research question is as follows:

What is the influence of Bulgaria's business climate on the level of FDI in Sofia, Bulgaria?

To understand and properly answer this question, the interpretations of business climate and the level of FDI must be explained. Business climate can be defined as a reflection of the price and quality of productive resources, state and local government policies, and the state or area's quality of life. Foreign direct investment (FDI) can be defined as the capital flow from one country to another which occurs when a firm from one country owns a company in another country (Feenstra, R.C., & Taylor, A.M. (2017)).

To find a complete answer on our main research question, we will answer several subquestions. They are formulated as follows:

- *To what extent do government incentives affect the level of FDI in Sofia?*

- *To what extent does the level of economic growth affect the level of FDI in Sofia?*
- *To what extent does research and development affect the level of FDI in Sofia?*

The exact definitions of government incentives, economic growth and research and development are described in the next section. First of all, examples of government incentives are tax incentives, subsidies and other aid that can influence the level of FDI. Second, economic growth can refer to for example, the gross domestic product (GDP) or the level of income of consumers. Last, factors such as the level of innovation or acquiring knowledge is what is meant by research and development.

Conceptual model

Operational definitions

Dependent Variable

FDI in Bulgaria

Foreign direct investment (FDI) can be defined as the capital flow from one country to another which occurs when a firm from one country owns a company in another country (Feenstra, R.C., & Taylor, A.M. (2017)).

This variable is measured by the amount of money that foreign companies invested in Sofia, Bulgaria through the way that is mentioned above.

Independent Variables

Governmental Incentives

Governmental incentives are signals and actions by the government that motivate foreign companies to invest in the country, in this case, Bulgaria. This variable will be measured by collecting primary data through conducting interviews with several different companies, located in Sofia, Bulgaria. Besides that more primary information was given by mister Panov, of the Bulgarian Embassy.

Mister Panov indicated that investors can be especially attracted by the Bulgarian tax incentives.

Tax incentives

A tax incentive is a reduction in taxes that encourages companies or people to do something that will help the country's economy (Cambridge dictionary, 2019).

Research and development

R&D can be defined as systematic investigation or experimentation involving innovation or technical risk, the outcome of which is new knowledge, with or without a specific practical application of new or improved products, processes, materials, devices or services. This variable is measured by the amount of R&D expenses of Sofia.

Definition of Economic Growth

Economic growth is defined as the increase in production of services and goods which is compared from one period to another. It can be measured in nominal or real terms and it is adjusted to the inflation rate. Normally, economic growth is measured in terms of GNP or GDP. GNP stands for Gross National Product and GDP stands for Gross Domestic Product. Sometimes other ways of measuring are used. In the simplest terms, economic growth refers to the aggregate production in an economy. Economic growth leads to an increase in incomes and this leads to an inspiration for consumers to open up their wallets and buy more. This supports a higher quality of life and standard of living (Amadeo, 2020).

Literature review

Regarding the determinants of FDI, much research has been done. Even though there are several theories that can explain capital flows going from one country to another, some factors are more common than others. From the literature review, we can observe that the market size, the government form, openness to trade and the availability of infrastructure are the most important determinants of FDI.

First of all, the size of a particular market may indicate the attractiveness of a specific location for the investment when a multinational corporation aims to produce for the local market (Busse & Hefeker, 2007).

Second, Busse and Hefeker argue that several studies have analysed the relationship between fundamental democratic rights and FDI. Using different econometric techniques and periods, Harms and Ursprung (2002), Jensen (2003), and Busse (2004) found that multinational corporations are more likely to be attracted where there is democracy (Busse & Hefeker, 2007). However, it should be taken into account that this does not necessarily hold for smaller companies, as relatively smaller companies can engage in FDI as well.

Another determinant that is likely to have an impact on FDI is openness to trade, usually measured by the ratio of imports and exports to GDP. This ratio is often interpreted as quantification of trade restrictions. This is also explained by Iamsiraroj's work, where it is explained that the trade to GDP is a proxy for the degree of openness to trade in the host country. Openness is generally known as an important determinant of economic growth (Iamsiraroj, 2016).

Iamsiraroj also discusses that the availability of infrastructure in the host country is considered by many scholars as a necessary facility to attract FDI inflows. Well-developed infrastructure facilitates the production process and the distribution of the produced goods. It increases the productivity of investments, and reduces operating costs (Iamsiraroj, 2016).

Expected outcomes

It is rather clear from the literature review that a business climate that favors FDI has a positive impact on economic growth. As a result, our main question: *What is the influence of Bulgaria's business climate on the level of FDI in Sofia, Bulgaria?*

We anticipate that governmental incentives, the level of economic growth and the extent of Research and development are indicators of the business climate that drive foreign direct investment in Sofia.

Furthermore, our first sub question: *To what extent do government incentives affect the level of FDI in Sofia?*

We expect a strong and positive correlation between governmental incentives and the level of FDI activity in Sofia and the rest of the country.

Secondly, *To what extent does the level of economic growth affect the level of FDI in Sofia?* We expect that economic growth and level of FDI are correlated. In which one rises, the latter rises too.

Lastly, our sub research question: *To what extent does research and development affect the level of FDI in Sofia?*

We assume that research and development brings in innovation. Thus, a high level of research and development will positively affect the FDI activity in Sofia, Bulgaria.

Research methods

We are going to develop our research by making use of a qualitative research method in order to discover the influence of governmental incentives, level of economic growth and R&D on the level of FDI in Sofia. To accomplish this, we will use literature as a basis of our research. Furthermore, we will do interviews with several companies about these topics. In these interviews, our goal is mainly to discover the determinants of the company to locate in Sofia and how Sofia's business climate is related to this choice of the companies.

Qualitative research focuses on the natural settings of a phenomenon and leads to detailed information due to specific answers to questions which can be obtained through subjects being studied earlier (Verner, 2011). Partially conducting a literature review can have several advantages, namely it can create insight on what has already been done research on (Knopf, 2006). By doing this research we hope to create new ideas that can be used in future research on FDI and the Business climate in Sofia. We hope to contribute to create further insight on what has already been done research on. Qualitative research could enable us to place our research in a larger context.

Results

According to the interviews, we can make several conclusions about the Bulgarian business climate and the level of Foreign Direct Investment in Bulgaria.

Firstly, according to Renaissance Consulting, it is easy for foreign companies to do business in Bulgaria. There is not much competition on the Bulgarian market and there are minimum requirements. However, several other companies mentioned that coming to Bulgaria is known for the paperwork. For example, IBM mentioned that it can take 3 to 6 months before someone can really work in Bulgaria because of administration. Also, BCCI mentioned that it takes some time to start up a company in Bulgaria and an important challenge is the administrative work. Despite the low level of competition, the ease of doing business on a Bulgarian market is inhibited by the administrative work.

Secondly, several companies mentioned some specific attractive characteristics of the Bulgarian business climate. Firstly, an attractive characteristic for foreigners is the low level of taxation as mentioned by multiple companies like BCCI, Besco and IBM. The level of taxation in Bulgaria is one of the lowest in Europe. Secondly, an attractive characteristic is the low cost of the internet and the high quality of it. In addition, the labour costs are very low in Bulgaria. The cost of labour is the lowest labour cost in Europe as mentioned by BESCO. Furthermore, the costs of living are also very low in Bulgaria.

However, there are also some characteristics of the Bulgarian business climate that are not attractive for not only foreigners but also for locals. For example, according to the Dutch embassy, there are not many international schools. This means that foreigners with children are less likely to come to Bulgaria. Bulgaria has a huge potential, but this may deter internationals from going to Bulgaria. In addition, the Dutch embassy mentioned that in the long term there will probably be a drop of labor in Bulgaria. The young population do not see a future in Bulgaria and leave abroad. Especially high educated people will leave. Till 2030 1 million Bulgarians will leave and this makes Bulgaria the country that has the fastest shrinking population in the EU. This is not attractive for locals themselves but also for international companies that want to locate in Bulgaria.

The reason for this is that the relationship between government, companies and universities is not optimal. According to the Bulgarian university, the Bulgarian business does not really support universities. Companies are not open to help students form universities. The government should improve these relations and make sure that students feel more connected to the businesses in Bulgaria. Also, IBM mentioned that more collaboration can be beneficial for the universities and businesses both. The government is not really pushing this relation between businesses and universities. So, there is a lack in the collaboration between universities and businesses. A company that does support the relation between students and companies is BESCO. Students from universities help them with the basic research. BESCO needs a lot of information and needs external help because they are only with 4.5 people in the company and students help them with doing research. As a result, students will feel more connected to the Bulgarian market.

Conclusion

With the use of the results conducted through literature research and the interviews during the ESR week, the research question and sub-questions can be answered. The research question for this research was the following: *What is the influence of Bulgaria's business climate on the level of FDI in*

Sofia, Bulgaria?. During the research it became clear that the Business Climate in Bulgaria is quite interesting, there are some positive and some negative influences on the level of FDI.

To what extent do government incentives affect the level of FDI in Sofia?

The Bulgarian government influences the level of FDI in several ways. Firstly, the level of taxation is very low in Bulgaria. This is attractive for international companies to locate their businesses in Bulgaria. However, one of the things that Bulgaria is known for is that coming to Bulgaria is about paperwork. It takes like 3 to 6 months for international companies before they can really work in Bulgaria according to administrative things. Furthermore, there are not a lot of international schools which means that internationals with children are less likely to come to Bulgaria.

To what extent does the level of economic growth affect the level of FDI in Sofia?

A characteristic is that Bulgaria has the quickest growth with GDP and people become richer. In addition, people have more purchasing power, and more and better clients. However, this level of economic growth does not affect the level of FDI in Sofia.

To what extent does research and development affect the level of FDI in Sofia?

The level of FDI is not really high in Bulgaria. Some international companies are located in neighboring countries with headquarters and are producing products in Bulgaria because of the low levels of taxation. After the production, they shift the products to other countries. It's cheaper to produce in Bulgaria and export. As a result, the level of production is high in Bulgaria while the level of R&D is low because of headquarters with R&D departments located in other countries .

In conclusion, there are various factors of the business climate that are affecting the level of FDI in Sofia, Bulgaria. Some of these factors are positive, others are negative, however it is hard to say if it is just a positive or negative influence. This is because there is a negative influence of governmental incentives on the level of FDI, however the influence of economic growth is positive and the influence of R&D is neutral.

Recommendation

To make the Bulgarian market more attractive for FDI some things about the business climate should change. Firstly, the government should improve the relationship between businesses, universities, and government. At the moment, the younger highly educated people do not really see a future in Bulgaria and will eventually leave for another country. To prevent this, the Bulgarian government should improve the relation between universities and business to make sure that students feel connected to the Bulgarian market and will stay in Bulgaria. This will make it also more attractive for international companies to locate in Bulgaria since the level of younger highly educated people will increase. In addition, the Bulgarian government should make it easier for international companies to start a business in Bulgaria. Especially the administrative work that all must be done before an international company can start a business. In addition, the government can increase the amount of international schools in the country. This will make it more attractive for foreign families to move to Bulgaria. In this way, the government can improve the business climate of Bulgaria and can attract more foreign companies to settle in Bulgaria.

Limitations & future research

This research, like other studies, is not without limitations. Regarding the independent variable Research and Development, time constraints and the complexity of the topic did not allow us to investigate to what extent it affects FDI. Eventually we did get to ask some questions during the ESR week and, however, not the exact answers we were looking for.

Furthermore, another limit that we encountered was the fact that the interviews were online because of covid-19. This was quite limiting because it was hard to continue asking questions to get a more detailed answer.

Future research could delve further into the relationship between government, businesses and universities with the aim to develop this relationship. In this research we found out that this relationship is not optimal and to what consequences this could lead. In further research it could be examined why this relationship is not optimal and how this could be improved. Furthermore, future research could examine how the level of R&D in Bulgaria could be improved. To ensure that more companies establish their headquarters and their R&D departments in Bulgaria instead of a neighbouring country.

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Knowledge spillover in the IT sector in Sofia

INTRODUCTION

Information Technology has become a huge part of our everyday lives. It involves everything with the transmission of information or the systems that assist the progress of communication. The IT sector is one of the most booming industries in Bulgaria, especially in Sofia where the main investments are concentrated (Anguelov et. al., 2020). It has been one of the driving forces behind the country's steady growth over the past few years. Some even say that Sofia is the silicon valley of Europe because of its large-scale computing technology exports to COMECON states (eg. Hungary, Poland, Romania). According to the Bulgarian Association of Software Companies (BASCOM), the annual revenue from 2012 to 2018 has increased from 619 million to 1502 million euros, with growing percentages between 15 and 29 in each year (BASCOM, 2019a). Furthermore, those employed in this branch in Bulgaria are mostly young specialists who have an interest and knowledge in the field of technology and the market of information resources (Anguelov et. al., 2020). Due to the excellent University programs, Bulgaria has a well-educated workforce, including skilled IT specialists. Another reason that has a positive impact on the growth of the IT sector in Bulgaria, is that it has one of the most competitive costs of labour in Central and Eastern Europe (Questers). An example of this is the speed of the internet access of over 32 megabytes per second, which makes Bulgaria rank among the top 10 in the world (World Bank).

With the uprising of the IT sector, it is likely that some knowledge will be transferred. Knowledge spillover does not necessarily have to be negative, since it is important for achieving innovation and economic growth (Van Stel & Nieuwenhuijsen, 2002). According to Skorupinska & Torrent-Sellens (2017), the IT sector needs the knowledge spillover in order to fully exploit growth opportunities. This is

also confirmed by Acs et al. (2008), who state that the creation of new knowledge expands the set of technological opportunities.

According to the Bulgarian Industrial Association (BIA), the IT sector is almost exclusively export oriented. Between 2012 and 2015, export revenue of IT sector enterprises in Sofia grew by 78% to reach 1.2 billion BGN (=0.61 billion Euros). During the same period, the share of the capital's IT sector in the overall national export grew almost twice: from 1.4% to 2.1% of the total exported goods and services (Sofia Investment Agency, 2017). This could mean that knowledge spillover in the IT sector is mostly done through export. However, even though information can be diffused at zero cost throughout the world, interaction between people and enterprises located in each other's proximity produce the highest likelihood of spillover effects (Van Stel & Nieuwenhuijsen, 2002).

RESEARCH QUESTION & SUBQUESTIONS

In this research, we want to find out the different factors influencing the knowledge spillover in the IT sector in Sofia. In addition, we want to find out whether there is much knowledge spillover within the IT sector in Sofia. Therefore, our research question would be:

“What are the factors influencing the knowledge spillover in the IT sector in Sofia?”

We believe that this question will be influential for HRM because knowledge spillover is very important for industries that are capital intensive. Moreover, human capital is very valuable in the IT sector and the spillover of knowledge might be beneficial as well as hurting for a lot of companies in Sofia. The next question would be what is the reason or reasons behind the knowledge spillover in the IT sector of Sofia.

First of all, the demand for IT services is very important (i.e. consumer spending). If more IT services are demanded from Sofia it follows that there will be room for more IT companies, if there are more IT companies in Sofia, the amount of knowledge spillover should increase. Therefore, the first subquestion is as follows:

“What is the effect of consumer spending in the IT sector on knowledge spillover?”

Next, we believe that the available talent in the sector is also a very important factor that influences the amount of knowledge spillover in the IT sector of Sofia. The educational quality of a country is very influential in nurturing new talent and allowing them to develop the necessary skills. Therefore, our second sub question will be:

“To what extent does educational quality have an effect on knowledge spillover in the IT sector?”

Lastly, building on the idea of talent being essential in the amount of knowledge spillover between companies, we are interested in the amount of further training possibilities the companies might offer to their employees. Training an employee and having him switch jobs to a competitor's company is one of the biggest factors of knowledge spillover in general. We are interested to see if IT companies in Sofia also see this happening and if they offer these training possibilities at all. Thus, the last sub question will be phrased as:

“Does the degree of further training possibilities have an impact on the knowledge spillover in the IT sector?”

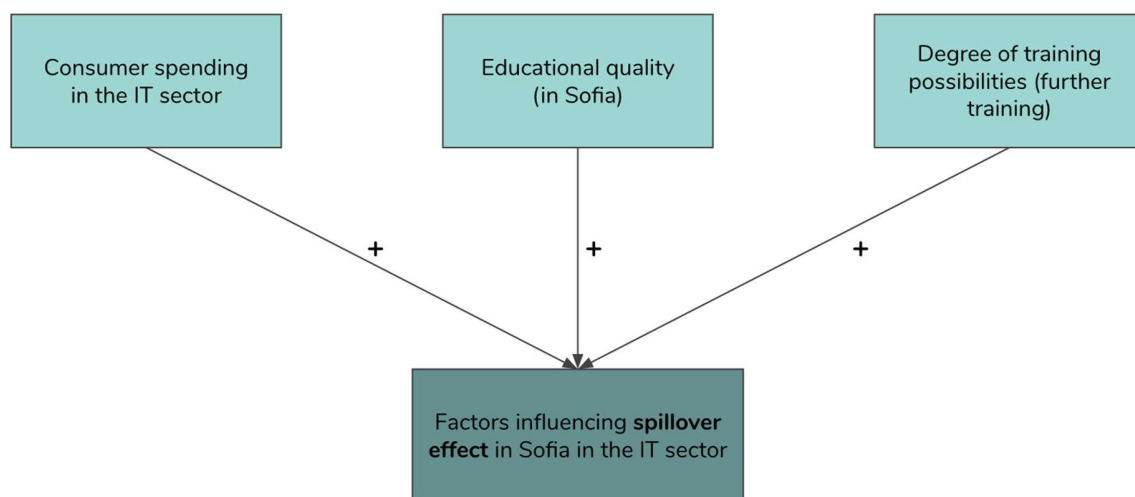
LITERATURE REVIEW

In this research, we want to find out whether there is much knowledge spillover within the IT sector in Sofia. In addition, we want to identify the different effects of multiple causes of knowledge spillover. We use different articles to find out the different effects. Fallah, M. H., & Ibrahim, S. (2004) concludes that knowledge spillover is the largest and mostly positive in an environment where technology clusters we can expect that we will find a positive spillover effect in the IT sector of Sofia. According to Skorupinska & Torrent-Sellens (2017), the IT sector needs the knowledge spillover in order to fully exploit growth opportunities. This is also confirmed by Acs et al. (2008), who state that the creation of new knowledge expands the set of technological opportunities.

The economy of Bulgaria has a free market, having a large private sector and a small public sector. Bulgaria is an industrialised upper-middle-income country. The economy has experienced significant growth since 2000 starting from \$13.15 billion to an estimated gross domestic product of \$67.9 billion in 2019. The IT sector is one of the driving sectors behind the growth of the economy. With an overall annual increase of 17% since 2007, the IT sector is one of the fast growing in the country. It generates 10% of the Bulgarian GDP. Bulgaria's ICT sector is characterized as stable and constantly growing, making it one of the most profitable sectors in Bulgaria. In 2018 there were over 2000 important IT projects in Bulgaria. Bulgaria has a long, rich tradition in the IT and electronics sectors (dating back to the Communist era) and is still known as the Silicon Valley of Southeastern Europe. Bulgaria is home to approximately 10,000 ICT companies, 70 percent of which are only exporting. According to International

Data Corporation (IDC) (the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets) the Bulgarian ICT market reached about 3.2 billion USD in 2018, presenting a 45 percent growth since 2017. During an EU Conference EURONET in Sofia (2018) it was noted that turnover in the ICT sector in Bulgaria experienced a 300 percent rise over the past 7 years and has reached 2.5 billion euros. After ten years of EU membership software business in Bulgaria is the best performing sector in the ICT industry. One of the factors that attracts so many companies to do business in Bulgaria is the low corporate tax rates of 10 percent.

CONCEPTUAL MODEL



OPERATIONAL DEFINITIONS

Dependent variable

Factors influencing spillover effect in Sofia in the IT sector:

The spillover effect is an (unwanted) effect of information and/or people flowing from one company to another. (*citation) This is mostly beneficial for only the receiving company. This variable can be

measured by comparing the IT sector of Sofia to a different sector and/or comparing it to the IT sector somewhere else.

Independent variables

Consumer spending in the IT sector:

Consumer spending is the total money spent on final goods and services by individuals and households for personal use and enjoyment in an economy (Kelly, 2020). Therefore, consumer spending in the IT sector is the money that individuals and households spend on IT services. These consumers can be domestic and foreign. I.e. including exports of IT services, which are the services provided by a resident in one country to people or companies from another (Nagel, 2016).

In this model we measure the consumer spending by looking at the sales of the IT companies in Sofia. The reason is that higher consumer spending in the IT sector should be equal to the increase in sales of the IT companies. This information can be obtained from the prepared questions we will ask companies in Sofia as well as general available information in the literature.

Educational quality:

Educational quality allows for an understanding of education as a complex system embedded in a political, cultural and economic context, (Motala, S., 2000).

For educational quality in our model we will be mainly focussing on the number of education facilities for the IT sector as well as their ranking compared to other IT related education facilities. More educational

facilities in the vicinity of each other implies a competitive environment because all facilities want to attract the most talented individuals. Hence, the quality offered at all facilities should increase when prospective students have multiple educational facilities to choose from. The ranking of the educational facilities is the second measure and probably the most important and straightforward for this research. If educational facilities rank higher compared to similar facilities in a different city/country we can assume the educational quality in Sofia to be higher.

Degree of training possibilities (development of human capital):

The degree of training possibilities are the development programmes companies offer to their employees. Assuming these training possibilities are always effective to a certain extent, they will lead to an increase of human capital. Where human capital is referred to as the stock of skills and productive knowledge embodied in people, (Rosen, 1989). Meaning that if individuals receive training their skills and productive knowledge will increase.

In this model we measure the degree of training possibilities in a very straightforward way. We will be asking questions regarding training possibilities to the companies that are included by the ESR. As mentioned before we assume that each training opportunity will be (equally) beneficial for participants. Therefore, the most important questions asked will be how many training possibilities the companies offer and to how many people. This is a clear relaxation if you take into account that each training is different and each person reacts to training differently. In addition to the prepared questions we will also try to find/use data from firms in the IT sector of Sofia in the literature regarding the training opportunities.

EXPECTED OUTCOMES

In the introduction we showed that most business in the IT sector is being done in Sofia. Moreover, most new investments and startups can be found in Sofia. This means that it is safe to say that the IT sector, which is very technological, is clustering in Sofia. Combining this information with the findings of Fallah, M. H., & Ibrahim, S. (2004) who concluded that knowledge spillover is the largest and mostly positive in an environment where technology clusters, we can expect that we will find a positive spillover effect in the IT sector of Sofia. However, this paper focuses on finding the mechanisms that lead to this knowledge spillover. With our research, we hope to find variables that explain the cause of knowledge spillover in the IT sector of Sofia, given the sign of the spillover effect we find in the first place. The variables that we will focus on are: Consumer spending in the IT sector, educational quality and degree of further training possibilities and as mentioned before, we expect these variables to have a significant positive effect on the knowledge spillover.

RESEARCH METHODS

The research will be based mainly on information from relevant papers concerning business in Bulgaria and knowledge spillover. The papers regarding knowledge spillover will be general information as well as data analyses in other countries. This information will be complemented by some prepared questions for businesses in Sofia. Although not all of the companies are IT-related we still think that the input is beneficial for the research. The reason is that it is important to understand the business climate in Sofia to formulate conclusions about the mechanism behind the knowledge spillover in Sofia. We expect that the answers to the prepared questions will align with our expected outcomes. If this is not the case we will have found a very interesting and controversial result which would require further research.

RESULTS

From the questions asked to various businesses in Bulgaria, we have gathered some useful information for our research. The Bulgarian market is highly competitive, and over the last 15 years this has been growing. More companies are starting their business and more students are graduating. From the Dutch Embassy we know that most startups in Sofia are in the IT sector. Knowledge spillover has a somewhat bigger effect on Bulgaria nowadays than it was before. However, there is a lot of brain drain in Bulgaria, meaning that a lot of students are also going abroad and looking for a job there. Young families often do not see a bright future in Bulgaria, which is a big concern for the country. These young talented people often leave the country because of corruption and the rule of law (maybe explain this a bit better). Bulgaria has even the fastest shrinking population in the European Union, which is of course a big problem.

We spoke with IBM, which is an IT company in Bulgaria, located in Sofia. From their perspective it is concluded that the more highly skilled companies you represent, the better it is for everyone with regard to knowledge spillover. Like said before, knowledge spillover does not have to be negative since you can learn from each other. IBM is sharing people but it is beneficial for everyone and is also a healthy competition. Furthermore, IBM works with a lot of technical universities in Bulgaria. They try to increase awareness and skills of the students. Their goal is to offer the local students a touch with the business life, a practical experience so to say. To do this, IBM provides curriculum/lectures at universities, which will help with the skills and knowledge for the students, but also for their own employees. Furthermore, they have a lot of training programs for their employees, everything you can think of. This will help to retain the employees. They put a lot of effort and money into performance development. Sometimes it occurs that a well trained employee leaves the company, which is sort of a loss. However, this can also be the other way around in the sense that you can attract people that are trained by another company, which also creates knowledge spillover.

The University of National World and Economy (UNWE) offers some IT related courses and programmes. For instance, they have a major in IT, a bachelor program in applied informatics, and two masters related to IT. Furthermore, they have relations with some informal companies who transfer some technology knowhow. The University states that there are not enough students for the fast growing IT business. In addition, they said that a very innovative IT company was sold to the US, which also fosters more knowledge spillover between countries. According to BestaMed, a pharmaceutical company, companies are more and more willing and ready to share. This goes most for bigger and responsible companies.

With regard to IT services that are exported, as a global company, IBM says that the large amount of IT services that is exported from Bulgaria/Sofia in general has an influence on the knowledge spillover between companies in Bulgaria. They state that one thing is driving the other one, meaning that skilled people ensure skilled companies which attract skilled employees. Companies sometimes trade with these skilled people and so on.

To come back to our research question and conceptual model, the three factors do have a positive effect on the knowledge spillover in the IT sector in Sofia, Bulgaria. A higher consumer spending relates to a bigger company which means there is a bigger effect on knowledge spillover. In addition, we have seen that the universities offer multiple programs that support the IT business. Lastly, most companies offer training possibilities for performance development. These skilled workers move from place to place which also ensures knowledge spillover.

CONCLUSION

To conclude, most start-up companies in Sofia are in the IT sector. Bulgaria has one big problem and that is that young educated people leave the country because of better opportunities in other countries according to the Dutch Embassy. The IBM perspective concluded that the more highly skilled companies you represent, the better it is for everyone with regard to knowledge spillover. The University of National World and Economy (UNWE) offers some IT related courses and programmes. For instance, they have a major in IT, a bachelor program in applied informatics, and two masters related to IT. Furthermore, they have relations with some informal companies who transfer some technology knowhow. The University states that there are not enough students for the fast growing IT business. IBM says that the large amount of IT services that is exported from Bulgaria/Sofia in general has an influence on the knowledge spillover between companies in Bulgaria.

ADVICE

In Bulgaria young educated people leave the country because of better opportunities in other countries. The IBM perspective concluded that the more highly skilled companies you represent, the better it is for everyone with regard to knowledge spillover. So it's necessary that companies are highly skilled, so young educated people will stay in Bulgaria. This will lead to higher developed companies. Bulgaria would need to invest in the capabilities of it. Large amount of IT services exported from Bulgaria in general is affecting the knowledge spillover between companies in Bulgaria.

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The challenges and barriers companies in Sofia face to Sustainability



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Introduction

Business has always had an influence on the environment, society, the economy and the various stakeholders - suppliers, partners, customers, staff, local communities. In today's world, executives are faced with a complex business environment in which sustainability-based management is required. To what extent have businesses in Sofia placed sustainability core to their company's business strategy? Business sustainability has evolved from a focus on corporate social responsibility (CSR). From the academic and practical perspective, sustainability in business can be viewed as fulfilling the company's CSR responsibility for society above and beyond mandatory obligations. (Razaee 2019) Moreover, sustainable practices will be defined as practice that "do not harm people or the planet and at best create value for stakeholders" and "focus on improving environmental, social, and governance performance in the areas in which the company or brand has a material environmental or social impact - such as in their operations, value chain, or customers". (Whelan & Fink, 2016). According to a number of empirical studies, the extent to which companies incorporate sustainable practices is determined by the impact of many factors: geographical, culture, social, political, cultural, ideological, philosophical, scientific, religious. (Matten & Moon, 2008; Albareda et al., 2007; Knudsen, Moon, 2012)

Irena Slavova (2015) conducted a study about the application of CSR practices in Bulgaria by surveying 175 companies who have posted on their corporate social website initiatives, as a stand-alone section CSR or press releases. Out of the 175 companies surveyed, only 60 companies published information about their CSR initiatives and practices. The study was based on quantitative data through personal interviews with managers of the respective companies. Small, medium and large companies from the industrial sector and the sector of services were targeted, through which the attitudes, commitment and perception of CSR by business in Bulgaria were assessed. The empirical study found that although businesses in Bulgaria have a positive attitude towards the promotion of CSR practices, this is not the case with accountability. The study found that in the case of Bulgarian companies, corporate social accountability is at the very initial stage of development. This is because most of the companies operating in the Bulgarian market may be reluctant to place sustainability core to their company's business strategy in the mistaken belief that the costs of sustainable practices outweigh the benefits. Irena Slavova concludes by saying that there are growing initiatives for the promotion of sustainable practices, but campaigns, training courses, websites, guides, conferences, round tables and seminars need to be more actively applied in the future.

Moreover, in relation to cost efficiency related concerns, Danciu (2013) argues that it may be "tempting to adhere to the lowest economic, social and environmental sustainability standards, but the companies that focus on meeting the most stringent even emerging rules and norms gain more time to experiment with materials, technologies and processes and the first-movers yield substantial advantages in terms of fostering innovation." This reinforces the notion that businesses operating sustainably often save costs and can reap great benefits, such as new business opportunities, in the long run. Therefore, Danciu (2013) goes on to suggest different sustainability strategies which enable firms to perform better. These strategies are Sustainability Management, Sustainable Innovation, Eco..Efficiency and Sustainable Competitive Advantage. In Bulgaria, firms have great potential to perform more sustainably if adapting some of these strategies.

Conceptual model

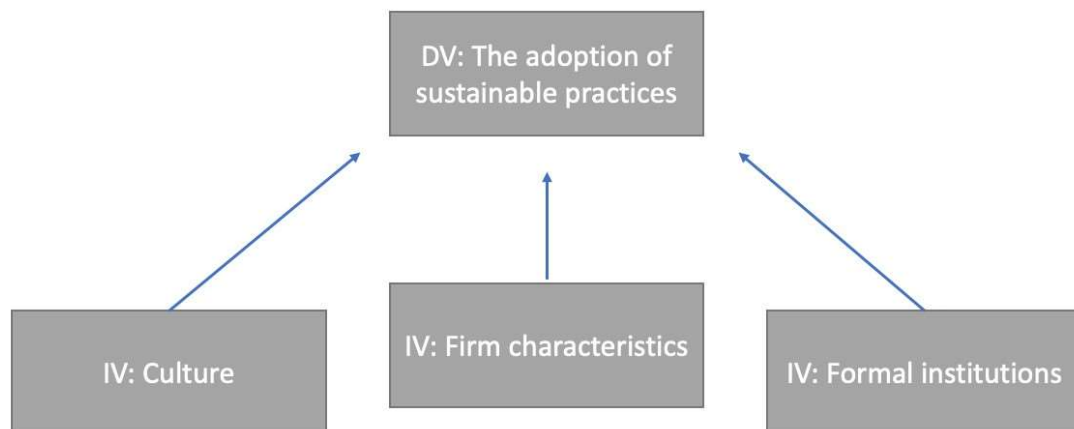
Main research question: What challenges and barriers to sustainability do companies in Sofia face?

Sub-questions

1. How do cost efficiency and practical know-how affect the adoption of sustainable practices?
2. How do laws and regulations affect sustainable business practices?
3. How do national cultures affect sustainable business practices?

Dependent variable: **sustainable business practices** Independent variables:

1. **Firm characteristics** → Cost efficiency and practical know-how
2. **Formal institutions** → laws and regulations
3. **Culture** → *The extent to which companies take accountability for their impact on society through cultural and societal pressures and expectation*



Literature review

Sofia being the largest and capital of Bulgaria, it is an important factor for the growth of the country. Over the last years, the city improved itself in several ways to attract new companies. However, this often goes hand in hand with an increasing amount of pollution. In 2009, they were ranked 29th in the European Green City Index (European Green City Index, 2009). This is something that needed to change and therefore, several plans were made to adjust their ranking. A waste processing plant was created and led to a 79% decrease in the amount of waste deposited in landfills (European Commission, 2016). However, this was not enough. In 2016, twenty-four NGOs and civil organizations founded the “Sofia – Green Capital” initiative, with the aim to transform Sofia into a modern and sustainable city. They want to obtain a high place in the ranking but have not obtained it yet. As the CSR awareness rises, it leaves us with the following research question. Which kind of sustainability challenges and barriers do companies in Sofia face? The realization is there but where are the real problems and what needs to be adjusted in order to become a more sustainable city. We chose the following variables. Our dependent variable is lack of sustainable practices. Our first independent variables will be Firm characteristics where we will research the firm's cost efficiency and practical know-how. Our second independent variable will be formal institutions where we research laws and regulations. Our third independent variable is the culture where we will research the

extent to which companies take accountability for their impact on society through cultural and societal pressures and expectations.

Firm characteristics

Firms in Sofia have a lot to work on when thinking about sustainability. But, is it even fair to ask that much from them? Questions such as, ‘‘Do firms in Sofia have enough practical know-how to easily switch their operations to a more sustainable one?’’ and ‘‘Is it cost-efficient enough for the firms to act in a more sustainable manner?’’, directly comes to our mind. With our research, we want to show the opportunities for the firms. For instance, research done by Adams and his colleagues proved that ‘‘engaging in sustainability contributed positively to shareholder value in the long term since these proactive companies are much more likely to not only seek, but also find shareholder value creation opportunities in sustainability’’. Next, ‘‘corporate sustainability efforts can be employed to build brand loyalty and corporate reputations in the long term which should be positively correlated to long-term shareholder wealth maximization’’ (2012). Next, the return on investment (ROI) for sustainable firms is higher than other firms. Again, this is beneficial for the shareholders. (Joonhyun. K.& Jinsoo K., 2018) Regarding practical know-how, there is still a lot to learn in Sofia. With our research we are trying to find possible solutions for this lack of practical know-how, think about collaboration with neighbouring countries. So, to keep it short, the firm characteristics of a firm from Sofia may obstruct their willingness to act more sustainable. With our research, we will find appropriate solutions for this.

Formal institutions

Laws and regulations in a country significantly impact the businesses operating within its borders. Even though the Bulgarian capital is far from being the most sustainable European city (ACR Plus, 2020), it has improved a lot in recent years and perhaps its national formal institutions have played a supportive role in this. As a UN and EU member state and a signatory to major conventions and treaties, Bulgaria is required to comply with both UN and EU rules and standards with regards to labor and environmental laws, among others. Companies in Bulgaria must pay their workers no less than the minimum wage which – although rather low compared to that of other European countries – covers the cost of living of the average adult in Bulgaria (Wage Indicator, n.a.). Such protection ensures that workers are not exploited by companies, which is an important aspect of sustainable business practices. In addition, sustainable development has been a priority for the Bulgarian government and they have been focused on reaching a number of the UN’s Sustainable Development Goals (SDGs) and creating a sustainable Bulgaria (European Environment Agency, 2020). However, ‘‘the biggest challenge to successfully integrating the economic, social, and environmental dimensions of Bulgaria’s sustainable development policies is the coal sector which still has a significant share of the country’s energy balance’’ (European Environment Agency, 2020). Overall, the country has great potential to become more sustainable (thanks to the goals of the government and national formal institutions) and this research aims to contribute to that and identify ways to achieve it.

Culture

Sustainable practices of CSR can be defined by the voluntary, social and environmental initiatives taken for ‘‘the responsibility of undertakings for their impact on society.’’, where the emphasis is more on responsible behavior than on the origin of such behavior. The extent to which companies take accountability for sustainable business practices is determined by the impact of many factors, one of them being national culture. Chapple and Moon (2005) found that CSR is very much tied to cultural traditions at a country level. Businesses have a variety of their own cultural norms integrated in their sustainable practices for CSR. Nilsson and Tsai (2016) also concluded that national culture is a factor which determines what the expectations business corporations have on the implementation of CSR

practices. For example, it will be interesting to find out whether companies in Bulgaria take a localised or standardised approach on sustainable practices, as a consequence of their cultural attitude towards it. In addition, the behavior of the companies (responsible or not) depends on the environment in which they operate. For example, do the cultural norms and values in Sofia, Bulgaria, pressure companies to be sustainable? Culture influences attitudes, values and practices, underpinning every human interaction. Sustainable development is linked to a change in priority that humanity within a society sets. Therefore, national culture provides a basis for sustainable practices through rethinking on values and reflection on values and social norms. For example, research has shown that Bulgarian companies still have a sense of ignorance rooted in their attitude towards sustainable practices and do not fully understand the benefits of the implantation of certain CSR practices. This might explain why there are many CSR initiatives on “social policy and employment”, but there is a lack of focus on the implementation of sustainable practices.

Research Methods

We are going to develop our study making use of a qualitative research method in order to discover the different factors that contribute to the lack of sustainable practice of CSR in Sofia, Bulgaria. Most of our questions will be open questions in order for them to expand their answers and in order for us to obtain deep and valuable information. To accomplish this, we will ask our interview questions to employees of different companies located in Sofia. We have set up questions which will guide us. However, we are also thinking that we sometimes have to adjust to the situation. We want to break bigger questions into smaller questions and we do think it is important to do our homework for each company. During the week, it is important to update our final thesis as we can see where we are missing answers to our questions.

Expected Outcomes

Before mentioning our expected outcomes, we will firstly restate our research question and sub-research questions. Our main research question is: “What challenges and barriers to sustainability do companies in Sofia face?”. We expect that national culture, firm characteristics and formal institutions are determinant challenges and barriers which companies in Sofia face to sustainability.

Then our first sub-question is: How do cost efficiency and practical know-how affect the adoption of sustainable practices? Our expectation is that there is a negative relationship between cost efficiency and the adoption of sustainable practices.

Our second sub-question is: “How do laws and regulations affect sustainable business practices?” We expect that the laws and regulations positively affect the adoption of sustainable practices in business, since companies will be more obligated to adopt sustainable practices.

Finally, our last sub-research question is: “Do national cultures affect sustainable business practices?” Our hypothesis is that there is a negative relationship between national culture and Sofia’s mindset to sustainable business practices.

We think that the main problems can be found in these sections. We think that there is going to be a lack of knowledge about how to have sustainable practices. Another problem is the government, their laws and regulations. The national culture can also become a problem, as we think that there is not a large focus on sustainability.

Results

When we asked the companies about cost efficiency and practical know-how, we saw different answers. Renaissance consulting emphasized that currently it is expected that you adopt sustainability practices in your business model. However, it is hard for the companies who do not have money for this. While the richer countries in Europe are more keen on sustainability, yet, poor countries like Bulgaria, are lacking behind. The consulting company pointed out that start-up companies in Sofia focus more on their survival for the first 5 years, than thinking about sustainable value creation in the long-term. Start-up companies need to think more about being cost-effective and do not have the money for long-term sustainable practices. Therefore, they do not see it as their first priority.

The Dutch Embassy focused on the fact that in the Netherlands, the degree of innovation and creativeness is way higher than in Bulgaria. In Bulgaria, sustainability is seen as a limitation while the Netherlands views it as something they can excel in or differentiate itself from. The Bulgarian Society is very busy with making corruption less of a problem and therefore, they also do not see CSR practises as their first priority.

As IBM is a MNC, we see that they know how to focus on CSR. They do this by sending their employees to other countries for one month to work with the people there. They offered water supply in America for instance. Besides that they ask disabled people to help them in their projects and come join the community of IBM. In this way, they create inclusivity and give back to the world. They have each year a target to decrease their CO2 emissions. Their energy consumption is tracked and each year this target is a little lower. They focus on water waste and building sustainable facilities. This company has the most information and the knowhow how to do these sustainable practises in giving back to society. However, this is all globalised. They have some actions and different ways of giving back to society, but they admit that this is supported by the headquarters.

The Bulgarian Start Up association emphasized that Bulgarians are educating themselves more on sustainability. There are more efforts towards the implementation of sustainable practices, which is especially driven by the young people. On the other hand, it was mentioned that Bulgaria as a whole lacks behind due to a misunderstanding mindset towards sustainability. Moreover, the Bulgarian Start Up association points out that: sustainability in Sofia, Bulgaria, is considered a liability rather than an asset. This reveals one of the main firm characteristics which leads companies in Sofia to face barriers towards sustainability. This is because companies in Sofia lack the practical know-how that the adoption of sustainable practices can positively affect the long-term shareholder wealth maximization.

The University mainly talked about the relationships between them and companies. The University provides companies with the know-how to be sustainable. What the university itself is doing to be more sustainable, is not mentioned.

BestaMed was really clear about its sustainability practices. They focus a lot on them and find them really important. As they are a medical company, they focus on the way they treat their people and their products. They invest a lot in this and see this as a large priority. This was one of the first companies that showed active interest and also had practices that correspond to their beliefs. They plant over 600 trees every year and while talking about this, they seemed really passionate about it. We can see that this is actually something that they care about as they do not 'have' to do it, as companies have to buy their products anyway.

However, it is their mission to build a sustainable world and they seem to do it well.

When we asked the companies about the laws and regulations, we saw different answers. Renaissance Consulting demanded better governmental support through the provision of financial support and taxation. It was a bit better explained as the Dutch Embassy said that the government is a place where

there is much bribery and corruption. This definitely has a bad influence on other issues like sustainability as the laws and regulations are not applied efficiently. This definitely is a problem they need to handle first. After handling the corruption, they can invest in regulations and support for these practices. The Dutch Embassy focused on the fact that there is a large difference between West European countries and their sustainability practises and their way of finding it important. A lot of Bulgarian people live in poverty and this is definitely not their first problem. We think that the government should first focus on those problems and that sustainability is something that comes a bit later.

IBM admitted that there definitely can be more support. They said that there was some governmental support but this can be even higher. They had support from their headquarters which made it easier for them to act in a sustainable way but they still need a lot more support from the government. However, they also admit and understand that this is not the first priority of the government as there is a lot of corruption happening and this is limiting making effective and fair use of the regulations and the money that is there.

The Bulgarian Start-Up commission confirms that a larger shift needs to be executed by the government through laws and regulations to motivate businesses to adopt sustainable practices. Through stricter regulations, businesses will slowly but surely start seeing the benefits of sustainability in the long run.

The Bulgarian Chamber of Commerce was stating that it is easy to set up a sustainable company because the laws and regulations for companies are great in Sofia, according to them.

BesteMed admitted that there is a lot of support from their government but therefore they lay some money aside from the company. Of course, governmental support would be greatly appreciated but they also see that this can take a long time. Therefore, they took matters into their own hands and created their own funds. They did not specifically go into the negative side of the support. They mainly focused on their own funds and how they established those and are satisfied with how that turned out. However, they stated that more support is always welcome.

When we asked the companies about the influence of the national culture, we saw different answers. When we asked Renaissance consulting if they promote sustainable practices to the start-up companies they consult, his answer was that currently, sustainability is not their highest priority. The national culture is a huge determinant of why companies in Sofia face challenges and barriers to sustainability. He emphasized that it is a cultural norm for Bulgarians to look at things in the short run rather than in the long term. To support his answer, a Youtube video was given to us: “Kevin O’Leary gets real about why you must be ruthless in Business”. Important notes which were mentioned in the video and touched upon the answer which the Renaissance consulting mentioned, were for example, the belief that any company should fully focus on generating sales and profits in order to survive. To the question whether companies should try to do anything other than this, such as saving the planet, Kevin O’Leary mentioned that this business is evil and that “any startup trying to do more than serve customers and generate profits is being run by labra doodles playing among the pit bulls of commerce.”

We spoke to the Dutch Embassy and we spoke to a Dutchman. He could not tell very much about the national culture from its own behaviour as he is not Bulgarian but he could tell us something about the things he experienced. The Bulgarian people are really short term thinkers. This is also due to the fact that there is a lot of poverty and the first priority is surviving every day. The problem of a world that is overused is simply not their first problem as they first have to survive themselves before they have to think of the rest of the world.

We asked IBM for their personal preferences and they had to admit that while they thought it was important, they did not behave like it always. It is simply something that is not something that comes naturally for them. He also said that the average monthly wage in Bulgaria was around 600 euros. This is very little and people will always buy the cheapest product instead of a more expensive but more sustainable product. This is something that could be supported more by the government but we saw in subquestion 2 that they were not that far yet.

There is a mindset in Sofia that “only the rich can be charitable” and the rich can give back to the planet. Although the Bulgarian Startup company says that this negative cultural mindset to always choose the fastest and cheapest option, it is getting better, however, the growth is unsteady due to many different changes. A larger shift needs to be executed to show Bulgarian companies that sustainable practices are a very strong asset in the long run.

In BestaMed, the national culture did not seem to be a problem. They were very focused on their responsibilities to the world and understood the importance of their behaviour. We did not see a short term vision but actually a long term vision. After having done some research, we saw that Bulgaria scores high on the long term side on the Hofstede. With a score of 69, Bulgaria has a Pragmatic culture. In societies with a pragmatic orientation, people believe that truth depends very much on situation, context and time. They show an ability to adapt traditions easily to changed conditions, a strong propensity to save and invest, thriftiness, and perseverance in achieving results. (Hofstede, 2021) BestaMed follows this behaviour in being adjustable to the changing standards in sustainability.

Recommendations

During our interviews, we clearly saw that the problem is more difficult than we thought. Why companies are not sustainable in Sofia is definitely a cultural thing. It is a cultural norm for Bulgarians to look at things in the short run rather than in the long-term. How hard it may sound, this culture needs to be changed. Besides the culture, we also see that the average wage and the government with a lot of corruption has a large influence. This is something that needs to be adjusted. We would suggest that this culture should be changed at the top. IBM, a company with a subsidiary in Sofia is a company that is from this top. For them, the resources are more accessible in order to make a change. So, if the big companies go first, the others will follow more easily. It would become more normal to act in a sustainable way. We already saw this as BestaMed and IBM had the most sustainable practices. In order to keep this going, they have to present themselves and educate other small companies on how important it is to act sustainably. They have to create a more general knowledge about the current status and how we can only change that if we all alter our behaviour.

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groningen

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European Research Project

2020-2021

Assignment: Research report

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Introduction

As an EU member state, it has become an imperative for Bulgaria to fit in the economic structure of the European Union. For instance, Bulgaria was ranked 59th out of 190 countries in terms of “Ease of Doing Business” in 2019 (Perez, 2020). Besides, Bulgaria ranked second in the European Union in terms of lowest government debt after joining the EU in 2007. (Plovdiv, n.d.). However, the country has faced a number of crises, such as, a liquidity crisis and several protests with an adverse impact on the growth of Bulgaria. Yet, the country has been able to recover as a result of Sofia's contribution to the growth of the Bulgarian economy. Although, the recovery appears to be moderate.

The question remains as to what more could be done to improve firm performance in Bulgaria, particularly in Sofia, in order to help firms overcome financial and economic crises. This is especially important in today's competitive society. For instance, it is critical for companies to stay ahead of competitors as the success of organizations indicates a high firm performance. As a result, one of the areas to focus on is innovation, which allows businesses to differentiate themselves from their competitors. For instance, it may increase the chances of new firms surviving by providing successful niche strategies. Especially, when Sofia has been recognized as one of the best places for start-up businesses around the world. However, there has been little research into whether innovation contributes to firm performance within Sofia. For instance, previous research found that managing measures and practices in firms helps to stimulate innovation (Marqués & Simón, 2006). However, whether or not this contributed to better performance remains to be determined. Besides, research has focused mainly on the link between innovation and economic growth in the Central and Eastern European countries (Petrariu et al., n.d.). As a result, more research in the Bulgarian context with regards to firm performance and innovation is required. Especially since the country implemented *The innovation strategy* policy in order to improve Bulgarian industry's competitiveness and encourage innovation (Ministry of Economy of the Republic of Bulgaria, n.d.).

Therefore, this report explicitly focuses on whether innovation leads to higher firm performance in Sofia. In particular, given research highlighting the importance of organizational culture and employee development in driving performance-enhancing innovation (Marqués & Simón, 2006; Koudelková & Milichovský, 2015), We examine the roles of management measurement and practices, employee motivation and supporting resources. For instance, management practices refers to knowledge management methods. Employee motivation, on the other hand, is more focused on intrinsic motivation, which refers to employee satisfaction in the workplace, whereas supporting resources point to technical, financial, and human resources. Together these three elements capture the foundations of an innovative climate within firms which will be further explained in the following sections. In addition, a conceptual model with operational definitions is provided, followed by a final evaluation that summarizes and assesses our findings. Nonetheless, the final section includes a conclusion and recommendations, as well as a few limitations and future research suggestions.

Main Research Question and Sub-Questions

The purpose of this analysis is to explore what are the drivers of innovation in Sofia which enhances the economic position of the firm. We attempt to answer the following research question central in this study: “what are the factors that contribute to firm-level innovation and (when) does this innovation lead to better firm performance?” In doing so, our focus lies on Sofia, which is the economic heart of Bulgaria. Therefore, this paper aims to contribute to previous studies by extending the existing literature on the factors that drive innovation in firms and subsequently their firm performance. As a result, we provide an in-depth analysis of three main reasons that are easier to examine in comparison to other factors.

Furthermore, previous research indicates that the following three factors have a direct impact on both innovation and firm performance, which lends support to our framework.

Literature Review and Hypothesis development

Literature review

Literature assesses innovation as the most important differentiation strategy to acquire a competitive advantage in the market (Kalay & Lynn, 2015). Therefore, Kalay and Lynn (2015) investigate the impact of different strategic innovation management practices in business enterprises on firm innovation performance. They focus on the practices of innovation culture, innovation strategy, organizational structure, technological capability and customer and supplier relationships, and find that innovation culture, innovation strategy and organizational structure have a significant, positive impact on firm innovation performance. However, they find no evidence that technological capability and customer and supplier relationships significantly increase firm innovation performance.

Furthermore, Hung et al. (2010) argue that TQM embodies the following four elements; top management support, employee involvement, continuous improvement and customer focus. Hung et al. (2010) investigate how firms' knowledge management (KM) initiatives influence innovation performance through TQM practices, instead of examining KM initiatives and TQM individually. The findings show that KM is positively associated with both TQM and innovation performance and that TQM is a mediator between KM and innovation performance.

In particular, Lee & Raschke (2016) argue that motivated employees lead to better organizational performance. For instance, organizations, regardless of industry and size, should always strive for the best possible relationship with their employees. Some employees are motivated by rewards and others by their own motives. Although, when considering Hofstede's cultural dimensions, Bulgaria scores a 30/100 on the dimension 'individualism' which suggests that bulgarian employees are unlikely to be motivated by individual rewards and promotions. Yet, it is possible that employees behave or respond differently in practice. For instance, employee motivation has been shown to increase within businesses by factors including empowerment and recognition (Dobre, 2013). Specifically, employee motivation, as well as accomplishments and organizational performance, has been demonstrated to enhance when employees are given more power and recognition.

Nevertheless, Gloet and Terziovski (2004) argue that the process of innovation depends heavily on knowledge, and the management of knowledge and human capital should be an essential element of running any type of business. In their study, they find a significant and positive relationship between knowledge management (KM) practices based on a combination of information technology or human resource management and innovation performance, which could imply that firms should strive for an integrated approach to KM in order to maximise innovation performance leading to competitive advantage. Besides, Mardani et al. (2018) add to this that "knowledge creation has more significant effects on innovation speed, innovation quality, and innovation quantity, whereas innovation quality, knowledge creation, and knowledge integration has more significant effects on performance."

Hypotheses development

According to the literature review, innovation is a critical aspect for organizations, and it can be accomplished in a number of ways. These are based on previous research, management measurements and practices, employee motivation, and supporting resources, all of which will be discussed further below.

Management practices and measures

In particular, managing measures and practices in firms is of importance to track innovation and to stimulate innovation according to Marqués and Simón (2006). Knowledge management, for example, is particularly relevant in this context since it refers to organizational innovation involving major changes in strategy implementation and traditional management techniques. Companies that adopt knowledge management methods outperform their competition, according to the research. As a result, the link between innovation and business performance is revealed. Although it has been difficult to measure knowledge management, an instrument has been developed to do so. This instrument consists of six aspects: orientation towards the development, transfer and protection of knowledge, continuous learning in the organization, an understanding of the organization as a global system, development of an innovative culture that encourages R&D projects, approach based on individuals, and competence development and management based on competences. As a result, based on the evidence, the following hypothesis can be developed:

Hypothesis 1: Measures and practices in management that support creating a culture of innovation leads to more innovation and subsequently higher firm performance.

Employee motivation

Further, according to Koudelková & Milichovský (2015), there does exist a positive relationship between employee motivation and the creation of successful innovation. This relationship is mediated through the aspect that motivation is an important factor for building a comfortable working environment. Intrinsic motivation is of importance, since employees are not always satisfied with incentives offered by their company. This could lead to adverse reactions towards new innovations and therewith the firm performance. Aforementioned authors have formulated five steps to motivate employees: 1) set goals, 2) motivate in time (there is no wait to for a new project), 3) use valuable incentives (ask for employees about their preferences), 4) include all relevant employees in the incentive program and 5) keep your promises. This roadmap will ultimately lead to higher firm performance. As a result, the second hypothesis follows:

Hypothesis 2: Employee motivation in the innovation process leads to more innovation and subsequently higher firm performance.

Supporting resources

Nonetheless, to constitute innovation within a firm, technical preparation in material, financial and human resources is required. These aspects will largely determine the success of the objectives of firms. Though these technical aspects are of importance - they make up the framework - soft aspects should be considered as well. Without clear values and orientations shared by all the members of the firm, a corporate culture which is aimed at innovation will not develop in a satisfactory manner (Claver, Llopis,

Garcia & Molina, 1998). As a result, supporting resources may contribute to increased corporate innovation, which leads to the following hypothesis:

Hypothesis 3: Resources supporting an innovative culture leads to better innovation and subsequently higher firm performance.

Conceptual Model

The following conceptual model is established based on our main research question, related literature and hypotheses. As previously discussed, prior research indicates that measurement, employee motivation, and supporting resources encourage more innovation, which enhances firm performance. Although, firms differ in their approach to innovation. This model holds true if organizations have specific measurements and policies in place that support a firm's innovative culture. Furthermore, increased employee motivation will contribute to increased productivity if a company makes an effort to generate and implement innovative ideas. Furthermore, specific resources may contribute to the rapid and effective implementation of innovations in processes, technologies, or other areas. All of this, in turn, through the level of innovation, will have a positive impact on firm performance, such as increased market share, productivity, and financial returns. As a result, the arrows in figure 1 include a positive sign to indicate the positive effect they have on the variables they point to.

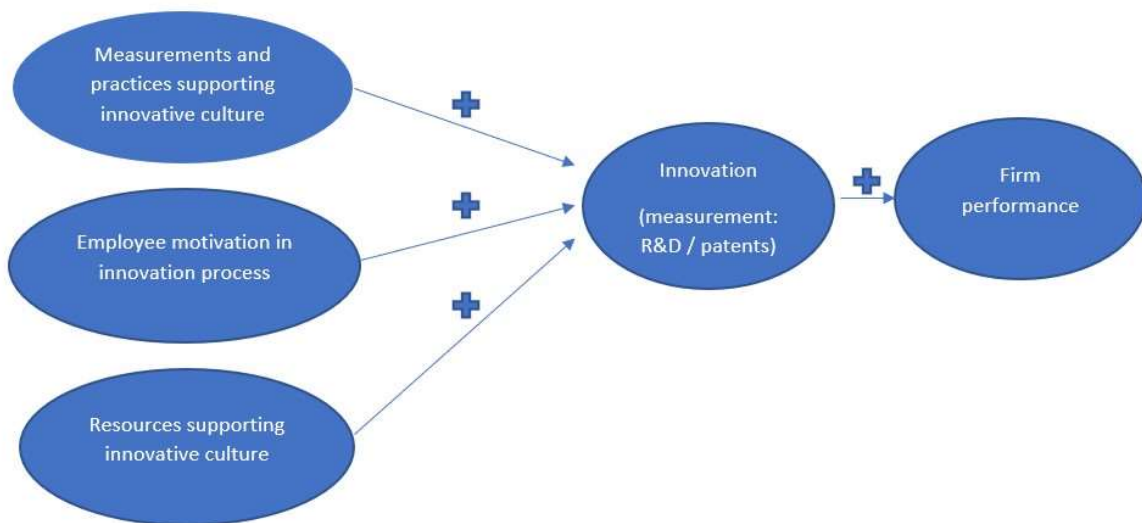


Figure 1 *Conceptual model*

Further, based on our main research question, "what are the factors that contribute to firm-level innovation and (when) does this innovation lead to better firm performance?" The following are the terminology used in the conceptual framework:

DV= Firm performance

IV= Management practices supporting innovative culture

IV= Employee motivation in innovation process

IV= Resources supporting an innovative culture

Mediator = Innovation

Operational Definitions

Firm performance: Business performance is described as a subset of organizational effectiveness that covers both operational and financial outcomes (Selvam, Gayathri, Vasanth, Lingaraja & Marxiaoli, 2016). Organizational effectiveness can be measured by looking at the firm performance, according to (Marques, 2006). Firm performance is determined by nine different indicators, to know: profitability performance, market value performance, growth performance, employee satisfaction, customer satisfaction, environmental performance, environmental audit performance, corporate governance performance and social performance (Selvam et al., 2016). Sample indicators for each of these dimensions are given in table 1.

Dimensions	Sample Indicators
Profitability Performance	Return on Assets, EBTIDA, RoI, Net Income/Revenues, Return on Equity, Economic Value Added (EVA)
Market Value Performance	Earnings Per Share, Changes in Stock Price, Dividend Yield
Growth Performance	Market-Share Growth, Asset Growth, Net Revenue Growth, Net Income Growth, Number of Employees Growth
Employee Satisfaction	Turn-over, Investments in Employees and Training, Wages and Rewards Policies, Career Plans, Organizational Climate, General Employees' Satisfaction
Customer Satisfaction	Mix of Products and Services, Number of Complaints, Repurchase Rate, New Customer Retention, General Customers' Satisfaction, Number of New Products/Services Launched
Environmental Performance	Number of Projects to Improve / Recover the Environment, Level of Energy Intensity, Use of Recyclable Materials, Recycling Level and Reuse of Residuals, Volume of Energy Consumption, Number of Environmental Lawsuits
Environmental Audit Performance	Environmental Policy, Environmental Audit Report and Environmental Review
Corporate Governance Performance	Board Size, Board Independence, Outside Directors, Insider Ownership

Social Performance	Employment of Minorities, Number of Social and Cultural Projects, Number of Lawsuits Filed by Employees, Customers and Regulatory Agencies
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Table 1 *Sample Indicators for each Dimension* (Selvam et al., 2016)

Management practices supporting innovative culture: The term management practices relates to “sets of general practices used by firms to achieve better results. ... When a specific firm attempts to apply these practices, the process is not a straightforward re-enactment of existing knowledge; rather, it involves adaptation, new learning and novelty.” (Brito & Sauan, 2016). For specific practices supporting innovative culture, we will look at the extent to which the management:

- Sets clear, achievable strategic goals: by specifying clear goals, that are ambitious as well as achievable, employees will better understand how their work contributes to the organization’s long-term sustainability and competitive advantage;
- Provides challenging work and suitable rewards: when employees are given the opportunity to feel challenged and work hard and, in turn, get rewarded for this, innovative ideas will flow easier;
- Gives employees the autonomy in their practice of work: when employees have freedom in determining the best approach to carrying out their tasks, it will give them a sense of responsibility for the final service or product;
- And supports teamwork: as innovation is a team effort, work teams should be comprised of individuals with diverse skills and perspectives.

Employee motivation in the innovation process: Employee motivation is a part of, and influenced by, the corporate culture within a company (Koudelkova, 2015). A disciplined corporate culture supports the formation of a business social climate. Motivation partly consists of direct and indirect motives that employees have during the innovation process (Tureckiova, 2004). Learning something new is seen as the strongest motivational factor and important to almost 70% of the people involved in the innovation process. Additionally, stimulating curiosity contributes to innovation as well.

Resources supporting innovative culture: Resources that support innovation are among others financial resources, human resources (such as knowledge), physical resources and information resources (Koudelkova, 2015). With the presence of these, an innovative culture within a firm is stimulated and can be obtained more easily and efficiently.

It is thought a lot that financial resources inhibit the performance of innovation teams. However, when relating the financial constraints to the innovation project performance, there is a moderating role of a bounded creativity approach. This approach is a team process that leverages the team’s domain-relevant skills, an engaging project objective, strong team cohesion and team potency (Hoegl, Gibbet & Mazurskyc, 2008). In this way, financial resource constraints can lead to enhanced culture and therewith performance.

A major driver for innovative culture is human resources (HR) and HR are considered to be one of the most important resources of today’s firms. In order to obtain the maximum performance of an organization,, managers need to support, plan for and nurture an innovation culture (Maier, Brad, Nicoara & Maier, 2014). It is especially important for organizations to know how the learning system is created.

This could mean options to increasing self awareness, for a deeper understanding of the context, for appreciating the linkages between their own new behaviour, business outcomes and personal implications, picking up a few skills to achieve this behaviour change, using support systems like peer coaching, mentoring, etc. Another way for organizations to establish a more innovative culture lies in their ability to foster, develop and utilize the talents, in particular the innovative potential, of their employees.

Information resources could be provided in the form of technological resources to support the process (Ståhlbröst & Bergvall-Kåreborn, 2011). From this technological resources perspective, there could be made a distinction between two groups: technology enthusiasts and utility users. This first group views technological resources as very important to the end-result of the process while the second group sees them as rather supporting.

Innovation: Innovation is a process by which a domain, a product, or a service is renewed and brought up to date by applying new processes, introducing new techniques, or establishing successful ideas to create new value (Gault, 2018). Innovation is proxied by R&D outlays and patents (Kacprzyk & Doryn; 2017). Innovation could be classified into several groups, to know: process innovation, product innovation and organizational innovation.

Expected Outcomes

In this study, we expect to find a trend within the investigated firms in Sofia suiting the overall trend of innovation influencing economic growth within Bulgaria. Moreover, we expect to find a relationship between the three factors concerning innovation and the economic growth in Sofia, Burgaria.

We expect to have a positive relationship between measures and practices in management that support creating a culture of innovation and innovation. We expect that the increase of this innovation subsequently leads to a higher firm performance of enterprises in Sofia. We assumed this for a reason, as mentioned in literature these supporting measures and practices concerning creating a culture of innovation are of great importance to enhance innovation (Marqués & Simón). By means of setting clear goals, proving challenging work and suitable rewards, giving autonomy in their practice of work and supporting teamwork, a better work environment is created, which is positive for innovation and firm performance. Therefore, we expect that an increase in measures and practices in management that support creating a culture of innovation, leads to positive results in innovation and firm performance.

Furthermore, we presume that employee motivation in the innovation process positively relates to innovation. Similar to the first relationship, we expect this positive relationship also to lead to an increase in firm performance. With regards to the literature discussed earlier, Koudelková & Milichovský discussed as a matter of fact that employee motivation positively relates to successful innovation. They proved our expectation by expressing that by means of trying to enhance intrinsic motivation, and motivate employees using 5 steps, the firm performance can be increased. Therefore, we expect in our study that the firm performance of Bulgarian enterprises will increase when the focus lies on strengthening employee motivation in the innovation process. Moreover, the third factor we expect to have an influence on innovation and firm performance is the resources that support the innovative culture. We expect this factor to have a positive relationship with innovation and firm performance. Aforementioned, it is shown that the success of innovation and firm performance is greatly dependent on the resources of a company. The technical preparation in material, financial and human resources are the

key to successful innovation as concluded from Claver, Llopis, Garcia & Molina (1998) . Therefore we assume it to have a positive influence on firm performance.

Research methods

The literature argues that the three factors: measurements and practices, employee motivation and resources support innovative culture and innovation can be positively related to firm innovation and subsequently firm performance. In order to estimate this relationship between these three factors and the innovation and firm performance, this study estimates the outcomes by conducting a qualitative research method. To discover if these factors contribute to better innovation and higher firm performance, we will interview different companies located in Sofia coming from different sectors. Most of our questions for the companies in our interview are open questions, to receive the optimal valuable and relevant information about the topics. Our goal in the interview is mainly to discover how they enhance their innovation and how the factors contribute to this enhancement. The results of the interviews will be processed, and compared to our literature review. The results of this study based on the interviews could be consistent with the literature, but could also be contradictory. We aim to provide new insights towards the existing literature and contribute to a better in-depth overview of how the firms participating in the study can enhance their innovation and firm performance even more.

Results

This part discusses the findings of our research and whether our hypotheses are accepted or rejected, based on the responses of the participants. The measures are described in the first paragraph. Following this, the practices and any supporting resources are discussed. Finally, a conclusion is reached. Besides, it's important to mention that the data we obtained from research participants is not attributed to specific companies or organizations. Instead, we discuss the data in order to protect the participants' confidentiality, which was guaranteed when they consented to participate in our study.

Hypothesis 1: Measures and practices in management that support creating a culture of innovation leads to more innovation and subsequently higher firm performance.

As stated before, there are certain measures and practices in management that support creating a culture of innovation that leads to more innovation and subsequently to a higher firm performance. In particular, measures in management are mostly focussed on the output of innovation. These measurements are used to get insight into the current state of innovation within not only the companies themselves, but also in countries. The most important measurement is patents and intellectual properties. The former protects products, while the latter protects services from copying. This is important because companies need to earn back their investments as this ultimately leads to higher firm performance in terms of monetary value. Not only by producing the product or conducting the service, but also by selling patents and intellectual properties to other companies, institutions, etc.

Next to the measurements, there are many management practices that create a culture of innovation. The first, and most appointed one, is the mindset. Managers should create a mindset within their people to think outside the box, to make mistakes, etc. This is really important as it stimulates innovation. Another aspect is to realize that competitiveness is something positive; it stimulates innovation rather than it discourages innovation. Next to this, people should be conscious that quickness is an important factor stimulating outcomes of innovation. Because of this competitiveness, it is of utmost importance to keep momentum to stay on track in terms of research & development.

More tangible management practices are laid within the participation in activities and collaborations. Let employees participate in hackathons for example will lead to a stimulance. Especially these technical aspects that need investments, such as labs. Collaboration is convenient to increase awareness and skills of people in university, whereby the focus should be more on practical skills rather than on theoretical knowledge. By providing lectures, workshops and guest lectures, people can develop themselves in a topic of interest. The collaboration between universities, businesses and governments, which is thriving innovation, could even be more expanded. Letting employees attend a course at a university without actually studying there offers the perfect possibility for personal development of them. This will later have positive outcomes in terms of innovation, and consequently in firm performance.

Hypothesis 2: Employee motivation in the innovation process leads to more innovation and subsequently higher firm performance.

The relationship between the employee motivation in the innovation process and the innovation and firm performance is studied in the second hypothesis. By interviewing several Bulgarian enterprises from Sofia, we derived the result of a positive relationship between those two factors. Employee motivation in the innovation process leads to more innovation, and therefore subsequently to a higher firm performance. A recurrent answer to the questions from the business interviews regarding employee motivation and innovation explained that innovation is the ultimate tool to improve competitiveness. Especially for startups it is a crucial part to be successful, offering innovation processes and innovative products are a must to compete with other firms. Therefore, the mindset in most firms is to be considerably cheaper or better in order to achieve success in your business.

Derived from the interviews, there are three focus points concerning employee motivation that resulted in more innovation and higher firm performance which substantiates the second hypothesis. The first focus point is career development, which is described as improving your professional skills, and advancing along your career path. The firms motivate their employees by providing the resources for their personal and professional development. The process of exploration, self-knowledge and decision-making that shapes the career of the employees is stimulated by the firms. It is important for a firm to direct the employee to the job, by finding tasks and adapting the job in a way that suits a person's personality, skills and interests. By challenging the employees to become a better version of themselves by identifying their own strengths and weaknesses and improving their skills and by challenging them to be innovative and open-minded in improving business processes and products, the innovation increases.

The second focus point concerns the learning opportunities provided by the enterprises. To stimulate innovation and motivate their employees, firms provide several learning opportunities. An example of these learning opportunities are learning programs in and outside the company to stimulate the knowledge, innovative thinking and skills. Another program is the compensation and benefit program, that values work-life balance, flexible working time, visibility and transparency, and personal ambitions.

The last focus point is performance management, which focuses on managing personal development and the company goals. It comprises all activities that ensure that all goals are reached effectively and efficiently. Performance management, not only focuses on the employees, but also concentrates on the performances of the entire organization, departments, and production processes. By keeping track of the course of events in the corporation, the firm has insight into the goals and results that need to be achieved. Performance management increases the engagement of the employees by their firm and the business objectives. When employees know the plans and goals, and when they are actively engaged in the

realisation of these goals, they feel appreciated, and they feel that there is room for their own initiative, and self-development. Working in a peer group or entering a discussion group or getting a right advisor/mentor also enhances the motivation and engagement. These aspects are essential to create a culture. In engaging the employees and creating a culture, the motivation of the employees increases which leads to more innovation and firm performance.

Even though motivation is an interesting and long discussion, for the reason that it's not one size fits all. Not every employee can be motivated in the same way, but when a company stimulates their employees in the ways that are discussed above, their mindset can be changed, and these three points can stimulate their motivation to be more innovative and open minded.

Hypothesis 3: Resources supporting an innovative culture leads to better innovation and subsequently higher firm performance.

The lack of access to capital is a great obstacle to innovation in Bulgaria. Especially for non-IT companies it is hard to get access to cash. The money goes to the stages of innovation management which are close to the market because the risk is lower. The money provided for new ideas is very little. Government subsidies and support are very limited. This may be due to the fact that Bulgaria is one of the poorest European Union countries. The government is holding back when it comes to providing cash to start-ups and entrepreneurs. A second way to get financed is by fundraising, however this is a time-consuming process; the process for investment approval is relatively long due to the Bulgarian bureaucracy. So, there are many funds, but the process of closing down deals/investments is very slow. Also, Bulgaria lacks venture capitalists and angel investors. This could be improved in three ways: 1) educating entrepreneurs on how to do business and acquire investors, like the British program SCIS; 2) removing capital gains, which would make selling shares and investing in a company more attractive; 3) governmental guarantees, so governmental money is provided by specific banks and start-ups can apply for these funds.

The human resources in Bulgaria do contribute to the country's level of innovation. The country has good brain power, especially within the Information Technology (IT) sector. Back in the days, the Soviet Union and Bulgaria were known as the high-tech countries of the Eastern bloc. These two countries had highly educated people working in the IT sector, which attracted the big multinational IT companies, like Microsoft and Google. The branches of those big companies in Bulgaria resulted in spinoffs and new IT start-ups. However, based on the response of one of the participants it can be said that Bulgaria has limited knowledge institutes, such as universities. This is supported by the fact that Bulgaria only has 54 universities, which is a small number in comparison to other European countries (Countries arranged by Number of Universities in Top Ranks, 2020). For instance, Germany had 464 universities, Spain had 263 universities, and the Netherlands had 131 universities in 2020. Besides, the government does not work closely together with the universities, which also hinders innovation. If the government, businesses and universities would collaborate more, innovation will thrive. The relatively higher number of start-ups in Sofia compared to elsewhere in the country is partly due to the clustering of influential universities in Sofia. However, Bulgaria does experience brain drain, whereby a relatively large part of the highly educated workforce moves out of the country. This is an obstacle to a higher level of innovation in the country.

Nevertheless, The protection of intellectual property is a very important driver of innovation. However, the number of patents in Bulgaria is low. Even though this number is growing, especially in the electronics sector, food industry, and medicine industry, the speed of growth should be higher. Patents are expensive, but they must be seen as an investment. However, this is not yet part of the Bulgarian mindset. Therefore, Bulgarians should be educated on entrepreneurship and innovation, like mentioned above. It is of great importance for companies to realize that protecting intellectual property is essential for them. If this idea becomes part of the Bulgarian mindset, innovation would thrive. Besides, Bulgaria also lacks information resources. Access to information is difficult as Bulgaria is very bureaucratic and not very digitized. This slows down the process of innovation.

Conclusion and recommendations

To conclude, we have some advice using our findings in this report as a basis. Firstly, the way Bulgarians operate in the business world is determined by their mindset. This cannot change easily since it has to do with cultural values that are passed down through generations. To really make a change, you as a company could be a front runner. The traditional Bulgarian mindset works well in the Bulgarian market and culture. However, if the goal is to do business abroad, adjustments need to be made in order to do business successfully. A recommendation is to check for instance the values of Geert Hofstede's cultural dimensions of a specific country and compare them with the Bulgarian values. This will provide a quick overview of cultural differences to be aware of when doing business with others.

Moreover, try to focus on innovation as much as possible. During conversations with several Bulgarian companies, we found out that it is usually not the first priority since companies choose survival over innovation. However, for the companies that are able to pay attention to and spend money on innovation, we strongly recommend doing so. This will improve your competitive position in the Bulgarian market as well as in the European market. Besides innovation on a company-level, innovation on a personal level would also be one of our pieces of advice. Self-exploration and training as an employee are worthy for your own personal development and increase attractiveness for employers. All of this will tremendously increase your firm performance and the innovativeness of your business.

Limitations and Future research

There are a few limitations to this study. For example, due to a time constraint, we were unable to investigate which independent variable has the greatest impact on the dependent variables. Therefore, future studies should place a greater emphasis on this. Furthermore, causality is difficult to prove to some extent because this report is primarily based on opinion and judgment rather than results. Besides, another limitation would be that our research method consists of interviews due to which some of the respondents might not feel encouraged or comfortable to provide honest answers or present themselves in an unfavorable manner. Moreover, since consistency and objectivity are difficult to establish in interviews, there is a risk of less reliability. The data acquired, for example, is unique due to its distinctive content and the specific individuals involved, which reduces its validity. Besides, it is important to note that the report is not statistically representative as responses given are not measured. Therefore, future research into the relationship between innovation and company performance in Sofia may use other methods.

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Management summary

The goal of our study is to see whether innovation in Sofia leads to enhanced corporate performance. More specifically, the aim was to investigate what are the drivers of innovation in Sofia that improve the firm's financial position as a result of its contribution in Bulgaria's economy. As a result, our research question is as follows: "What factors contribute to firm-level innovation, and (when) does this innovation lead to better firm performance?" We focused on management measurements and practices linked to knowledge management within organizations, employee motivation in terms of work environment satisfaction, and supporting resources, such as technical, financial, and human resources, based on existing literature and studies.

Further, Interviews were conducted with various companies located in Sofia from different sectors to determine whether the aforementioned relationship holds true. All of our hypotheses were confirmed by the results. Patents, intellectual property, Bulgarian mindsets, and participation in activities and collaborations are revealed to be important management measures and practices that support more innovation. Managers, for example, should encourage their employees to think creatively and make mistakes in order to foster innovation. Further, in terms of employee motivation, career development can motivate their employees by providing the resources for their personal and professional development. This can be achieved by the process of exploration, self-knowledge and decision-making that shapes the career of the employees. Furthermore, career development in terms of exploration, self-knowledge, and decision-making, as well as a variety of learning opportunities, can increase employee motivation and, as a result, stimulate innovative thinking and related skills. Besides that, compensation and benefit programs, as well as performance management, may assist in increasing employee engagement with their company and its targets. Although, in terms of supporting resources, Bulgaria's lack of access to capital is a significant barrier to innovation, especially given the government's limited subsidies and support. Yet, Bulgaria's human resources contribute to the country's innovation level. In line with this, intellectual property rights is a major driver of innovation. Patents are expensive, but they must be considered as an investment.

To summarize, our findings imply that firms in Bulgaria that do business abroad must make some adjustments in order to be successful. For example, more emphasis should be placed on the cultural differences that must be considered when doing business with others; one suggestion would be to review the values of Geert Hofstede's cultural dimensions. Furthermore, it is critical to try to focus as much as possible on innovation. This will help you gain a stronger position in the Bulgarian and European markets. As a result, it is recommended that both company-level and individual-level innovation, such as self-exploration and employee training, be implemented. All of this will help to improve the performance of Bulgarian companies and its ability to innovate.