

# **Management of Innovation and Business Development**

## **Master thesis**

### **Identifying determinants for entrepreneurial development the case with Bulgaria**

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## Abstract

The study focuses on investigating the important entrepreneurship determinants in Bulgaria in order to clarify the factors that facilitate and/or inhibit business development in the country. The case was not analysed in isolation. Instead, relevant previous literature and models were considered in order to outline a plausible framework for selecting, assessing and proposing a relevant list of entrepreneurship determinants.

Based on quantitative and qualitative research methods, the research paper managed to collect sufficient evidence in order to elaborate a list of significant business development determinants. It is worth mentioning that the determinants' list includes various factors that are related not only to the institutional environment, but also incorporate factors linked to personal motivation and resource availability.

Based on the findings, a number of suggestions for improving the business environment in Bulgaria are provided accordingly. It should be noted that while some things work well, the work of the institutions insists considerable improvement by focusing on administrative reform and corruption reduction. In addition, stimulating private finance initiatives and incubators' role can be seen as helpful. Further consideration of the role of education and providing public finance options should be considered, as well.

## 1. Introduction

After the end of the communistic era, Bulgaria entered into a period of transformation from a planned, state-run economy to a modern market one. The transition period, however, was quite bumpy and painful in comparison to the other Central and Eastern European countries. In 1998 the Bulgarian GDP per capita measured by the Purchasing Power Parity (PPP) was barely 27% of the EU average (Eurostat, 2012a). As a result of broad reforms, deep structural changes and liberalization, Bulgaria has attracted substantial investment interest recently. Strengthened by the reforms and supported from the generous flow of foreign direct investments (FDI), the Bulgarian economy clearly went on the convergence path, as the national income accounted for 45% of the average EU in 2011 (Eurostat, 2012b).

Despite improving economic conditions and the 2007 EU membership euphoria, Bulgarian economy still experiences problems which are either country specific and structural (deteriorating demographics, low levels of innovation, corruption), or caused by external factors, such as the global economic crisis (stagnating GDP, lower FDI levels, real estate bubble burst). In this unfavourable economic context, fostering entrepreneurship activity is considered by policy makers as a valuable tool for achieving high economic activity, employment, innovation, as well as economic dynamism and competitiveness.

Indeed, the local government has launched several initiatives in an attempt to improve the business environment. First, a 10% corporate rate was introduced followed by the complete elimination of the dividend and reinvesting taxes, thus making Bulgaria one of the EU countries with the lowest corporate tax burden (Deloitte, 2012). Moreover, the Bulgarian Development Bank (BDB) was created with the focus of “...*local SMEs, project financing for export-oriented companies, as well as investment banking and public projects of national importance.*” (BDB, 2012; p.1). Secondly, local economy currently benefits from the existence of various EU convergence and operative programs that help in improving the overall infrastructure and providing funds to different entrepreneurship related initiatives, such as the “*Stimulating entrepreneurship among the unemployed*” program (NEA, 2012). Finally, private sector initiatives have to be recognized, since numerous business incubators and accelerators have been recently created in an attempt to foster entrepreneurship activity.

As it can be seen, various public and private sectors' initiatives targeting entrepreneurship development have been launched in Bulgaria. Whether these initiatives are going to support a solid economic revival, however, depends entirely on their efficacy in a local context. Hence, understanding the key determinants of entrepreneurial development and success in Bulgaria should be seen as an important prerequisite for designing and launching successful initiatives helping local entrepreneurs. Theoretical literature has investigated the topic and managed to collect substantial evidence in respect to the factors determining entrepreneurship development. Moreover, many empirical studies focused on particular country related cases, thus identifying variations in the factors' significance in the different parts of the globe.

What is the case with Bulgaria, however, remains unclear due to the lack of sufficient literature that investigates the issue. Identifying the significant factors determining entrepreneurship development is an intriguing question, since Bulgaria is a young entrepreneurial nation that has just achieved the status of a market economy. Capturing the main trends in the fast evolving entrepreneurial environment and identifying the main driving factors not only contributes to the better understanding of the ways of doing business in Bulgaria, but also reveals valuable insights for improving the efficacy of entrepreneurship related public and private programs, as well as enriching the existing empirical literature in the field.

### **1.1. Problem statement**

Inspired by the provided motivation, the study aims to address the following main research question: *What are the significant determinants of entrepreneurial development in Bulgaria?* Providing an objective answer to this research question insists the implementation of a thorough and objective research structure that includes several main objectives:

- ➔ Critically reviewing the existing theoretical and empirical literature that investigates entrepreneurship development determinants and their significance in a broader perspective;
- ➔ Constructing a model of all potentially relevant factors based on the literature findings that will provide key insights for conducting the survey among the Bulgarian entrepreneurs;
- ➔ Elaborating a proper methodological framework and data collection process that will guarantee the establishment of reliable and valid research results;

- ➔ Providing evidence for the significant entrepreneurship determinants within the case of Bulgaria, as well as investigating the existing difference among entrepreneurs based on the key demographic characteristics (gender, firm size, business sector, years of experience, education);
- ➔ Outlying plausible recommendations for further research and possible policy solution for further improving the entrepreneurship environment in Bulgaria.

Structurally, the study is going to follow a conventional framework in order to answer the outlined research issues. To start with, the literature review has three major objectives. An overview of the entrepreneurship development process will be provided followed by an extensive review of the economic and non-economic benefits of entrepreneurship from an empirical point of view. In addition, the review will focus on the major groups of entrepreneurship development determinants. Next, the selected theoretical model will aim to summarize the major determinants and provide a list of the empirically proven determinants that have been found to be most influential. Third, the methodological framework will elaborate on the details of the research design and will provide motivation for adopting quantitative (survey based on the outlined relevant entrepreneurship determinants), as well as qualitative (interviews) data collection measures. Four, the obtained results will be critically analysed in order to outline the major entrepreneurship development factors within Bulgarian context together with identifying the existing differences among the different entrepreneurs' groups who took part in the data collection process. Based on the outcomes, relevant recommendations for future improvement will be provided, so that the weaknesses of the current entrepreneurial environment in Bulgaria are effectively tackled. Suggestions for further research will also be provided. Finally, a conclusion chapter will sum up the major findings.

## **1.2. Delimitations**

In indentifying the significant determinants for entrepreneurship development in Bulgaria, it should be noted that the study includes enterprises that are defined to be “micro”, “small” and “medium”. Using the local classification of businesses, the size division is based on the number of employees within an organization and the applicable thresholds are 10, 50 and 250 employees respectively for each group. Business organizations with more than 250 employees will be

excluded from the study. The rationale for such a decision is supported by the statistical, methodological and practical arguments.

A study by Vitosha Research (2006) shows that less than 1% of all business enterprises in Bulgaria can be defined as “large”. Hence, ignoring them from the study sample is unlikely to result in a significant loss of validity. From a methodological point of view, it can be argued that large business enterprises are quite inappropriate for the objectives of this study. More precisely, they are typically old and well established business organizations and many of them are still state-owned. In this context, large businesses in Bulgaria can be described as being bureaucratic, lacking dynamism and often enjoying some degree of market power. Consequently, they are less sensitive and responsive to the magnitude and changes in the possible entrepreneurship determinants in comparison to smaller businesses and data from them can be considered as irrelevant. Finally, data collection from large business enterprises is likely to be more burdensome as they are generally reluctant to participate in students’ surveys.

Another important delimitation originates from the quality and quantity of the available secondary data about entrepreneurial development in Bulgaria. Previous research data on the topic is scarce and often obsolete. The available sources are either from studies that examine the entire Eastern and Central European region, or date back to 1990s and very few publications focus particularly on the issues within the Bulgarian context. This can be seen as a major obstacle for revealing important insights on the topic and identify the dominating development trends that has taken place prior to the study. As a result, the description of the potential entrepreneurial development determinants in the literature review is based on partial evidence from studies that are often quite old to be completely relevant. Despite these major data availability problems, sufficient efforts to reveal the major existing issues within Bulgarian context were made. Moreover, the lack of coherent knowledge on the topic can be seen as additional motivational factor for the creation of the current study that aims to fill the existing knowledge gaps with up-to-date data.



## 2. Literature review

The literature review aims to reveal the main theoretical and empirical findings in respect to three research objectives. First, a short historical review of the literature revealing the role and importance of entrepreneurship for the overall process of economic development will be elaborated. Second, a critical discussion about the factors for entrepreneurial development will be analyzed in order to identify the main determinants affecting the business environment in Bulgaria. The final objective targets the assessment of the relevant entrepreneurship related determinants by revealing the main theoretical models and their empirical validity. The discussion is believed to provide enough evidence for the creation of an independent model of entrepreneurship determinants that will be applied in the methodological part of study.

### 2.1. Entrepreneurship impact on economic development

Assessing the role of entrepreneurship as a possible driver of economic expansion, job creation and innovation has been in the focus of attention since the 18<sup>th</sup> century. Literature on the topic is quite extensive and provides valuable insights about the topic from a theoretical and empirical point of view. Identifying the entrepreneurship contribution on economic development, however, requires an extensive and objective approach that takes into consideration all relevant pieces of evidence. Providing sufficient evidence in this respect is important due to the existing ambiguity in the dominating economic theory which largely neglects the overall entrepreneurship significance.

#### 2.1.1. Early considerations

To start with, the contribution of Cantillon (1755) is remarkable as this is the first extensive and coherent piece of research acknowledging the pivotal role of entrepreneurship in several areas of economic development. Cantillon describes entrepreneurs as risk takers who create new opportunities under a condition of uncertainty. Although such risk taking may result in “*bankruptcy or starvation*” (p.53) for the individual entrepreneur, the overall effect for economic development is quite significant with positive implications of production decision, price determination, regional development, transportation and labour economics (Cantillon, 1931).

Knight (1921) also identifies the role entrepreneurship as an engine for economic development. He argues that the role of the individual entrepreneur is to bear the market uncertainty by trying to predict changes in markets and act accordingly. In addition, Knight focuses on the substantial growth potential associated with higher entrepreneurship activity and the importance of businesses for creating a more flexible and vibrant labour market

The Austrian School scholars' contribution for understanding the role of entrepreneurship as a growth and innovation factor is significant. Schumpeter (1942) recognizes the role of technological development and innovation as being the main facilitators for economic growth by stressing on the importance of savings, labour and natural resources availability for the creation of new capabilities and economic expansion. In this context, Schumpeter supports the pivotal role of entrepreneurial ventures in the process of technological development by being "*the fundamental engine that sets and keeps the capitalist engine in motion*" (p.83). Entrepreneurs are seen as developers of new production methods, business models and markets that facilitate the process of economic development. Von Mises (1949) provides more insights on this description by emphasizing on the importance of risk taking in doing business. Successful entrepreneurs are those who can adequately manage risk, while market environment quickly eliminates the individuals who are inefficient and cannot adapt to the changing environment, thus making the system more resilient and competitive in the long run.

### **2.1.2. Reappearance of entrepreneurship**

While these early pieces of research clearly identified the positive role of entrepreneurship on economic development by fostering innovation, growth and job creation, a closer look at the traditional economic theories developed in the 20<sup>th</sup> century demonstrates that entrepreneurship has a quite insignificant role. Kirzner (1973) reviews the neoclassical equilibrium model where entrepreneurship activity is reduced to automata and the role of risk and uncertainty is completely neglected. In addition, Holcombe (2007) argues that mainstream economic analysis overlooks the role of entrepreneurship as a possible engine of growth. Indeed, such considerations are worth being accounted, since modern economic theory focuses predominantly on the role of the aggregate policy tools, such as fiscal and monetary policy, thus neglecting the role of entrepreneurship for generating prosperity at a micro level.

Despite the ambiguity originating from the neoclassical economics, recent research volume has managed to empirically demonstrate the validity of the early findings suggesting the positive role of entrepreneurship for economic development. In this respect, the link between entrepreneurship and growth, innovation, job creation and dynamics as main indicators for economic development, have been extensively examined. Empirical research includes studies focusing on the evidence from a global data, as well as ones examining the effects on a micro level.

To start with, Reynolds et al. (1999) together with Zacharakis et al. (2000) use data from the Global Entrepreneurship Monitor (GEM) project in order to make an international comparison between the degree of entrepreneurship development and economic growth. Both studies find strong positive correlation between the two variables. Zacharakis et al. (2000) estimate that a percentage point increase in the level of entrepreneurship activity results in 0.69% increase in growth rate. When accounting for the G7 countries, however, the relationship is even stronger by generating an output growth of 0.76%. Stel et al. (2005) confirm those results by examining the entrepreneurship impact in both, developed and developing countries. They find that the growth accelerating effect of entrepreneurship largely depends on per capita income. Countries with higher per capita income face larger growth contribution from the increase in entrepreneurship activity, while the evidence for developing countries remains ambiguous and even negative in some instances.

A recent study by Erken et al. (2009) focuses specifically on the entrepreneurship affected total factor productivity (TFP) in 20 OECD countries in the 1971-2002 period. It is found that entrepreneurship has a positive and significant influence on productivity levels. Geroski (1989) investigate 79 manufacturing industries in the UK where the increased number of entrepreneurial activity generates a higher number of market participants and overall productivity. In addition, evidence focusing on the developing markets is provided by Berkowitz and DeJong (2005) who investigate 70 regions in post-Soviet Russia in the period from 1993 and 2000. It is found that the regions with higher entrepreneurial activity per capita managed to achieve higher growth rates than the average national one.

Existing literature also focuses on the relationship between entrepreneurship and employment. Following the earlier theoretical consideration by Knight (1921) it should be expected that such a relationship is positive and significant. Indeed, a number of studies focusing on the examples of

several from the US and some European countries confirm this notion. Foelster (2000) examine the Swedish case between 1976 and 1995 where an increase in the self-employment rates is found to be beneficiary for the overall employment levels. Similarly, Robbins et al. (2000) investigate the case in the US between 1986 and 1995 and find that states with larger number of self-employed and small businesses tend to outperform the rest of the country in terms of employment development and productivity growth. Earlier evidence from Hart and Hanvey (1995) find supportive evidence for the beneficial role of entrepreneurship for employment development within the UK context from 1980s. However, the authors also find that higher number of small business enterprises and self-employed results in an increased employment volatility that translates in higher labour market responsiveness to the business cycle changes.

Praag and Versloot (2008) argue that entrepreneurship lead to higher employment rate not only in the short-term, but also in the long-run as a direct effect from the increased competition. Similarly to Hart and Hanvey (1995), they find that the created jobs are less secure due to higher volatility and higher firm-related risk of dissolution. In addition, Praag and Versloot (2008) suggest that entrepreneurs offer to their employees lower remuneration levels in comparison with the large and well-established companies. Interestingly, the authors confirm the lower pay phenomenon in the small firms after reviewing numerous existing empirical studies from different countries, periods and sample sizes.

Audretsch et al. (2002) argue that countries tend to have an optimal level of small firms. The initial stages of increasing entrepreneurial development are found to be positive for growth and employment. However, if the number of business exceeds the “optimal” level, growth is halted and even negatively influenced. Later, Carree et al. (2007) also provide evidence supporting that notion. Growth and employment opportunities tend to decrease in the cases when entrepreneurial activity (measured by self-employment) deviates substantially from the natural level. These empirical findings coincide with the suggestions by Stel et al. (2005) who also argue that the effect of entrepreneurship on growth differed between the groups of developed and developing countries. Therefore, it can be argued that developing countries do not benefit from further entrepreneurial development due to the excess number of businesses and self-employed agents that are above the suggested “optimal” level.

In this context, the stage of development of Bulgaria should be critically evaluated. The country shares the characteristics of a developed country, as its income per capita is much higher than the world's average and it is a part of the EU. Hence, it can be expected that further entrepreneurship development is more likely to be beneficial for its economic performance similarly to what the evidence suggests about the other developed countries. In this context, the findings by Audretsch et al. (2002), Carree et al. (2007) and Stel et al. (2005) should further support the idea for need of additional entrepreneurship development in Bulgaria.

Another important area of discussion is the possible relationship between entrepreneurship and innovation. Earliest studies belong to Jewkes et al. (1958) where small business enterprises are suggested to be more innovative than the big ones. They also play a pivotal role in the process of technological improvement and R&D. Acs (1992) addresses the importance of small firms for innovation by finding a strong positive relationship. In addition, Michelacci (2003) provides some important theoretical implications by claiming that innovation is a result of research and entrepreneurship activity. His model shows that growth tends to stagnate in an environment where entrepreneurship development is suppressed.

From an empirical point of view, various studies provide evidence about the role of entrepreneurship in the process of innovation. Prusa and Schmitz (1990) observe the PC industry and discover that almost half of the new products and services originate from the activities of new-born firms. In addition, The European Commission (2003) also acknowledges that entrepreneurship fosters higher competition among firms resulting in productivity and innovation gains which per se are a vital prerequisite for sustainable growth, better economic dynamism and consumers' welfare.

However, innovation is not equally spread among firms. Based on a series of studies within the manufacturing sector in Scotland where 300 plants were examined, Love and Ashcroft (1999) find that the number of innovations proportionally increases with the plant size. Similarly, large firms in Spain were found to be more innovative, as companies with more than 500 employees accounted for significantly more patents and R&D breakthroughs in comparison with their smaller counterparts (Huergo & Jaumandreu, 2004). Evidence from the US also suggests that larger firms introduce a greater number of new products as a part of the total product innovation (Acs & Gifford, 1996). In conclusion, while small and medium firms account for fewer new

products and technologies, entrepreneurs in general are found to be much more innovative per individual employed, thus confirming the key role of entrepreneurship in the innovation process.

The European Commission (2003) goes beyond the strictly economic-related factors in examining the benefits of entrepreneurship. It also suggests that entrepreneurship provides a personal choice that fulfils “higher order” needs, such as self-realisation and independence, which in turn boosts creativity, self-fulfillment and freedom. Praag and Versloot (2008) also argue that given individuals’ personal characteristics, entrepreneurship provides a better utility function by offering higher overall remuneration levels, job satisfaction as well as positive income volatility (in comparison to employees who are on a fixed income). The Commission provides survey results from UK which unambiguously show that employed people have in general a lower satisfaction level in comparison with the self-employed ones (The European Commission, 2003). Evidence in terms of average pay does not unambiguously show that entrepreneurs earn higher incomes on average in comparison with employees. In this context, Praag and Versloot (2008) argue that statistics on entrepreneurs’ incomes is quite unreliable due to the existing possibilities for declaring smaller than the actual income due to legislative imperfections and business owners’ incentives.

Fig. 1 Effects from entrepreneurship

<b>Factor</b>	<b>Effect</b>	<b>Publications</b>
Economic growth	Strong positive effect. 1% increase in entrepreneurial activity leads to 0.69% higher growth (and 0.76% in G7 countries); Economic dynamism	Reynolds et al. (1999); Zacharakis et al. (2000); Zacharakis et al. (2000); Stel et al. (2005)
	Increase in TFP	Erken et al. (2009)
	Higher competition and growth	Geroski (1989); Berkowitz and DeJong (2005)
Job creation	Positive effect (evidence from Sweden, US and UK, respectively)	Foelster (2000); Robbins et al. (2000); Hart and Hanvey (1995)
	Higher job volatility, lower	Hart and Hanvey (1995); Praag and

	average employees' pay	Versloot (2008)
	An “optimal”, country-specific level of growth and employment exists	Audretsch et al. (2002), Carree et al. (2007); Stel et al. (2005)
Innovation	Positive effect on innovation	Jewkes et al. (1958); Prusa and Schmitz (1990); Acs (1992); Michelacci (2003)
	Innovation increases proportionally with the firm size	Love and Ashcroft (1999); Huergo & Jaumandreu (2004); Acs & Gifford (1996)
Non-economic benefits	Fulfilment of “higher order” needs (self-realisation, independence, creativity); higher satisfaction level	European Commission (2003); Praag and Versloot (2008)

To sum up, it can be argued that the provided theoretical and empirical literature substantiates the important role of entrepreneurship for overall economic development. Recent empirical evidence supports the early theoretical considerations where economic growth, job creation, dynamism and innovation are found to be positive influenced by entrepreneurship development. Besides, it is to be emphasized that entrepreneurship provides some non-economic benefits that provide the individual with better options for personal development, freedom of choice and self-fulfillment. Therefore, based on all of the abovementioned advantages of entrepreneurship, it is worth examining what the specific Bulgarian entrepreneurship determinants are, so that proper business development policies can be pursued by the public and private sectors.

## 2.2. Entrepreneurship development determinants

As already discussed, entrepreneurship development is an essential component of economic progress and its beneficial effects have already been recognized by organizations, such as the European Union, OECD and The World Bank. Already in 2003, The EC announced its action plan for improving the levels of entrepreneurship development. The economic crisis of 2008/09 together with the sluggish recovery in the Western world has triggered significant policy initiatives in this direction (EC, 2003). In this context, Bulgaria has followed the propositions of the EC. Tax reductions, facilitating lending to private enterprises and programs for promoting

entrepreneurship among the unemployed have been launched. However, no research showing the effectiveness of these programs is available. In addition, it remains unclear what the specific determinants fostering entrepreneurial development are and whether they are targeted by the public and private entrepreneurial related initiatives.

Fortunately, theoretical and empirical literature investigating entrepreneurship development determinants is quite abundant. Scholars have managed to outline many factors with significant impact on entrepreneurship development which can be divided into several distinct groups related to the macroeconomic environment, legislative and regulatory frameworks, socio-cultural factors, access to resources and market conditions. This chapter aims to summarize and critically discuss the importance of these determinants together with providing evidence within the Bulgarian case, if possible.

### **2.2.1. Personal traits**

Literature has focused on the importance of entrepreneurs' personality traits as a possible predictor of entrepreneurship success. Mill (1984) proposes risk taking as a key factor, since entrepreneurs take greater risks in areas where they have control and competences in order to benefit from the potential opportunities. Mitton (1989) confirms the earlier conclusions in this respect. Entrepreneurs not only tolerate higher risk than the rest of society, but also play a key role in achieving business success with a focus on innovation. Ho and Koh (1992) and Robinson and Sexton (1994) confirm empirically the notion that entrepreneurs are more innovative than the rest of society. Literature also suggests that entrepreneurs have higher locus of control and uncertainty tolerance as dominating personal traits affecting the business process (Entrialgo et al., 2000).

The role of personal motivation has also been acknowledged by literature. Wood and Bandura (1989) show the unique role of personal motivation by emphasizing on the individual's related specific personal traits, risk aversion level and the role of culture. By using the principles of the cognitive psychology, they manage to explain the relationship between the above mentioned behavioural characteristics and the level of individual's motivation from a theoretical point of view. Empirically, Adeyemi and Adeoti (2006) manage to define four specific factors fostering



motivation in a study focusing on Nigerian entrepreneurs: 1) Money seeking; 2) Status seeking; 3) “Self-actualization” and 4) Low motivators who are driven by external negative factors.

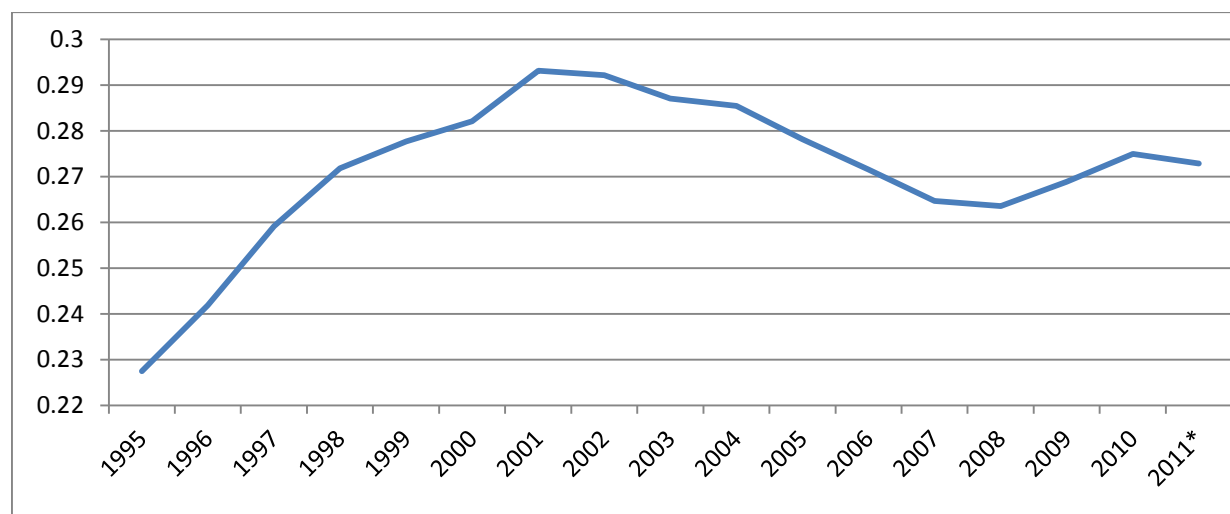
These traits are strictly personally related and literature does not provide evidence whether they have different importance among countries. Since personal traits have been identified as a major determinant for entrepreneurship, they will be addressed accordingly in the data collection process of the study. However, every generalization about the role of each specific trait in the specific Bulgarian context cannot be outlined due to the individual nature of the phenomenon.

### 2.2.2. Socio-cultural factors

Various *socio-cultural* factors are also found to influence entrepreneurship development. Early studies by Greenfield and Strickon (1986) and Stewart (1991) link entrepreneurship to society’s established norms and traditions. Researchers have proven the significant role of societal factors as a main determinant of how business is done. Hayton et al. (2002) capture all relevant socio-cultural effects in three distinguished groups: 1) impact of national culture on business creation and level of innovativeness; 2) effect of culture on the individuals’ characteristics and traits, as well as 3) the impact of cultural norms on corporate entrepreneurship. Parker (1988) goes further by establishing a link between society’s characteristics and the way it shape ethics, business formation process and growth.

Assessing the relevant socio-cultural factors in Bulgarian context is important, since culture determines to a large extend the desire for owning business, risk tolerance in society and entrepreneurship mindset. Evidence in this field is collected from a number of separate data sources, since a single comprehensive study examining the specific socio-culture aspects of Bulgaria does not exist. In general, the lack of a solid safety net and the specific individualistic culture typical for the southern countries predisposes the high percentage of self-employed in Bulgaria. The country is a leader in Europe together with some other Southern countries, such as Cyprus, Greece, Italy and Portugal with self-employed accounting for almost 30% of the total employment (EC, 2010). Figure 1 below shows the dynamics of self-employment in Bulgaria since mid 90s.

Fig. 2 Share of self-employed people of total labour force



Source: National Statistical Institute, 2012

It is worth noting that the reform towards market oriented economy created abundant opportunities for self-employment in post-communist Bulgaria. After a significant rise in late 90s, the number of self-employed remains quite stable and accounts for more than  $\frac{1}{4}$  of the total employment. The consequences of the recent economic crisis have increased population's interest to self-employment.

### 2.2.3. Resources availability

Ahmad and Hoffman (2007) argue that the availability of resources play a critical role for entrepreneurship development. Specifically, they found three decisive resources factors, such as access to capital, R&D and technology. Also, Lee et al. (2000) highlight the role of human capital and R&D in the process of technological advancement that should be seen as a necessary prerequisite for the creation of new entrepreneurial opportunities.

According to the EC (2011), Bulgaria has the lowest R&D intensity in the EU which is decreasing over time from 0.57% in 1999 to just 0.53% of the GDP in 2009. These numbers are around four times lower than the average for the community. Moreover, the contribution of the private sector to the investment in R&D is even lower-0.16% of GDP in 2009. Bulgaria also has a quite low number of new patent applications compared to the other EU countries. Evidence by Estrin et al. (2005) shows that Bulgaria is behind the other transition economies in adoption new technologies, such as Internet and mobile phone penetration by population.

Pissarides et al. (2003) investigate the business climate in Bulgaria. Findings demonstrate that capital availability is one of the biggest resource constraints for the local business owners. Banks' reluctance to lend together with high real interest rates has hindered business development. The study, however, was conducted in mid-90s when the macroeconomic environment in Bulgaria was quite different. The last Doing Business report (2012) shows that the country ranks 38 globally in terms of getting credit which demonstrates a significant improvement. The appearance of business incubators, angel investors and other alternative private forms of investment also testifies for the improved capital accessibility (EBAN, 2008).

#### **2.2.4. Macroeconomic conditions and the role of institutions**

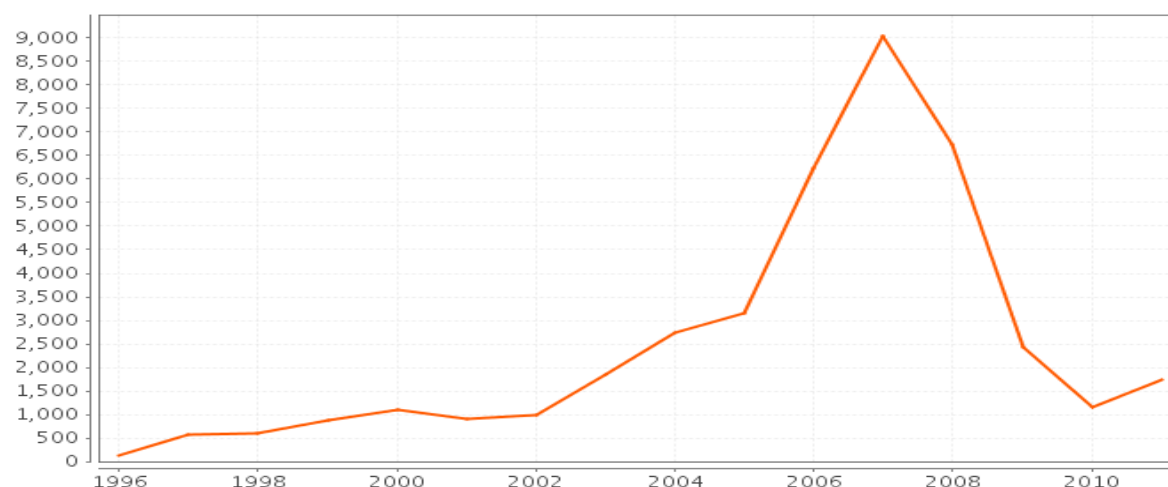
The importance of the macroeconomic conditions and markets access should also be recognized. Hoffmann et al. (2006) critically evaluate the importance of 59 possible entrepreneurship determinants. Evidence reveals the importance of numerous macroeconomic factors, such as taxation levels, interest rates, barriers for exports/imports, as well as credit availability and government incentives as major components affecting entrepreneurship activity. Authors also stress on the importance of the good legislative and administrative frameworks for the creation of a better business environment (EC, 2003). Specifically, judiciary system quality, bureaucracy levels, bankruptcy legislation, costs of doing business, difficulties of hiring/firing, as well as venture capital availability were identified as major entrepreneurship environment determinants.

It is worth emphasizing that macroeconomic and business environment factors play an essential role in forming the global entrepreneurship landscape. Empirical evidence for the applicability of the above mentioned factors is found in the numerous prestigious periodical business reports that globally investigate entrepreneurial development, such as the Doing Business report by the World Bank, as well as the Global Entrepreneur Indicator and Global Entrepreneur Index can be mentioned accordingly (Doing Business, 2012; Acs and Szerb, 2009; Global Entrepreneur Indicator, 2012).

The recent accession of Bulgaria in the EU (2007) and the country's participation in the World Trade Organization (1996) facilitate country's access to markets. The elimination of trade barriers especially with the countries from the EU which are Bulgaria's biggest trading partners has substantially improved markets access and the process of technological transfer through

increased foreign direct investments (FDI). Improvements in economic openness lead to a better entrepreneurial environment. The latest data from the Institute for Market Economics (2012) places Bulgaria 12<sup>th</sup> in the world in terms of trade freedom. The data about FDI shows a significant deterioration in the post-crisis period. This is mainly due to the burst of the house bubble. Despite the sharp decline in FDI, there is still a capital inflow in the country which is beneficial for the local business environment.

Fig. 3 Foreign Direct Investments (millions of Euro)



*Source: Bulgarian National Bank, 2012*

The quality of the institutional environment is addressed by Estrin et al. (2005) who compare Bulgaria with some other transitional economies from the Central and Eastern Europe region. The country obtains an average score in respect to easiness of starting business. The days and procedures to register a property and enforce contracts do not differ from the other countries in the panel. Some macroeconomic variables affecting the business environment, such as taxes, inflation and exchange rate stability are included, as well. The maintenance of a fixed exchange rate to the Euro, low income and corporate taxes and modest inflation rate create a stable macroeconomic environment for doing business in Bulgaria, as the country shows results similar to the leading Central European countries in the sample (Poland and Hungary).

According to the data by Estrin et al. (2005), Bulgaria substantially underperforms in key areas determining the business environment, such as the functioning of the judiciary system and the overall corruption level. In both indicators, the country's result is comparable with those of

Russia and much worse than the leaders in the sample. The physical infrastructure quality is mentioned as a major problematic area. The existence of organized crime is also a serious obstacle for doing business in Bulgaria. Figure 3 below summarizes the findings by Estrin et al. (2005).

Fig. 4 Institutional environment for doing business

	<b>Bulgaria</b>	<b>Hungary</b>	<b>Lithuania</b>	<b>Poland</b>	<b>Russia</b>
Starting a business, days	32	52	26	31	36
Starting a business, procedures	11	6	8	10	9
Enforcing a contract, days	440	365	154	1000	330
Enforcing a contract, procedures	34	21	17	41	29
Registering a property, days	19	79	3	204	37
Registering a property, procedures	9	4	3	7	6
Taxes*	77.9	74.5	82.2	74.4	90.6
Financing*	72.5	60	69.8	48	78.8
Policy instability*	70.4	57	50	55.2	84.8
Inflation*	58.6	52.1	56.4	52.9	88.2
Function of judiciary system*	41.3	8.3	36.4	39.1	29.8
Corruption*	54.3	28.5	53	39.4	50.5
Street crime*	57.8	25.1	53.8	40.3	50.2
Organized crime*	51.2	25	48.4	28.5	49.8
Infrastructure*	42.8	15.3	24.5	16.9	32.6

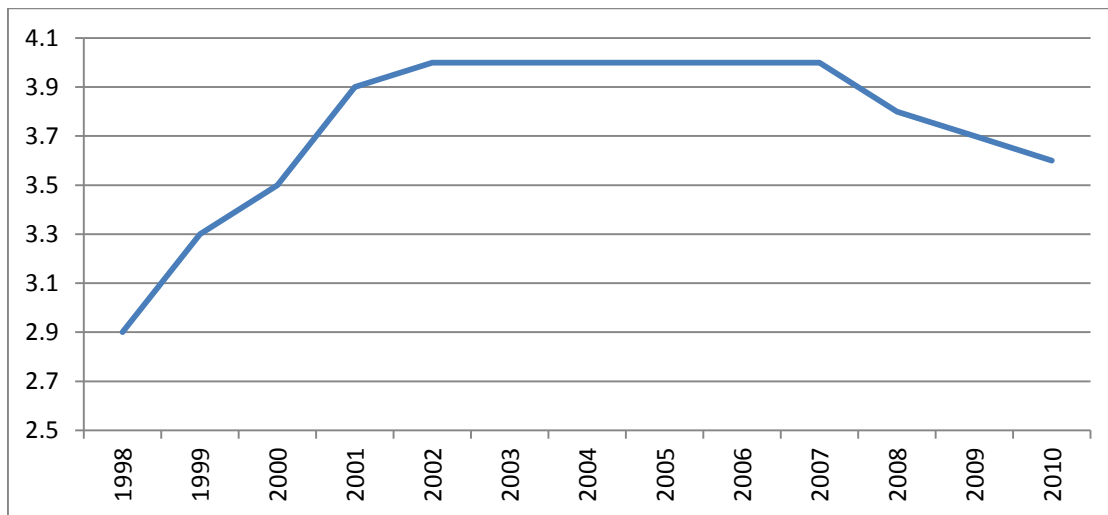
*Source: Estrin (2005) (\* shows percentage of respondents indicating moderate or major obstacle to the business environment in 2002)*

The institutional weakness continues to be a problem of a large magnitude for Bulgaria even after the accession in the EU in 2007. The country is heavily criticized for its chronic high corruption level and inability to halt the organized crime. Although some recent progress has been observed in improving the local infrastructure, high degree of political stability and lowering its tax rates to the lowest levels in the EU, Bulgaria's institutions remain the country's Achill's heel that adversely affect business environment.

A problem of particular importance is the level of perceived corruption. Transparency International conducts annual studies assessing the spread of corruption in Bulgaria since 1998.

These assessments focus on corruption among public institutions and data is gathered from independent studies that collect responses from citizens, business owners and risk analyzers. Corruption is evaluated through the use of an index from 0 to 10, where higher index values indicate less perceived corruption. Figure XXX below represents the dynamics of corruption perception in Bulgaria from 1998 to 2010. Initially, the index has an extremely low value of 2.9 but steady progress is achieved in the following years. The improvement, however, stagnates around the level of 4 between 2002 and 2007. Despite the accession in the EU and the expectations for further improvement in the quality of institutions, recent data indicates that the corruption problem in Bulgaria escalates. Currently, the country is ranked # 73 in the world, far behind the average values of the EU (Transparency International Bulgaria, 2013).

Fig. 5 Perceived corruption in Bulgaria



*Source: Transparency International Bulgaria, 2013*

So far, the discussion focused on the main groups of determinants of entrepreneurial development. The review aimed to show not only the main theoretical factors, as described in literature, but also to present empirical evidence specifically related to Bulgarian case. While the provided data helps in understanding how the above mentioned determinants affect the entrepreneurial environment in Bulgaria, their significance remains unclear. Therefore, analysis will aim to present a plausible model showing entrepreneurship determinants' degree of importance. The next chapter critically evaluates the existing models and aims to provide argumentation for the application of the most relevant theoretical framework.

### 2.3. Model

The literature review so far has provided a list of the most influential determinants for entrepreneurial development from a theoretical point of view. In addition, the discussion aimed to reveal what empirical literature suggests about the performance of these determinants within the Bulgarian case. Although important insights about the business environment in Bulgaria were revealed, the provided evidence does not evaluate determinants' individual level of significance in local context. Recent theory on entrepreneurship development has focused on systemizing the indicators according to their relevance. It is believed that by recognizing the main groups of determinants, it will be easier to assess the business environment and effectively promote policy initiatives that specifically target the main areas of relevance for entrepreneurship development. In this context, several main frameworks have been developed in an attempt to categorize and select the main entrepreneurship development determinants. The theoretical work of Audretsch et al. (2002), combined with the policy considerations provided by Lundstrom and Stevensen (2005) and Hoffmann et al. (2006) were taken into consideration and further systemized in a single model by Ahmad and Hoffman (2007).

The theoretical framework provided by Ahmad and Hoffman (2007) is worth being discussed, as it provides a coherent approach in understanding entrepreneurial performance by taking into account all previous major pieces of research in the field. According to the model, there are three main stages that affect entrepreneurial performance: 1) Determinants, 2) Entrepreneurial performance and 3) Impacts. In the context of this study, the authors' determinants division provides interesting insights, as they include 35 determinants into six different categories. The model results largely confirm the findings from the literature review, as determinants are related to areas that have already been discussed: regulatory framework, R&D and technology, entrepreneurial capabilities, culture, access to finance and market conditions. Figure 6 provides an overview of Ahmad and Hoffman's entrepreneurship determinants.

Fig.6 Determinants of entrepreneurial development

Determinants					
Regulatory Framework	R&D and Technology	Entrepreneurial Capabilities	Culture	Access to Finance	Market Conditions
Administrative Burdens for Entry	R&D Investment	Training and experience of entrepreneurs	Risk Attitude in Society	Access to Debt Financing	Anti-Trust Laws
Administrative Burdens for Growth	University/ Industry Interface	Business and Entrepreneurship Education (skills)	Attitudes Towards Entrepreneurs	Business Angels	Competition
Bankruptcy Regulations	Technological Cooperation Between Firms	Entrepreneurship Infrastructure	Desire for Business Ownership	Access to VC	Access to the Domestic Market
Safety, Health and Environmental Regulations	Technology Diffusion	Immigration	Entrepreneurship Education (mindset)	Access to Other Types of Equity	Access to Foreign Markets
Product Regulation	Broadband Access			Stock Markets	Degree of Public Involvement
Labour Market Regulation	Patent System; Standards				Public Procurement
Court & Legal Framework					
Social and Health Security					
Income taxes; Wealth/Bequest Taxes					
Business and Capital Taxes					

Source: Ahmad and Hoffman (2007)

Ahmad and Hoffman (2007) extend the findings from the literature review by adding some additional potential entrepreneurship determinants, such as immigration, stock market performance, broadband access, etc. Their contribution in understanding the determinants of entrepreneurial development is significant and widely recognized. At the first place, the study was created as OECD piece of research and so after its publishing, the model occupied a central place in all entrepreneurship related initiatives of the organization. In addition, the relevance of the theoretical framework is also recognized by the EU policy makers who use the model as a milestone in designing various policies in the field (Eurostat, 2012). As a result, it should be emphasized that Ahmad and Hoffman's model has gained a universal recognition as a major theoretical framework for investigating entrepreneurial development in the most advanced industrialized countries.



Despite the universal recognition of Ahmad and Hoffman's model by organizations, such as OECD and the EU, there are several aspects that make it inapplicable in the current study. The main problem is related to the large number of determinants that is problematic, if a focused questionnaire is to be constructed. From a practical point of view, respondents are likely to be confused and reluctant to answer to a bulky questionnaire with more than 40 questions when the demographic questions are included. The model fails to account for determinants' relevance and significance at a local level. It is simply a framework based on the experience in the OECD countries which the richest in the world, thus ignoring the specific experience of catching-up countries like Bulgaria.

Therefore, it is obvious that addressing the specific case of measuring the entrepreneurship development determinants in Bulgaria cannot be done by simply relying on the general model provided by Ahmad and Hoffman (2007). Instead, two additional steps have to be completed: 1) Assessing determinants' empirical significance and 2) Adjusting the model so that it reflects the specifics of the Bulgarian case. The study by Arboleda et al. (2009) provides some insights in respect to the first objective. They study entrepreneurial environment and argue that focusing on the entrepreneurship determinants' strengths and weakness per se "*do not immediately reveal which policy areas are likely to have the greatest impact when improved*" (p.41). Hence, determinants' overall effect is highly likely to vary depending on the context.

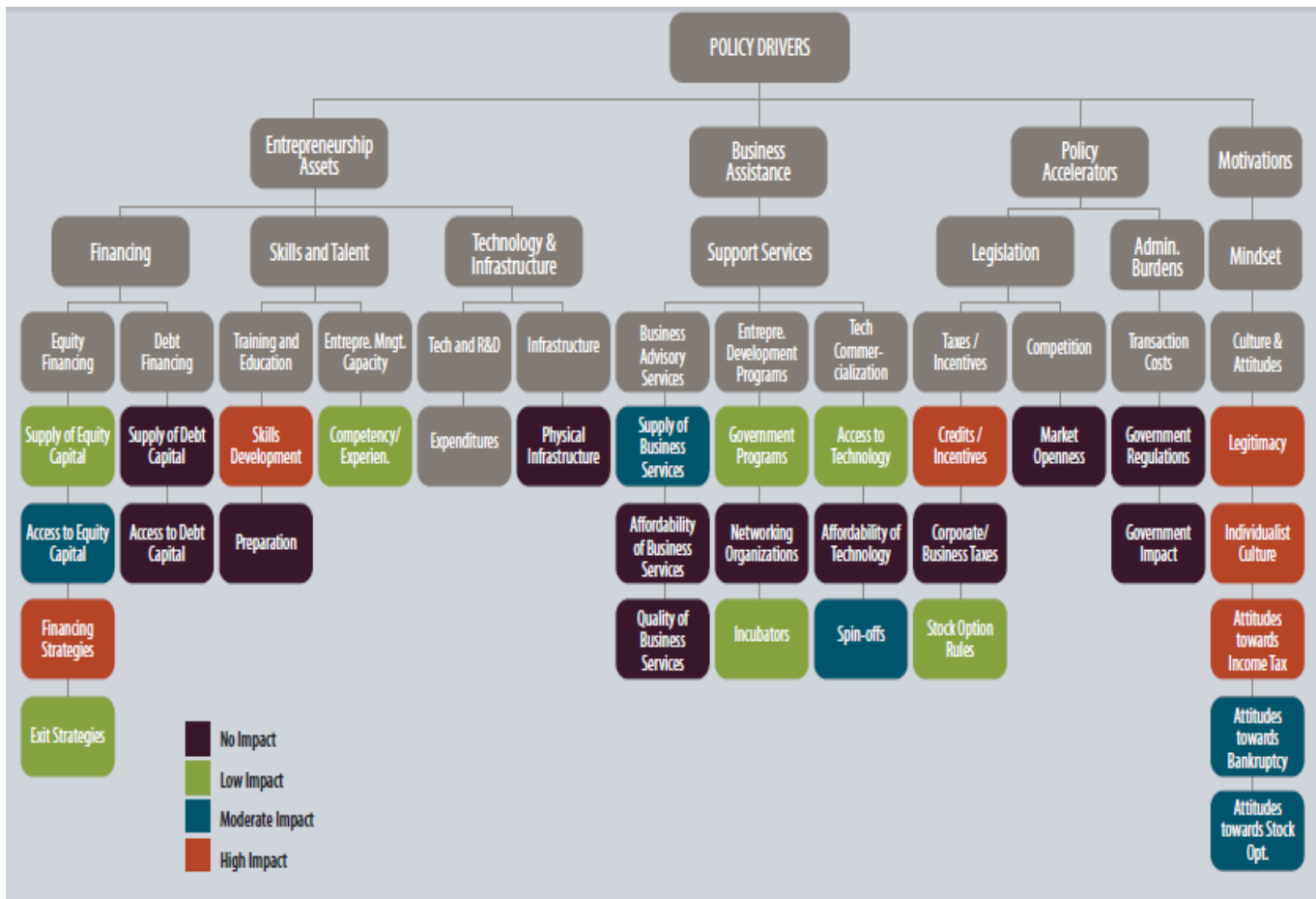
Understanding the individual's context is essential, as context provides different pathways for business development. Consequently, a different set of determinants is likely to be of importance depending on the nature of business. Arboleda et al. (2009) argue that there four distinct contextual frameworks in which a business evolves. These options include 1) *Anchor firm model* in which a business is developed due to the existence of a well-established firm which has the capacity to provide human capital and know-how to the new firm; 2) *Event driven model* in when businesses are created as a result of macroeconomic or other type of shock that provides incentives for choosing the entrepreneurship path of development; 3) The *local hero* scenario in which a distinct local entrepreneur plays a supportive role for other entrepreneurs in the area, as well as 4) The classic *Silicon Valley model* in which a set of pre-existing set of resources leads to the entrepreneurship development. Arboleda et al. (2009) argue that the variations in the pathways play an essential role in determining what motivates businesses creation at the first

place. Objectives, financing tools and business acumen involved in the entrepreneurial activity tend to be also influenced by the pathway.

The existence of different pathways of entrepreneurial development that shape the context and determinants' importance for each single business are further taken into account by Arboleda et al. (2009) who incorporate significant changes in their methodological design. First of all, the study relies on the data obtained from 22 countries including developed and developing countries, as proposed by The Danish Agency for Business and Housing; the Danish Ministry of Economic and Business Affairs; FORA (the Danish Center for Economic and Business) which were the initiators of the project. By including developing countries, such as China, India, a bigger representativeness and relevance of the study is expected compared to just relying on the OECD sample. Secondly, the different pathways of entrepreneurship development are addressed with a creation of a coherent four-scaled assessment procedure that aims to objectively assess each factor's significance. Finally, the study employs a robust statistical approach by measuring whether there is a statistically significant correlation between survey's results and the actual entrepreneurial performance. As a result, the highest relevant determinants can be outlined.

Arboleda et al. (2009) make their evaluation based on global data and results can vary among the different countries. The authors' contribution remains significant, as they manage to assess the determinants based on actual empirical data. Although slightly different set of determinants are used in comparison to Ahmad and Hoffman's model, the results remain highly applicable in the context of the investigated topic. Fig. 7 below summarizes the determinants groups and the relevance of each factor. In general, the determinants which are categorized as being with "high", "moderate" and "low" impact will be taken for further consideration. The "no impact" determinants will be excluded from further analysis due to their irrelevance at empirical level. In this context, it is worth noticing that the motivation related determinants play a quite important role in general, while others, such as corporate/personal taxes, governmental regulation, physical infrastructure and debt financing remain negligible.

Fig.7 Empirical evaluation of determinants' significance



Source: Arboleda et al. (2009)

The Arboleda et al. (2009) results provide a convenient framework that can be effectively used for the survey construction. The number of indicators is reduced by eliminating the less relevant factors. Despite these obvious improvements in the model, however, there are some specific factors that are closely related to the Bulgarian case which must be taken into account. For instance, stock options role and attitude towards stock options barely exist in Bulgaria and the will be removed from the model accordingly. The second consideration is related to the institutions' quality which tends to be chronically low in Bulgaria, as revealed earlier. In addition, other relevant areas, such as infrastructure quality, judiciary system functioning, corruption level and crime rate must be included in a model that addresses the specific entrepreneurial determinants in Bulgaria. This suggestion contradicts with the previous findings of Ahmad and Hoffman (2007) and Arboleda et al. (2009) who do not treat these determinants as significant for

entrepreneurship development. However, focusing more closely on the institutional quality in Bulgaria is justified by the evidence from the literature review as an important area of importance for the local business environment.

Consequently, a new model that takes into account the specific Bulgarian context of entrepreneurial development can be created. The model is based on the findings of Arboleda et al. (2009) and incorporates some additional institutional related determinants. Fig. 8 provides more insights on the model characteristics.

Fig. 8 Potential entrepreneurial development determinants in Bulgaria

<b>Determinants' category</b>	<b>Determinants</b>
<i>Culture and personal motivation</i>	Legitimacy (Status), Individualism, Attitude towards income tax, Attitude towards bankruptcy
<i>Institutional and regulatory framework</i>	Perception of corruption, Perception of crime, Private credit incentives, Public credit incentives, Judiciary system functioning, Exit strategies
<i>Resources</i>	Supply of equity capital, Access to equity capital, Incubators, Physical infrastructure, Supply of public business services, Supply of private business services, Access to technology, Government programs, Previous entrepreneurship experience, School/University related skills acquisition, Financing strategies

Thus, the number of determinants is reduced to 21 in three major categories: culture and personal motivation, institutional and regulatory, as well as resources. The selection is done by taking into consideration the empirical evidence by Arboleda et al. (2009) and critically evaluating the specific factors related to the Bulgarian entrepreneurial environment. By carefully eliminating the irrelevant factors, the number of determinants has been reduced, so that it can be easily applied in a questionnaire format. It should also be mentioned that the table captures the results of a long research process that has analyzed the pivotal role of entrepreneurship for economic development, the theoretical and empirical evidence in respect to entrepreneurship development determinants, as well as the factors that make the Bulgarian case different. By being empowered with a clear and coherent theoretical framework, the study can now proceed with explaining the methodological design behind the actual survey.

### 3. Methodology

This chapter focuses on the various aspects of the research design. It is focused on the choice of philosophical approach, research approach and means of data collection, sample size and design, questionnaire design, as well as the relevant hypotheses that can be constructed in relation to the research objectives. In building a plausible methodological framework, a single “right” answer does exist. Instead, the choice of methodology requires a thorough analysis of the objectives and a critical evaluation of the various options existing in satisfying the outlined objectives. Hence, the chapter aims to elaborate more on the possible methodological solutions and justify the choices made in respect to each of the main components.

#### 3.1. Philosophical approach

There are different philosophical frameworks that make a sufficient attempt to explain the forms and means through which a valid methodological process is created. No matter which epistemological framework is used, the core of the discussion is more or less boiled down to the central role of the observer (researcher) as a knowledge creator. According to Arbnor & Bjerke (2009), the *analytical*, *system* and *actors* views comprise the spectrum of alternatives by which a researcher can view reality and create knowledge.

The analytical view is built on the key assumption that knowledge is independent from the sole observer and explaining reality takes place by verifying facts that contribute to the “big picture”. If an analogy should be used to describe this process, reality should be seen as a half-built house and every new verified fact place the role of a new brick that contributes to the big construction. In this context, it should be mentioned that the analytical view heavily relies on applying previous knowledge about the investigated phenomenon. New findings contribute to the already established theories and models, although instances of new theory creation also take place. When a new fact is to be verified, a hypothesis is created and tested by using the collected data. Besides, the analytical approach requires, in almost all instances, that the new pieces of evidence are linked to a pre-existent theory (Arbnor & Bjerke, 2009).

Similarly, the system view relies on the assumption that reality consists of facts but the analogy with the house cannot be applied in this case. This is the case, since system view does not apply

the summative notion about reality. Instead, facts create “systems” that are explained largely depending on the context. Consequently, the system approach differs from the analytical one which relies on interpretations based on strict and clearly defined models and theories when analyzing a given phenomenon. Under the system approach, the researcher’s main objective is to improve the functioning of a given “system picture” by adding “finality relations” that aim to explain phenomena within a specific context and according to a specific purpose. In general, the system approach a higher degree of flexibility is allowed, so that the research can draw various analogies and links between the investigated case and previous findings (Arbnor & Bjerke, 2009).

Finally, the actors view substantially differs from the other two approaches, as it assumes a reality which depends on the observer’s view. Reality is a social construction that cannot exist independently. On the contrary, it is a common belief from a single individual or a group of individuals. In this context, reality also consists of facts which are summative, similarly to the other two approaches, but these facts can be objective and subjective, depending on the individual’s interpretation. In addition, reality is prone to constant changes over time with a regular actualization of the facts depending on the observers’ view point alternations. As one can suggest, structured epistemological frameworks and model are not applied under the actors approach (Arbnor & Bjerke, 2009).

The research paper is going to apply the analytical stance suggested by Arbnor & Bjerke (2009). Following the above mentioned short description of the analytical view, it becomes evident that its characteristics are strikingly similar to the positive philosophical approach. Positivism is the predominant social science philosophical approach currently. In short, positivism applies a strict theoretical framework and employs knowledge from previous research in a given field. The main view of the world is for “objective” and “factual” reality where the direct cause and effect relationship holds. Generalizations and inferences from a sample to the overall population are common. Hypotheses testing and relying on existing theoretical frameworks and models is also common (Orlikowski & Baroudi, 1991).

Despite the minor fluctuations in the definition and meaning of the applied approach (whether it is positivism or the analytical approach suggested by Arbnor & Bjerke (2009)), the meaning of the applied philosophical approach in the current study is unambiguous. Already, the literature review focused on the main findings and models of entrepreneurship development determinants

from the existing literature. Based on the established framework, the study aims to generate additional knowledge about the phenomenon within the Bulgarian context. Hypotheses testing and making inferences from a sample to the general population of entrepreneurs in Bulgaria will be applied accordingly. The generated outcomes will be critically analyzed through the prism of the existing theory and knowledge in the field. Finally, it should be emphasized that the positivist stance/analytical approach requires the application of a clear and highly structured methodological framework. Hence, the chapter will proceed with the clarification of the research methods and approach, data collection and sampling characteristics, hypotheses construction and relevant issues related to reliability and validity.

### **3.2. Data collection and research approach**

As Arbnor & Bjerke (2009) explain, there are two ways of collecting data- secondary and primary. Secondary data is obtained by using previously collected material, while the primary approach requires the collection on new data. The study implements both types of data collection. The literature review and the examined models of entrepreneurship development determinants should be seen as clear evidence of secondary data collection. On the contrary, the main objective of the research paper is to collect and analyze primary data type by approaching a sufficing number of Bulgarian entrepreneurs with a use of a survey. Thus, both methods of data collection are effectively applied in the study.

When using secondary data type, the problems of compatibility and trustworthiness may occur. The compatibility issue emerges when previously collected data was created for the purposes of another research and often with a quite different objective. In this context, data needs further verification in order to be suitable for the purposes of the current research. Trustworthiness is linked to reliability. Modern technology allows for an easy access to a wide range of data sources but their quality and objectivity is often compromised (Arbnor & Bjerke, 2009). The issues of compatibility and trustworthiness are appropriately addressed in the creation of the literature review. Data sources from prominent academic journals and other scientific publications have been collected. In addition, the use of online sources is quite limited, as they are often biased or inaccurate. The problem of compatibility has been addressed accordingly by selecting relevant literature that can contribute in better understanding the nature of entrepreneurship and the

overall progress and evidence in clarifying the entrepreneurship determinants in a global perspective.

The choice of primary data is supported by the objective to discover new pieces of knowledge, namely, the specific entrepreneurship development determinants in Bulgaria. Since, previous evidence is quite scarce and incomplete, the primary data collection aims to reveal new insights on the issue, so that a scientifically supported and thorough answer is provided within the Bulgarian context. The application of primary data insists rigorous and objective methodological framework and all details about the primary research process are to be presented and justified, accordingly.

In respect to the choices of primary data collection, the study applies a mixed approach. Data about entrepreneurial determinants' importance will be collected by quantitative methods: a survey. Questionnaire is a tool that allows fast access to a large sample of respondents at a low cost. By implementing a survey, respondents' opinions about the already outlined potentially important entrepreneurial determinants can be identified and tested for importance. Hence, the questionnaire results have a crucial role for testing the chosen hypotheses in this research paper.

One of the major disadvantages of the quantitative data collection process is its inability to gather in-depth information that can reveal respondents' deeper attitudes towards the questions of investigation. Moreover, the survey is built based on close-end questions that limit the opportunity of revealing key insights which are of importance for the participants but are overlooked in the survey design. Having in mind these limitations, the study also applied qualitative data collection method: personal interviews. Essentially, the interviews will closely follow the topics from the questionnaire. However, participants will be given more space to express their opinions.

The rationale for applying qualitative methods not only originates from the objective of collecting in-depth information, but is also justified by the need of identifying whether interviews' results will confirm those from the survey, or, perhaps, new insights can be added. In addition, respondents will be given the opportunity to express their recommendations for further improvement of the entrepreneurship environment in Bulgaria. This information can effectively



be used later in the study when policy solutions and ideas for better business framework will be proposed.

### 3.3. Survey design and sample size

The choice of appropriate sampling size and design is essential for generating data that is as reliable as possible. The necessity of flawless sampling design comes from the fact that the information will be obtained from a sample and inferences about the entire population of entrepreneurs in Bulgaria will be made based on the small group of respondents. In this context, the sample characteristics are expected to match as close as possible the populations' ones in order to reach reliable outcomes.

The non-probability sampling will be used in this particular case because of its high degree of applicability in similar cases. The technique suggests that each selected respondent in the sample has an unknown probability of being selected for survey participation. In addition, the non-probability sampling is an attractive choice when one or more elements from the population need to be excluded from the sample (OECD, 2005). In this particular case, the large-scale businesses will not take part in the survey due to reasons explained in the delimitations.

Among all different variations of non-probability sampling, the quota sampling will be applied in this survey. The core idea of quota sampling is to produce a sample that matches the population's characteristics in at least one component. Thus, it is believed that further matching can be achieved, so that the overall sampling characteristics fit quite well with the population's ones (Doherty, 1994). In addition, quota sampling is widely used in social science research, as it manages to produce reliable samples at a low cost. A possible disadvantage originates from the researcher's inability measure the sampling error (Black, 1999). Such a consideration, however, remains minor and with negligible negative consequences for the sampling design. Besides, a perfect sample design does not exist and one should accept that each method has its strengths and weaknesses.

The current study will apply a matching technique that takes into account the demographic characteristics of respondents. Unfortunately, data about Bulgarian entrepreneurs' gender and age does not exist. Nature of business and years of experience are also inapplicable due to data scarcity. The only plausible solution remains to create a sample based on firms' size, as a data

provided by Vitosha Research (2006) shows that the exact criteria and number of business enterprises in each category.

Fig. 9 Size criteria and number of Bulgarian private enterprises

Size	Micro	Small	Medium
Number of employees	Up to 10	Up to 50	Up to 250
Number of companies	195,780 (90.43%)	17,388 (8.03%)	3,321 (1.53%)

*Source: Vitosha Research, 2006*

Although the data is relatively old (2006), it provides valuable insights about the structure and number of business enterprises in Bulgaria. The great majority of businesses are in the micro category (more than 90%), while the small and medium categories account for 8.03% and 1.53%, respectively, of the total 216,489 private business enterprises in Bulgaria (Vitosha Research, 2006). A similar distribution of respondents will be targeted in the survey sample, as well, so that the sample follows population's characteristics in terms of size.

Bigger samples generate results closer to the ones that otherwise would be achieved, if the entire population participates in the survey. To increase the sample size indefinitely, however, is not a plausible solution, since there are serious resource limitations (time, funds, reaching a higher number of respondents) that restrict such an opportunity. For the purposes of the particular study, a minimum sample of 100 respondents has to be achieved. According to the proposed distribution, 90 of the respondents should be involved in micro size business enterprises, 8 from small ones and only 2 from medium-sized businesses. Respondents will be accessed via various means, such as gaining access to specific entrepreneurs' organizations (Launch Hub, Open Coffee Sofia), as well as by fully utilizing the existing researcher's contacts within the entrepreneurship environment in Bulgaria. The potential respondents will be approached entirely online by sending questionnaires individually.

### 3.4. Questionnaire structure

The questionnaire will be divided into two parts. The first part will entirely focus on the demographic profile of respondents by collecting data about their gender, education, years of business experience, nature of business and its size. The collected demographic data will be of help in accomplishing two main objectives. On the one hand, accounting for respondents'

demographic characteristics helps in controlling the sample design and satisfy the abovementioned quota sampling criteria. On the other hand, demographic data helps in understanding whether the different demographic groups of Bulgarian entrepreneurs value homogeneously the outlined entrepreneurship development determinants. If statistically significant differences exist between the various demographic groups, analysis with valuable insights for further recommendations and areas of possible research can be provided.

The second part of the questionnaire represents its core, as it includes the outlined possible entrepreneurship development determinants from the literature review. As shown in fig. 7, three main determinants' groups were identified after reviewing the existent literature, theoretical models and the specific empirical evidence from Bulgaria. The applied critical approach has helped in identifying determinants that are specifically related to the environment in Bulgaria, as well as eliminating a number of less relevant ones. Thus, the total number of determinants does not expand indefinitely and keeps the questionnaire reasonable in size, information intensive and user-friendly, as its submission requires less than five minutes on average. The complete version of the questionnaire is presented in appendix A.

All questions are close-end ones. Depending on the specific demographic question, respondents are provided with a variable number of options to answer. In the second part, however, a uniform approach is chosen with five options ranging from “strongly disagree” to “strongly agree”. The applied scaling strategy is widely spread in social science research and is familiar as Likert scaling. It is often used when respondents need to show their attitude towards a given problem and represents a polar structure with two clearly outlined extremes and a neutral response option in between. The applied Likert scaling is easy to understand by respondents and it also allows for easy computations with standard statistical programs (Mogey, 1999).

### **3.5. Hypotheses**

As already explained, Likert scaling will be applied when respondents are to answer to the questions related the possible entrepreneurship determinants in the second half of the questionnaire. Since Likert scaling varies from 1 to 5 (in this particular case) the average value of the variables and variance can be easily obtained. By knowing the means and variances of the variables based on 100 respondents, the analysis of variance (ANOVA) test can be applied. The

one-way ANOVA test compares the means and simply provides an answer, if these means are statistically different. Therefore, the null hypothesis can be formulated, as follows:

$$H_0 = \mu_1 = \mu_2 = \mu_3 = \dots = \mu_{21}$$

where  $\mu$  is the group population mean and  $k$  (1,2,3,...,21) is the number of each group. The alternative hypothesis states that there is a statistical significant difference in the mean values of at least two groups. There are three hypotheses that are to be investigated in this research paper:

1) Entrepreneurship development determinants:

$H_0$ : There is no statistically significant difference between the entrepreneurship development determinants.

$H_1$ : There are statistically significant differences between the entrepreneurship development determinants.

2) Variations in terms of gender:

$H_0$ : There is no statistically significant difference in entrepreneurs' responses based on gender.

$H_1$ : There are statistically significant differences in entrepreneurs' responses based on gender.

3) Variations in terms of years of experience:

$H_0$ : There is no statistically significant difference in entrepreneurs' responses based on years of experience.

$H_1$ : There are statistically significant differences in entrepreneurs' responses based on years of experience.

If the results from the one-way ANOVA test are statistically significant, the null hypothesis is rejected and the alternative one is accepted. It is important to mention that ANOVA is a quite general test and it does not provide additional information which specific groups are different than the other. A post-hoc test is of need in order to determine that and Tukey post-hoc is the most applicable choice among all existing opportunities. Tukey post-hoc test provides multiple comparisons between the groups, so it is easy to identify which entrepreneurship development determinants have a different score.

Simply running one-way ANOVA test and using the Tukey post-hoc, however, is not sufficient. A number of assumptions should be satisfied in order to use one-way ANOVA and, if these assumptions are not satisfied, there is a high risk of receiving non-valid results. In general, there are three major assumptions that need to be satisfied: 1) The dependent variables should be approximately normally distributed for each category; 2) Variance homogeneity between the independent groups should be achieved and 3) There is independence of cases. In terms of normality, however, it should be mentioned that the one-way ANOVA remains quite robust against normality violations (Laerd Statistics, 2012). Having in mind the small sample size, such robustness will provide more flexibility even if their variables' distributions are skewed. The SPSS statistical package provides the necessary tools to check whether these assumptions hold and these specifics will be taken into consideration while applying the one-way ANOVA test in the work process.

It is worth mentioning that the demographical variables from the first part of the questionnaire are helpful not only in the process of sample design (by controlling for firm's size) and gather general respondents' related information, but also it provides an opportunity to test whether responses vary depending on gender, years of experience, nature and size of business. It is particularly interesting to determine, experience and nature of business change responses and what can trigger such a difference. In terms of business size, it is quite inappropriate to suggest such a test, since there are disproportional differences between micro businesses and small/medium ones in the sample. In order to create rigorous statistical testing, a minimum number of respondents is required, which, however, is far from being satisfied in terms of business size. Again, one-way ANOVA analysis will be proposed when analyzing the demographic differences based responses.

### **3.6. Interviews**

In order to meet the objectives of the study and collect sufficient information that will outline the significant entrepreneurial determinants in Bulgaria, qualitative data collection methods should be applied, as well. The sole reliance on quantitative measures (survey) per se has its advantages, such as access to a large pool of respondents who can be accessed fast and at low cost. The quantitative methods, however, limit the possibility of reaching in-depth information that can reveal entrepreneurs' core motives, intentions and attitudes towards the various issues of

examination. Moreover, the application of a survey cannot reveal respondents' opinions for the possible improvements of the entrepreneurial environment in Bulgaria.

Following the above mentioned argumentation, the current study aims to also include qualitative methods in the data collection process. Among all possible qualitative techniques, interviews were chosen as the most suitable approach. The preference for interview over the alternative qualitative methods (focus groups and others) is justified by the higher degree of focus on the each individual interviewee, as well as ensuring privacy which is necessary when in-depth business related information is gathered. The rationale behind implementing qualitative data collection approach is justified by three major objectives.

To start with, it will be intriguing to analyse whether interviews outcomes confirm the results from the survey or, perhaps, some new meaningful insights can be suggested. Second, the approached in-depth information will be able to reveal some hidden motives and attitudes that otherwise cannot be found by simply relying on the survey information. Finally, interviewees will be asked about their ideas and suggestions for further improvement of the entrepreneurial environment in Bulgaria. These suggestions can be effectively used, together with the survey results, in the recommendation chapter of the study.

In contrast to the survey, interviews require a much smaller sample size to gather sufficient data and reaching objective conclusions. The qualitative nature of this data collection method suggests that the focus will be put on the possible implications of the provided in-depth information, rather than targeting high sample size. Hence, the study conducted only four interviews with respondents with different demographic characteristics, business experience and market fields. Respondents' diversity is a key prerequisite for gathering broader data set that would reveal different points of view in terms of entrepreneurship development in Bulgaria.

Structurally, the interview questions aim to collect brief background data, as well as key insights in several major areas of interest. Similarly to the survey, interviews address respondents' opinions about: 1) their personal and professional motivation for being entrepreneurs; 2) opportunities for acquiring external financing (private and public); 3) government and public institution's role and quality; 4) effectiveness of the government programs and initiatives; 5) private organisations and incubators' role. More importantly, respondents were given the

opportunity to leave their further remarks and suggest a number of recommendations for improving the entrepreneurial environment in Bulgaria.

Full transcripts of the interviews are presented in appendix B. Transcripts have not been edited. The only change that is introduced affects participants' answers. Since the standardized/structured interview framework is applied, interviewees face the same questions. This allows for representation of the interviews results in one large structure, where all four responses are put together after each question. This strategy enables for an easy comparison of the responses. In addition, following the conventional coding techniques, several major coding categories have been established and later applied in the interviews analysis. These coding categories comprise the entrepreneurship determinants and other relevant words and phrases that provide valuable hints for understanding the problem. The full results are presented in fig. 21 in the analysis part of the study.

### **3.7. Reliability and validity**

Achieving reliability and validity of the obtained results is a key prerequisite for presenting plausible research results. The issue with reliability is of key importance not only in terms of the accessed data sources quality, but also in achieving results' validity. The study has heavily relied on secondary data sources, such as books, journal articles and various online publications especially in the construction of the literature review and the model. While secondary data sources can be seen as a quick and straight-forward way of obtaining the necessary information, data reliability is often an issue, especially when some sources are likely to provide misleading and even wrong information. In order to effectively tackle the potential problem, efforts were made to incorporate only sources with high and proven reputation. As a result, data sources from popular journal articles and books were preferred and the usage of online publications, which are often inaccurate, was purposefully limited.

Internal consistency is another important ingredient that determines data reliability. Internal consistency focuses on the answers from the survey and evaluates whether they are reliable. The measurement unit is the so called Cronbach's alpha which is a statistic calculated from the pairwise correlations that exist between the different entrepreneurial determinants. In general, very high values of Cronbach's alpha (0.95 or higher) indicate that the included items can be

entirely redundant. Values from 0.7 to 0.95 are considered good as they indicate that each of the included variables contribute with unique information, although some relatedness may exist between similar items (Cortina, 1993).

The measure of Cronbach's alpha in this particular case show a value of 0.813. Such a result demonstrates a very satisfactorily rate of internal consistency of the survey, which strengthens the overall data reliability. In addition, when running the reliability check on the SPSS software, case processing summary is also included in the analysis. Figure 10 below shows the outcomes of this reliability measure. Once again, 98% validity of the outcomes is achieved which unambiguously testifies in favour of the high data quality.

Fig. 10 Case processing summary

Case Processing Summary			
		N	%
Cases	Valid	99	98,0
	Excluded <sup>a</sup>	2	2,0
	Total	101	100,0
a. Listwise deletion based on all variables in the procedure.			

*Source: SPSS*

Few words should be added in respect to validity. The achieved high degree of reliability does not necessarily translate in obtaining validity. In this particular case, validity problems are likely to originate from two specific sources. On the one hand, model overreliance often creates results that fit the model assumptions but substantially diverge from reality. After a careful consideration and analysis of the already existing evidence, the study has applied the proposed model considerations in a way that takes into account the specific Bulgarian context. Hence, a more liberal and case-specific approach was adopted instead of blindly relying on the model propositions. This approach is believed to achieve a dual objective: 1) to apply the model propositions that show the empirically proven entrepreneurial determinants and 2) to take into account the specific Bulgarian characteristics, so that the results are valid in the local context.

On the other hand, the sample of survey participants has to be constructed in such a way, so that the population characteristics are more or less well presented. Thus, survey results will be as



valid as possible, since their representation will be based on a legitimate sample that is similar to the population's features. The next chapter broadly discusses the demographic profile of the respondents. Evidence shows that participants' characteristics closely follow the population ones in all selected demographic variables. These results are encouraging for achieving high results validity, despite the relatively small sample size.

## 4. Results

The objectives of this chapter are to present in details the outcomes of the survey and the interviews. The procedure includes presenting general descriptive statistics based on the survey data, as well as investigating in details the differences between the various groups of entrepreneurs depending on their demographic profile. In addition, the interviews outcomes will also be presented in this chapter following the standard way of analysis that requires transcription and coding. A major objective of the chapter is to present the obtained results in the context of the elaborated theoretical framework. Furthermore, inferences supported simultaneously by the two data collection methods (survey and interviews) will be prioritized in order to draw fully objective and well-supported conclusions.

### 4.1. Survey results

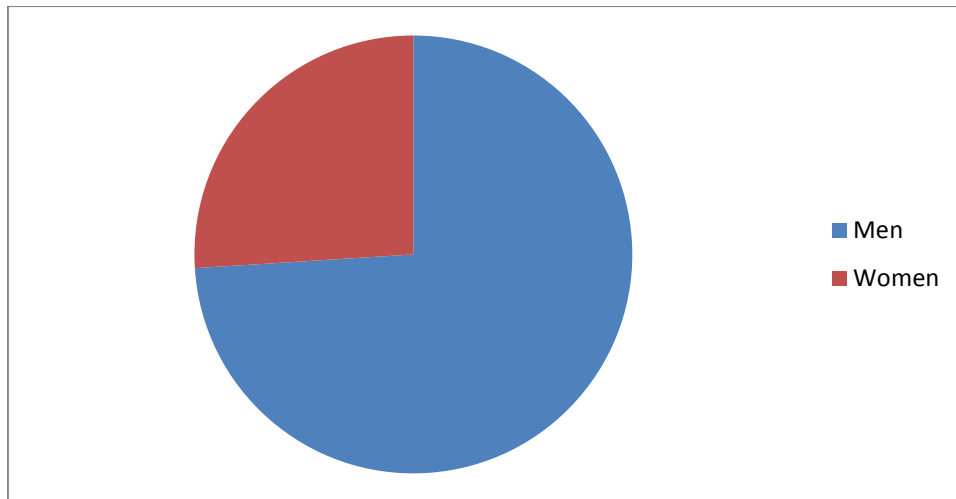
#### 4.1.1. Demographic related information

Five demographic variables are included in the survey: gender, education, years of business experience, nature of business (business sector) and size. The application of the demographic variables serves three main objectives. First, they have purely descriptive role showing the main demographic features of respondents. Second, these variables are used to test whether respondents' answers vary depending on their demographic profile. Such an analysis is performed later in the chapter with the objective of tracking the variations in entrepreneurial determinants across groups. Finally, the factors "size" is of particular importance as it is the main determinant in the construction of the sample that represents the population characteristics (see methodology).

To start with, the gender distribution from the survey is represented in fig. 11. The dominance of male respondents is obvious with 74% of all survey participants being men and only 26% being women. These outcomes clearly show the leading position of men in the process of entrepreneurial development in Bulgaria. These results are not surprising when compared with the evidence from the EU. According to the European Commission (2013), women account for only 30% of all entrepreneurs across Europe. Although country-specific details are not revealed, the outcomes from the Bulgarian survey show that the proportion between men and women is

close to the European average which is a strong indication in favour of the gender representation validity.

Fig. 11 Gender representation



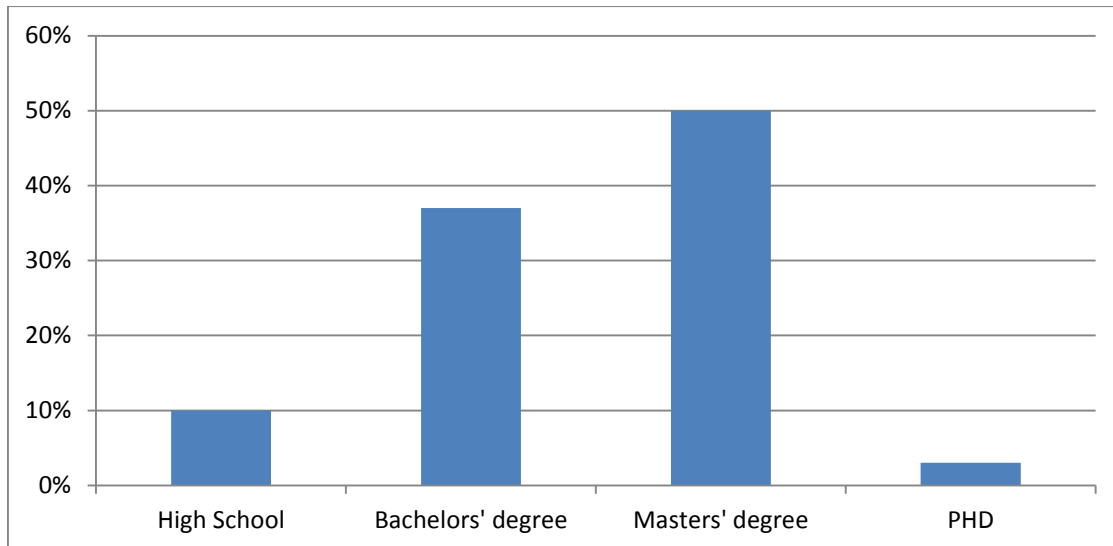
*Source: SPSS*

The educational status is also an important demographic variable included in the survey. Four distinct education brackets are applied, respectively: high school education, bachelors' degree/college, masters' degree and PHD. Fig. 12 shows respondents' distribution according their educational level. The prevailing number of participants has obtained a university degree with 37% being bachelors' degree holders and 50% being masters' degree graduates. Only 3% of the respondents have the highest educational level of PhD and the remaining 10% have only a high school diploma. Results unambiguously show that education is a major driving force for become an entrepreneur in Bulgaria, since an aggregate of 90% of all respondents have some university degree.

It is hard to put these results in perspective, since data for entrepreneurs' education in Bulgaria or the EU is unavailable. A study by Wadhva et al. (2009) in the US context reveals the importance of education for business development. Approximately 13% of the examined business owners have a PHD or equivalent degree, another 34% are masters' or MBA degree holders and 48% have obtained a bachelors' degree. The remaining 5% of the study participants have only a high school diploma. Although serious difference between the US and the Bulgarian context are likely

to exist, the evidence from Wadhva et al. (2009) supports to a great extend the overall validity of the outcomes from the survey participants' educational level.

Fig. 12 Educational level

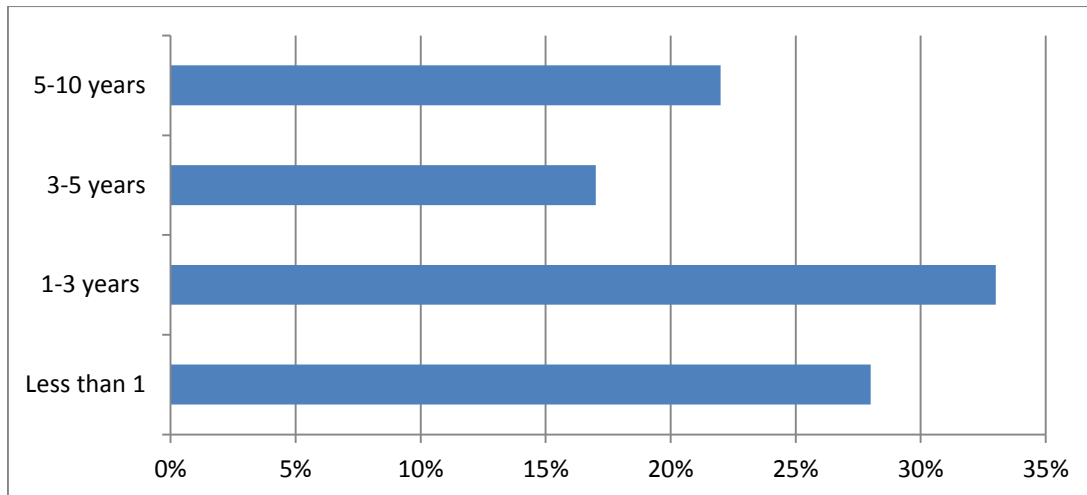


Source: SPSS

Next, years of experience is also included as a part of the demographic related factors. Results show that entrepreneurs have a diverse background in terms of their business experience. More than a quarter (28%) of participants declares less than a year of experience. Such a high percentage can be partially explained with the nature of data collection process and the background of some survey participants who were accessed via various start-up and seed capital firms' databases where the prevalence of new-starters is obvious. The largest part of respondents (33%) has a relatively short business experience between one and three years of length. The next group of three to five years accounts for only 17% of the sample size. The drop has its logical explanation, since older businesses generally account for a smaller portion of the business owners' population. Surprisingly, the last group of respondents (5 to 10 years of experience) has a relatively large degree of representation (22%). This can be explained with the design characteristics of the survey. On the one hand, the range between five and ten years is larger in comparison with the other groups. On the other hand, there no category representing businesses that exist for more than ten years and it can be expected that some of the longest existing entrepreneurs have automatically stated the longest period provided in the possible answers.

Despite these small technical issues, it is evident that the survey has managed to capture a wide variety of business experience owners, which is favourable for the validity of the obtained data.

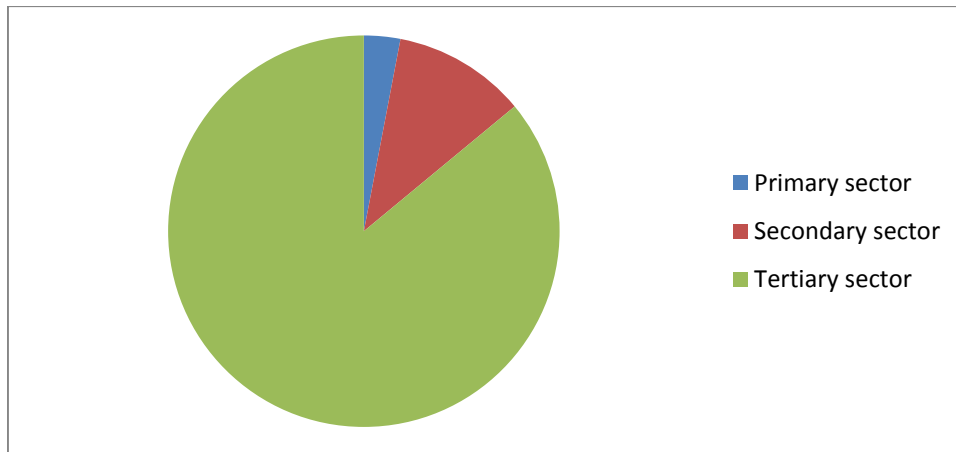
Fig. 13 Length of business experience



Source: SPSS

Fourth, it is important to maintain a relatively wide diversity in terms of the possible areas of business development, as well. In order to ensure a high degree of data validity, the number of entrepreneurs in the primary, secondary and tertiary sectors should be close to the population characteristics. Recent data from 2012 reveals that the Bulgarian economy is dominated by the service sector (63.2%), followed by the secondary sector (31.2%) and agriculture (5.6%) (Index Mundi, 2013). The distribution of the survey data is different. The proportion of the service sector is considerably higher (86%), followed by the industrial sector (11%) and agriculture (3%). To a great extent, the dominance of the service sector in the survey sample should not be an area of serious concerns. In the delimitations chapter, it was clarified how large business enterprises with more than 250 employees are excluded from the data collection process due to a number of reasons. As a result, many of the industrial companies are likely to be excluded from the sample, since this is the sector with the largest business entities in general. Hence, having in mind the existing size limitations (only firms with less than 250 employees), it should not be surprising that the secondary sector has a lower percentage of representation in the survey sample.

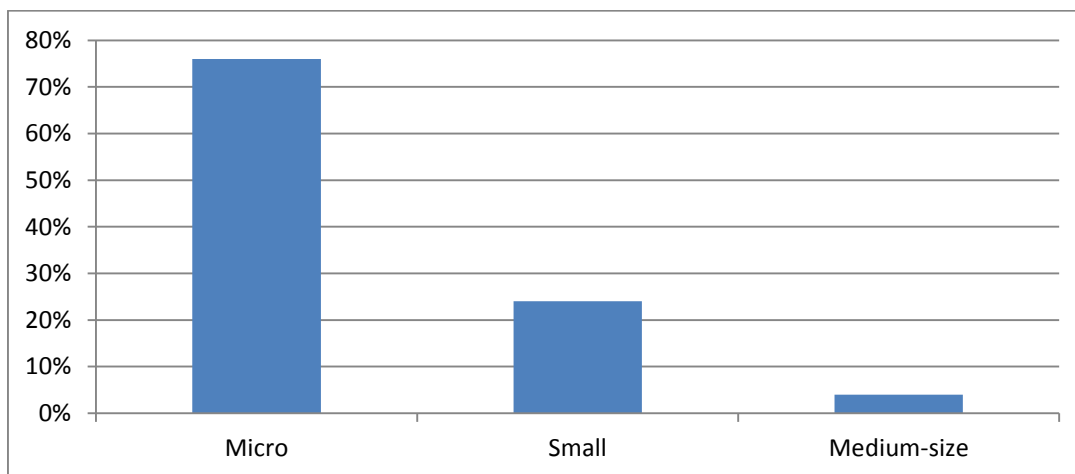
Fig. 14 Areas of business development



Source: SPSS

Finally, the number of employees is also included as a major demographic factor. This variable does not only have strictly descriptive functions, but also serves the role of an important indicator for constructing the survey sample. Earlier in the study, it was highlighted the important role of matching the sample characteristics with one or more features of the population as a part of the quota sampling strategy. Data from Vitosha Research (2006) showed that 90% of all firms in Bulgaria were micro firms (less than 10 employees), while 8% were small and only 2% - medium size enterprises. Figure 15 shows firms' division from the actual sample. 72% of participants are a part of a micro firm, while 24% and 4% are small and medium-size entrepreneurs, respectively.

Fig. 15 Business enterprises' size



Source: SPSS

The actual sample characteristics show some deviations from the proposed distribution. It is particularly important to mention the smaller role of micro business and the inflated weight of small business enterprises. Despite the differences in comparison with the predetermined size boundaries, the actual results are close to the population's characteristics. Moreover, the data provided by Vitosha Research (2006) is quite old and many tendencies in the recent economic development in Bulgaria confirm the notion that the average firms' size is gradually increasing. Seen from this perspective, the observed fluctuations in favour of small size enterprises should not be seen as an area of concern. In addition, the surprisingly good match of the other sample characteristics (gender, education, sectors of operation) with those of the population allow for some fluctuations in terms of size and provide serious evidence in favour of the overall data validity.

#### 4.1.2 Descriptive statistics

Figure 17 represents the survey results. More specifically, the mean values and the standard deviations about all entrepreneurial determinants are shown together with some additional information about the sample size (which is the targeted 100 respondents in almost all cases except for one questionnaire which was not fully completed) and the proposed Likert scaling range (from 1 to 5 where 1 accounts for “strongly disagree” and 5 represents “strongly agree”).

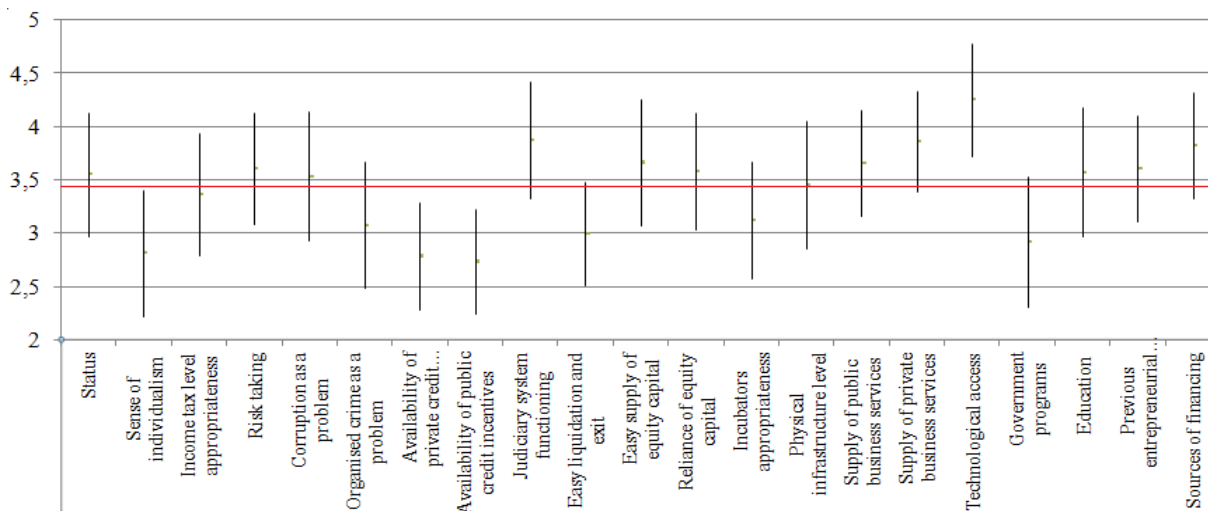
The applicability of Likert scaling allows for easy transformation of the respondents' answers into a numerical scale from 1 to 5. The questionnaire design and the applied scaling allow for a straight-forward interpretation of these results. The higher the score, the more important a given factor is for respondents' business development. And vice versa- indicators with lower score will be treated as less relevant for entrepreneurial development in Bulgaria. In addition, if there are any country-specific determinants that have not been identified as a result of the literature review and the Arboleda et al. (2009) propositions, this can pose serious threats to the overall study's validity in reality. Therefore, this topic is addressed in the interviews where participants are asked specifically about it. Further details about this issue are provided later in the chapter.

In respect to the standard deviation (fig. 17), it is worth mentioning that the variation of responses among the different determinants is relatively stable. The highest standard deviation value is 1.22, while the lowest one is 0.94. Such a similarity in the variables' standard deviations provides

a large degree of comfort for relying on the mean values, as it mitigates potential problems related to heteroscedasticity. If heteroscedasticity existed, then the deviations across the mean values would substantially vary, thus creating a problem with treating the determinants' role solely based on the means. However, the similarities in standard deviations suggest that these variations are equally distributed and means can be seen as legitimate indicators of the variables' roles for entrepreneurship development.

There are two strategies for estimating the role of each determinant. Having in mind the existing scaling (from 1 to 5), the conventional wisdom would suggest to use the median value of 3 as a major threshold for identifying the difference between the determinants. All factors with a mean value lower than three would be considered as inhibiting business development, and vice versa, the ones with a mean value above three would be considered as significant determinants for entrepreneurial development in Bulgaria. The evidence from the survey results, however, suggests the existence of a positive bias in the responses. When all factors are taken together, the average mean value deviates from the value of three. Instead, it is much higher-3.42. Applying the higher value of 3.42 seems to be a much more plausible solution, as it eliminates the existing positive bias in responses and provides an overview of the highly important factors only. Of course, the threshold of 3.42 constitutes an arbitrary boundary which can fluctuate depending on the assumptions. In this particular case, however, such an approach (by using the average mean value) guarantees the highest level of objectivity.

Fig. 16 Means, standard deviations and threshold





Source: SPSS

From the representation in fig. 16 above, it can be seen that standard deviations between the variables (measured by the vertical line) are quite similar. The arbitrary threshold of 3.42 is represented by a thick red line, so that it is visible which factors manage to qualify as significant. The full descriptive data is also shown in fig. 17 below. The important determinants are highlighted.

Fig. 17 Descriptive statistics results from the survey

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
<b>Status</b>	100	1	5	3,55	1,167
Sense of individualism	100	1	5	2,81	1,178
Income tax level appropriateness	100	1	5	3,36	1,133
<b>Risk taking</b>	100	1	5	3,60	1,044
<b>Corruption as a problem</b>	100	1	5	3,53	1,210
Organised crime as a problem	100	1	5	3,07	1,174
Availability of private credit incentives	100	1	5	2,78	,991
Availability of public credit incentives	100	1	5	2,73	,973
<b>Judiciary system functioning</b>	100	1	5	3,87	1,098
Easy liquidation and exit	100	1	5	2,99	,969
<b>Easy supply of equity capital</b>	100	1	5	3,66	1,174
<b>Reliance of equity capital</b>	100	1	5	3,58	1,103
Incubators appropriateness	99	1	5	3,12	1,091
<b>Physical infrastructure level</b>	99	1	5	3,45	1,198
<b>Supply of public business services</b>	99	1	5	3,65	1,003
<b>Supply of private business services</b>	99	1	5	3,86	,937
<b>Technological access</b>	99	1	5	4,25	1,053
Government programs	99	1	5	2,91	1,221
<b>Education</b>	99	1	5	3,57	1,197
<b>Previous entrepreneurial experience</b>	99	1	5	3,60	,999
<b>Sources of financing</b>	99	1	5	3,82	1,004

Source: SPSS

#### 4.1.3. Entrepreneurship determinants' importance

The differences between the various entrepreneurial determinants are considerable. In total eight determinants do not manage to qualify as being important according to the chosen evaluation

criteria. These determinants vary according to the three major groups of determinants but, in general, they are concentrated in the first two groups: “culture and personal motivation” and “institutional and regulatory framework”. Two factors within the group of “culture and personal motivation” fail to qualify as significant: sense of individualism and income tax appropriateness.

Sense of individualism is the factor with the lowest mean score in the survey. Such evidence demonstrates that entrepreneurs are actually team players who rely on working and managing team as a part of their business success. In addition, the insignificance of the factor debacle the wide spread notion that Bulgarians are a nation of individualist who do not want and cannot work in teams. To carry on, the insignificance of the tax level factors is surprising. The low level of corporate and income taxes in Bulgaria (10%) has been outlined by local authorities as one of the biggest advantages of doing business in the country. Entrepreneurs, however, neglect the importance of this determinant for their business development. As a result, it can be argued that the overall effect of tax incentives for stimulating business activity remain limited in Bulgarian context and such an observation can have serious implications of future policy making and the application of tax incentives for making Bulgaria an attractive business destination.

Four factors from the group of “institutional and regulatory framework” remain insignificant: organised crime, availability of private credit incentives, availability of public credit incentives and easy liquidation and exit. The insignificance of organised crime for tackling business activity demonstrates the progress in the field that has been achieved since 1990s. Earlier data from 2002 (fig. 4) identified organised crime as one of the major problems for doing business in Bulgaria. The evidence from the survey shows that the problem has successfully been tackled over time as a result of the better institutional functioning and effectiveness of the local authorities. Moreover, Bulgaria joined the EU in 2007 and the adopted institutional and legislative harmonization with the EU standards and norms has also played a major role for effectively eliminating the problem over time.

Next, the insignificant role of the private/public credit incentives should not be a surprise due to two major reasons. On the one hand, contrary to the European practices Bulgarian legislation does not provide solid credit incentives that target business developers. In addition, private credit incentives are virtually non-existent. As a result, businesses have limited access to tax incentives, at all. On the other hand, business owners in Bulgaria are predominantly small in size and as the

literature review revealed (fig. 2) approximately 25%- 30% of the population is engaged in micro-size business activity where the entities are often constructed by a single full-time working business owner or are family oriented. In this environment of micro-size businesses financing options are often limited to the existent equity capital (see later the importance of equity capital) and credit remains an undesirable alternative.

Easy liquidation and exit is also an insignificant factor for entrepreneurial development in Bulgaria. It becomes evident that local entrepreneurs do not seriously consider the availability of different exit strategies when engaging in business activity. This development can be explained with the already discussed characteristics of the typical Bulgarian business entity size and the high reliance of equity. If no debt is involved in running a given business, then closing down the entity is a much easier process with no further implications. Alternatively, it can be suggested that the existing exit procedures and legislation are already favourable enough, so that entrepreneurs are not concerned with exiting their business. Furthermore, it can also be proposed that local business owners are simply not affected by this factor when setting up and running a firm.

Among the resource based factors only two variables remain insignificant: incubators effectiveness and government programs. Incubators are a relatively new phenomenon in Bulgarian context and despite their rapid popularity increase in recent years, the overall role of incubators as possible suppliers of equity capital remains limited at this stage. Future research will be of need to identify whether business incubators and venture capital firms will be able to reach a significant group of business owners in the future.

Following the post-2007 EU admission, Bulgaria has received billions of Euros as a part of its convergence program. In total, close to €10 billion were invested in sectors, such as human resource development, regional development (infrastructural projects), transport, competitiveness development, administrative capacity development, rural and environmental development, as well as fisheries sector investing (Investnet, 2013). The government is particularly pleased from the available EU financing and often prioritizes on the importance of these programs for the economic development of the country. The survey results, however, contradict with the generally wide media acceptance for the positive role of EU funding. Reality shows that participants do not consider government programs to be a significant supportive factor for their business

development. This can be partially explained with the unique nature of entrepreneurship and the prevailing idea of self-reliance when doing business. In addition, further research is of need in order to identify whether these substantial amounts of funds are spent effectively. Perhaps, the government programs in Bulgaria do not reach our target group (business with less than 250 employees in size) or their effectiveness is quite low and entrepreneurs simply do not rely on them when setting up and running business.

Fig. 18 provides a ranking scale of the significant entrepreneurial development determinants. All 13 factors are presented by stating their ranking position, mean score and type of factor. It is worth pointing out the overall high significance of the resource-based factors in the table. To a great extent, this comes to show that the Bulgarian context of doing business is not largely determined by any country-specific cultural and/or institutional factors, although some of them remain significant. Instead, entrepreneurship development is largely shaped by the availability of resources similarly to the broad European context.

Fig. 18 Ranking of the important factors

1. Technological access	4.25	Resources
2. Judiciary system functioning	3.87	Institutional and regulatory framework
3. Supply of private business services	3.86	Resources
4. Sources of financing	3.82	Resources
5. Easy supply of equity capital	3.66	Resources
6. Supply of public business services	3.65	Resources
7. Risk taking	3.60	Culture and personal motivation
7. Previous entrepreneurial experience	3.60	Resources
8. Reliance of equity capital	3.58	Resources
9. Education	3.57	Resources
10. Status	3.55	Culture and personal development
11. Corruption as a problem	3.53	Institutional and regulatory framework
12. Physical infrastructure	3.45	Institutional and regulatory framework

*Source: SPSS*

Technological access is unambiguously assessed as the most important determinant of entrepreneurial development by the survey participants. The factors not only has the highest score, but also scores remarkably higher in comparison with the other factors. The outlier role of technological access factor demonstrates the high degree of reliance of Bulgarian entrepreneurs for their business development. On the one hand, this observation is unexplainable, since many of the survey participants are engaged in micro-size type of businesses within the service sector

where technology access is not as important as it would be in the industry, for instance. On the other hand, however, Bulgaria has successfully undertaken the process of technological and economic convergence with the well-developed Western European members of the EU and, in this context; technology access and modernization are likely to be a major driving force for the time being.

The functioning of the judiciary system ranks as #2 and is the most important factor within the category of “institutional and regulatory framework” factors. Earlier evidence (see fig. 4) revealed that more than 41% of respondents viewed the weaknesses of the judiciary system as a major obstacle of doing business in 2002. The current survey suggests that the determinant is still quite important for shaping the business environment in Bulgaria. The survey results, however, just indicate determinant’s importance and do not suggest whether respondents evaluate judiciary system functioning as fostering or inhibiting entrepreneurial development in Bulgaria. Further evidence in this context is sought during the interview stage of the data collection process.

Supply of private (#3) and public (#6) business services are also viewed as important factors by survey participants. These observations show that being an entrepreneur is not an isolated process. Instead, successful business development requires an intensive interaction with a number of private and public agents who are able to provide supportive services. Bulgarian entrepreneurs clearly recognize the need of private (accountants, advisers, tax law specialist, etc.) and public (supportive administration, other business oriented public services) business services in order to fully develop their businesses. As a result, the importance of the two factors as relevant resource determinants is clearly acknowledged.

Sources of financing (#4) is recognized as a major resource based determinant that shapes entrepreneurial development in Bulgaria. These results are close to the international and European context where the availability of various sources of financing is also important for business creation. A closer look at the survey results, however, reveals that Bulgarian entrepreneurs express a clear bias to the equity sources of capital. As already discussed, private and public credit incentives are found to be insignificant. Moreover, the factors “easy supply of equity capital” and “reliance of equity capital” score #5 and #8 in the proposed ranking. Hence, it can be argued that Bulgarian entrepreneurs (especially micro-size firms) continue to rely predominantly on the low risk and conventional equity type of business financing, rather than

sharing the characteristics of their Western European colleagues who heavily rely on credit as a major source of business financing.

Risk taking (#7) and status (#10) are the two “culture and personal motivation” related factors that are significant. Although these two factors are not among the most important ones, they show how personal and cultural factors play an important role in taking the decision to be an entrepreneur. Risk taking was recognized as a major factor from the earliest studies on entrepreneurship (see lit. review) and it continues to be a valid factor in Bulgarian context, as well. Status can be seen as a particularly local phenomenon. Similarly to the other Southern European countries, being an entrepreneur has always been perceived as a status boost determinant. The relevance of status as a factor has a solid cultural backing. Contrary to the Nordic societies, Southern European culture is more individualistic and the role of the welfare state in local economies is limited which also predisposes for higher risk taking, search for status and overall higher desire to diverge from being “in the middle”.

Previous entrepreneurial experience (#7) and education (#9) are also important determinants of entrepreneurial development. These are strictly individually specific factors and vary from a person to a person. Although previous entrepreneurial experience and education are not among the most important determinants, their importance as relevant resource factors is clearly outlined. It is hard to distinguish which one of them is more important due to the similar score (3.60 vs. 3.57) but the overall conclusion suggests that practical business knowledge and experience is valued by respondents as important as the acquired education level.

Two “institutional and regulatory framework” factors occupy the last two positions in the ranking of entrepreneurial development determinants. Earlier, corruption has been outlined as one of the most inhibiting factors for business creation in Bulgaria. The periodic World Bank’s publications of Doing Business together with data from Transparency International confirm the stubbornness of the problem within Bulgarian context. Survey results also indicate that corruption continues to be a major obstacle of doing business. Further evidence from the interviews will be presented later in the chapter. Finally, respondents also acknowledge the importance of physical infrastructure for creating a better business environment. Substantial efforts have been made recently in order to improve the local infrastructure conditions. Again, further evidence will be provided by the interview results.

#### 4.1.4. Factors groups' importance

In total, 8 out of 21 entrepreneurship development determinants remain insignificant. These determinants are unequally spread between the three major groups of factors. The prevailing part of insignificant determinants is within the groups of “culture and personal motivation”, as well as “institutional and regulatory framework”, while the group of “resources” remains almost entirely composed of significant determinants. More specifically, the “resources” group has an average mean score of 3.59, while “culture and personal motivation” and “institutional and regulatory framework” have an average score of 3.33 and 3.16, respectively. According to the survey results, the importance of the various entrepreneurship development determinants groups significantly differs. Resource-related determinants are viewed by the participants as being the most important for business development in Bulgaria, while the role of the personal characteristics, as well as the institutional and regulatory framework decreases.

The results from the groups' analysis indicate that the variations in the degree of significance among the various determinants are strong enough to affect the overall factors' groups, as well. Although the size of each group of determinants differs (which might create problems in their relative comparison), it is more than evident that determinants in the “resource” group have highest overall importance for entrepreneurial development in Bulgaria. As already mentioned, this outcome is not surprising, since the literature review discussion unambiguously showed the high relevance of these factors in international perspective. Surprisingly, the group of “institutional and regulatory framework” factor remains the least important. Earlier in the study, it was identified that Bulgaria generally has faced serious problems in respect to the institutions' quality. While the problem with public institutions' corruption still remains vivid from the survey results, further insights will be sought from the interview results later in the study.

#### 4.1.5. Variations among participants

One of the main objectives in the study is investigating the differences that occur in the entrepreneurship determinants based on the demographic characteristics of participants. Several demographic factors were incorporated in the survey: gender, firm size, business sector, years of experience, education. Including such an analysis has its rationale, since the population of entrepreneurs differs and valuable insights can be found by focusing on the opinions of each sub-

group, rather than by simply investigating the aggregate data, as already accomplished earlier in the paper. The access to new information, if any, will be also plausible in respect to outlying more specific recommendations based on a wider evidence base.

Having in mind the specifics of the sample size, however, it becomes hard to test whether differences in the entrepreneurial determinants exist based on all demographic factors. Three of the demographic factors (sector of operation, education, business entity size) have disproportional representation of their sub-groups. This is not a serious problem per se, as differences in sub-groups size almost always occur. The conditions for running the ANOVA test suggest normality of the dependent variable distribution which is impossible to be achieved when some of the dependent variables have even less than five observations. Although one-way ANOVA is applied in this specific case and the method remain quite robust against violations in the normality assumption, the problem remains significant. More specifically, entrepreneurs with PHD are just three, entrepreneurs within the agriculture sector are also just three, and finally, entrepreneurs having a medium size business enterprise account for four participants. Thus, examining the variations between sub-groups of these three major demographic determinants (sector of operation, education, business entity size) is practically impossible.

Alternatively, comparison remains possible based on gender and years of experience differences. To start with gender, it will be interesting to compare how the different genders assess the entrepreneurial determinants and whether some factors are perceived as being more/less important than others. Both genders are well presented in size, so even some skewness in the variables' distribution can be tolerated, since one-way ANOVA is robust to normality violations. Testing homogeneity of variances is applied by running the Levene statistic. Figure 1 in appendix C shows the outcomes of the test. Except for the variable "income tax appropriateness", all other variables do not suffer from homogeneity which is a good indication. Moreover, it should also be mentioned that the third major assumption for case independence also holds.

After clarifying the major assumptions for running a one-way ANOVA test, the actual calculations are presented in fig. 19 which is a stylized version of the SPSS output. At a 5% confidence level only two variables show statistically significant differences: income level appropriateness and risk taking. Although most of the variables have only insignificant differences in the mean values, there is enough evidence to reject the null hypothesis and



conclude that men and women differ in their responses. The descriptive statistics (fig. 2 in appendix C) provides more details on these differences. Men show much higher results (3.62 versus 2.62 for women) when evaluating the appropriateness of the incomes tax level in Bulgaria. Variations are also observed in the degree of risk taking where men score again a statistically significant higher mean result than women (3.76 versus 3.15).

Fig. 19 Differences in means based on gender

	F	Sig.
Status	,064	,801
Sense of individualism	3,141	,079
<b>Income tax level appropriateness</b>	17,749	,000
<b>Risk taking</b>	6,786	,011
Corruption as a problem	2,787	,098
Organised crime as a problem	1,280	,261
Availability of private credit incentives	,567	,453
Availability of public credit incentives	,000	,996
Judiciary system functioning	,294	,589
Easy liquidation and exit	,030	,863
Easy supply of equity capital	,302	,584
Reliance of equity capital	,036	,850
Incubators appropriateness	1,508	,222
Physical infrastructure level	,366	,547
Supply of public business services	,406	,525
Supply of private business services	,166	,685
Technological access	2,049	,156
Government programs	,093	,761
Education	,018	,893
Previous entrepreneurial experience	,326	,570
Sources of financing	,265	,608

Source: SPSS

The observed differences in respect to risk taking can be logically explained with the gender variations and men's overall higher tolerance to risk taking. Hence, such an outcomes is to a great extend expected prior to its calculations confirmation. The results in terms of income tax appropriateness, however, are quite surprising. Female participants are much more negative to the current taxation level (10%) in comparison to men. These outcomes are striking, especially having in mind the typical female personality traits of tolerance, solidarity and stronger societal belonging. It is also worth pointing out that the variable "income tax appropriateness" is the only

one that fails the homogeneity test. As a result, the validity of the variable variations should be further examined.

Finally, the lack of further differences is also quite surprising. It is obvious that both genders share common views in terms of which the important entrepreneurial determinants are. Although the null hypothesis was rejected, the significant differences in two of the factors do not provide much additional evidence that can be of particular value in examining the characteristics of the Bulgarian entrepreneurs.

In order to investigate further the existing differences among the sample of entrepreneurs, an analysis of the business owners according to the length of their business activities is also performed. Perhaps, entrepreneurs differ and pioneers value different factors in comparison with those who have been engaged in private business for a longer period. Again, the same procedure is performed prior to running the one-way ANOVA test. The outcomes of the homogeneity test are presented in fig. 3 in appendix C. Although the evidence reveals some weaknesses in several particular values, no serious threats for the validity of the existing results can be suggested.

Fig. 20 Differences in means based on entrepreneurship experience

	F	Sig.
Status	1,076	,363
Sense of individualism	1,370	,257
<b>Income tax level appropriateness</b>	3,719	,014
Risk taking	,342	,795
Corruption as a problem	,924	,433
Organised crime as a problem	1,483	,224
Availability of private credit incentives	1,045	,376
<b>Availability of public credit incentives</b>	3,694	,014
Judiciary system functioning	,051	,985
Easy liquidation and exit	,884	,452
Easy supply of equity capital	,518	,671
Reliance of equity capital	,375	,771
Incubators appropriateness	,217	,885
Physical infrastructure level	1,418	,242
Supply of public business services	1,328	,270
Supply of private business services	,988	,402

Technological access	1,395	,249
Government programs	,802	,496
Education	,803	,495
Previous entrepreneurial experience	1,053	,373
Sources of financing	,581	,629

*Source: SPSS*

Based on the outcomes in fig. 20, the null hypothesis can be rejected because the mean values are not equal. Variations are observed again in the variable “income tax appropriateness”, as well as “availability of public credit incentives”. Business owners with the longest experience share a skeptical view in terms of taxation (mean value of 2.68), while the least experience entrepreneurs remain the most positive about it (3.61). Entrepreneurs share diverge opinions in terms of the availability of public credit incentives. Opinions across business owners, however, do not follow a clearly defined trend based on years of experience (see fig. 4 in appendix C). Hence, elaborating plausible inferences about the observed variations should be a topic of further research.

The outcomes in terms of entrepreneurial experience length also indicate a strong degree of consensus among respondents on the possible factors defining business development. These outcomes coincide with the earlier findings based on gender differences. In both comparisons respondents express divergence in opinions related to the income tax factors. Obviously, this is an intriguing factor that is perceived quite ambiguously by respondents, despite its quite low rate of 10%. The variations in risk taking are explainable with the specific gender preferences to risk, while the opinions in terms of public credit incentives insist further clarification by further research. In general, however, it can be concluded that respondents show surprisingly similar opinions and examining the variations among the sub-groups added little new insights for fully understanding the differences in entrepreneurial development determinants.

## 4.2. Interviews results

The necessity of applying qualitative research tools is motivated by the desire to reveal deeper insights and opinions that can provide important hints in understanding Bulgarian entrepreneurial environment and the significant determinants that lead to business development which otherwise

cannot be accessed by conducting quantitative tools (survey). In this particular case, the interview form is preferred as it is an effective way of collecting qualitative data and ensures privacy for each individual participant. In addition, structured/standardized interviews are conducted, so that two main objectives are achieved. First, the researcher has a greater degree of control over the data collection process. Second, participants are presented with the same questions which facilitate the ability to draw meaningful comparisons and conclusions based on their responses.

Four respondents (two female and two male) were selected for the interview stage. Participants come from different business areas. Three of them are engaged in the service sector and one in the agricultural one. Years of experience also fluctuates, since entrepreneurs have business experience from just several months to 17 years in range. Finally, the selected interview participants have differences in terms of business entity size, as well. The grain producer is a middle size business owner with approximately 80 employees, while the rest of respondents are engaged in micro-sized entities. In general, it can be concluded that the demographic characteristics of the interview participants more or less depict a micro-cosmos of the existing population of business owners in Bulgaria and do not significantly differ from the survey participants' sample (see more details in appendix B).

The outcomes from the four interviews are visually presented in fig. 21 below. The figure depicts the main categories (domains) included in the interviews. These domains are basically the main milestones that construct the interviews. Moreover, their selection is largely determined by the structure of the questionnaire in the survey where similar main areas are investigated. It is also worth mentioning that participants' responses are presented in such a way, so that an easy comparison between can be done. The selected data in the table is based on the outlined principles of interview analysis that are presented in the methodological chapter of the study. Basically, the table captures only the main coding categories that have been identified as a result of the interview transcription process.

Fig. 21 Interviews results

Main domains	R1: Merchandise of meat products	R2: E-commerce	R3: Consultancy services	R4: Grain production
Motivation	1)Successful previous business experience	1) Market niche; 2)Obvious opportunities; 3)High growth potential	1)Lack of employment opportunities	1)Asset acquisition at low cost; 2)Traditions in agriculture
Personal traits	1)Hard work; 2)Consistency; 3)Work with people	1)Experience; 2)Entrepreneurial spirit; 3)Innovativeness; 4)Creativity; 5) Commitment;	1)Education; 2)Organisational skills; 3)Belief in me; 4)Focus; 5)Desire to be different	1)Expertise; 2)10 years of experience; 3)Desire; 4)Self-determination; 5)Status;
Credit financing	1)Very difficult	1)Small probability; 2)Hard conditions	1)Entirely equity financed	1)Recently harder; 2) Successful long-term relationship with a local bank; 3)Available credit
Institutional framework	1)SMEs destroyed from government policies; 2)All institutions inhibit business development	1)Extremely unstable; 2)Low level of effectiveness, incompetence; 3)Under-developed administration; 4)High levels of corruption, low trust	1) High corruption; 2) Slow and inefficient judiciary system;	1) Institutions work slowly; 2)High level of bureaucracy; 3)Bribes
Government efficiency	1)Destroys local business	1)Inefficient and incompetent; 2)Some improvements recently (infrastructure)	1)Corrupted; 2)Creates obstacles, not helpful	1)The local authorities work O.K.; 2)Better central government of need
Government programs	1)None	1)None	1)None; 2)You should know the “right” people	1)Subsidies are provided; 2)Supportive for competitiveness
Business incubators' roles	1)Non-existent	1)Non-existent;	1) Getting popular; 2)IT sector only; 3)Small capital	1)Agriculture not an investment area for them
Recommendations: 1) <i>Administration</i>	1)Procedures done electronically; 2)Remove bureaucracy	1)To facilitate business development, rather than inhibiting it	1)Reduction in procedures; 2)Procedures via the Internet	1)Remove the hassle; 2)Lower regulation and administrative burden
2) <i>Private organisations and incubators</i>	1)Private driven financing initiatives	1)Banks should open up; 2) Flexible conditions	1)Enlarge the scope of initiatives; 2)Too cautious currently	1)I don't know
3) <i>Financing opportunities</i>	1)Low interest rate loans	1)Changing in lending requirements	1)Limit credit restrictions	1)Nothing
4) <i>Institutional framework</i>	1)Bureaucracy removed; 2)Electronic administration	1)Online administration; 2)Lower corruption; 3)Reduction in administrative procedures	1)More efficient and online based administration; 2)Reduction in corruption and hassle	1)Better and more efficient administration

Although it has no direct relationship to the investigated topic of entrepreneurship determinants in Bulgaria, analysing the motivation of each interviewee for starting own business is an intriguing question that can partially explain the high rate of entrepreneurs in the country, culture and personal motivation. From the interviews results it becomes evident that entrepreneurs do not share common motivational factors when starting own business. Two of the respondents (the meat merchandiser and grain producer) state previous successful entrepreneurial experience and established traditions in the business were major drivers for launching the current ventures. These observations confirm the earlier findings from the survey where previous entrepreneurial experience was found to be a significant factor for starting a business in Bulgaria. In addition, risk taking (the e-commerce respondent) can also be outlined as an important motivator for launching own business; a result that coincides with the survey outcomes.

The analysis of the personal traits involved in doing business in Bulgaria shows that many of the survey findings find their confirmation from the qualitative data, as well. Factors, such as status, desire to be different (similar to status), previous entrepreneurial experience and education have been strongly supported by the interviews results. Moreover, entrepreneurs share common personal traits that have exclusively operational value in their daily business activities, such as consistency, innovativeness, hard work, determination, focus, creativity and ability to work with people. While these common traits can be seen as important characteristics linked to entrepreneurship, their further investigation is not an objective of the current analysis.

The survey findings identified the strong reliance on equity capital and the insignificant role of public and private credit incentives for business financing. One of the objectives of the interview stage was to identify the deeper reasons and motives for these outcomes. The interviews results show that respondents consider credit as insignificant largely due to the unacceptable credit conditions, tight credit standards and the lack of sufficient credit history that many of the newly formed micro-size firms have. All these factors inhibit the freer credit flow to private business and justify the significant role of equity capital for business financing. A remarkable exception is the grain producer. The larger business entity size, sufficient credit history and low risk business profile enable middle size business to get adequate credit financing. Yet, the marginal role of credit financing can be considered as a major factor that inhibits business development in Bulgaria.

The outcomes in terms of institutional framework are striking. Across the board, respondents confirm earlier findings from the survey. Corruption is outlined as a major obstacle that inhibits business development and consumes valuable resources. Similarly to the earlier findings from the literature review (from 2002), corruption remains a persistence problem that affects the effectiveness of the Bulgarian public institutions. High level of intolerance is also expressed in relation to the overall functioning of the administration. It is described as slow, incompetent, unfriendly and highly corrupted. The work of administration does not constitute a part of the survey questionnaire but due to the interviews it becomes possible to identify this largely negative factor for business development in Bulgaria. Judiciary system functioning is also widely discussed in the interviews. Again, respondents are not satisfied by the slow and inefficient work of Bulgarian courts.

The picture with respect to the functioning of the government is similar. Probably motivated by the negative opinions about the work of the public institutions, respondents express heavy critique when evaluating the government effectiveness. Opinions are even quite extreme in some cases, as government is seen as a major obstacle and a destroyer of businesses. Some optimism is shared when the assessment is done about the local government work (municipalities). The e-commerce respondent sees some progress recently, probably related to the advancement of the big infrastructural projects in Bulgaria. Despite these silver lines, government is predominantly seen as a major obstacle for business development.

The role of government programs and initiatives was included in the questionnaire as a possible entrepreneurial development determinant. However, survey outcomes demonstrated the insignificant role of that factor. Similarly, three out of four entrepreneurs in the interviews stage state that government programs have no impact for the development of their businesses. In addition, one of the opinions suggests that acquiring government funding requires knowing “the right people” which links to potential corruption practices. It is worth mentioning that the middle-size entrepreneur (grain producer) manages to benefit from government subsidies that are provided in relation to the common European Union agricultural policy. This observation is isolated and does not change the overall perception of inefficient government.

Interviews results shed some light on the perceived performance of business incubators. Similarly to the survey outcomes, incubators are not seen as a significant factor for entrepreneurship

development in Bulgaria. It can be suggested that four interviewee is not a sufficient sample that can provide objective results about incubators' work. While such a statement is likely to be true, it becomes evident that business incubators and start-up companies in general do not cover a comprehensive area of business activities. Instead, they remain focused largely on the IT sector and provide limited in size financing options. In this context, it can be concluded that business incubators have a long way ahead before become a major determinants for entrepreneurship development in Bulgaria. Certain actions in this direction will be provided accordingly as a part of the recommendation chapter of the study.

One of the major objectives of the interview process is to gather participants' opinions about improving the future business environment in Bulgaria. This coincides with the major objective of the research paper which investigates determinants' importance in order to focus on the important areas of business development and the ways of affecting them, so that better public policies and private organisations' (incubators, financial institutions, etc.) functioning is achieved. In this context, gaining firsthand knowledge from the interviews certainly generates valuable insights of what should be changed in the local business environment.

Numerous plausible recommendations were generated in four distinct areas of interest: administration, private organisations and incubators work, financing opportunities and institutions functioning. Respondents share common opinions that aim to improve the work of the administration. In general, demands for electronic administration, removal of the heavy bureaucracy and administrative hassle and limiting the number of existing regulations are expressed. Similar ideas are shared in terms of institutions functioning in general. In addition to the above mentioned demands, respondents suggest limiting the wide spread corruption that paralyses the functioning of the public institutions.

In terms of financing opportunities, respondents would like to see more open and friendly financial institutions that are eager to cooperate with micro-size businesses and provide more flexible credit conditions and lower interest rates. Similar views are shared when the work of the private organisations and incubators is considered. Increasing the scope of initiatives, more intensive cooperation with small size business enterprises and private driven financing options are major suggestions in these areas. The list of recommendations suggests that further improvements in several key areas of business development have to be pursued. The value of this



feedback is of particular importance, as it originates from real-life experience and all of the mentioned problems are faced in everyday business management in Bulgaria.

To sum up, several major conclusions can be drawn from the interviews results. First and foremost, the outcomes largely confirm the survey results by supporting the already outlined important entrepreneurship development determinants. Factors, such as status, corruption, judiciary system functioning, equity capital availability, education and previous entrepreneurial experience can be outlined as major determinants of business development in Bulgaria. Secondly, the interviews results also provided new hints in understanding factors' importance. Specifically, it was emphasized on the crucial role of administration functioning and the overall role of institutions. Next, it should be mentioned that respondents showed a surprising level of consensus in their opinions about almost all domains. Such similarities provide strong indications for the validity of the presented opinions. Finally, the interviews managed to provide valuable recommendations that can be effectively applied in the discussion for the improvement of the entrepreneurship environment in Bulgaria.

#### **4.3. Conclusion**

The chapter discussed the findings provided from two different methods of research: quantitative (survey) and qualitative (interviews). By applying diverse data collection tool, the study collected enough evidence to answer the main research question about the importance of the entrepreneurship development determinants in Bulgaria. The obtained results not only depict a coherent overview of the relevant factors, but are also confirmed independently by both research methods which provide strong indications for their overall validity.

The provision of a detailed overview of the significant determinants and the existing variations among the different groups of participants enables the study to go one step further and propose a list of plausible recommendations that aim to improve Bulgarian business environment. In this context, determinants' level of significance/insignificance together with the available qualitative data clearly indicate respondents' demands for further improvements in areas, such as institutional functioning, government programs, opportunities for acquiring capital, the role of incubators and so on. The next chapter addresses these issues and provides key insights for policy recommendations as well as the possible areas for future research.

## 5. Recommendations

This chapter captures the possible recommendations based on the study results. The recommendations are divided into three distinct groups: 1) what works well, 2) what needs to be changed and 3) what should be considered. Thus, the proposed suggestions follow a comprehensive structure that aims to identify not only the areas where changes should be implemented, but also things that work well currently and, potentially, the things that should be further considered. In addition to the list of recommendations, the study focuses on the potential controversies that need further future examination, as well as changes in the philosophy and design of the future research in the area.

### 5.1 What works well

There are certain areas of entrepreneurship development where new changes are not likely to further improve business conditions in Bulgaria. Although the factor “appropriateness of income tax” fails to qualify as significant (score of 3.36 with a significance threshold of 3.42), it should be noted that respondents’ opinions *per se* are mostly positive, since the score is higher than three. In addition, the evidence for the interviews does not suggest that entrepreneurs share critique about the income tax level in Bulgaria. Indeed, the current 10% income and corporate tax levels are actually the lowest in the entire EU and further improvements in terms of taxation are unlikely to occur. As a result, it can be strongly argued that Bulgaria offers quite favourable tax conditions for doing business and further improvements are not necessary.

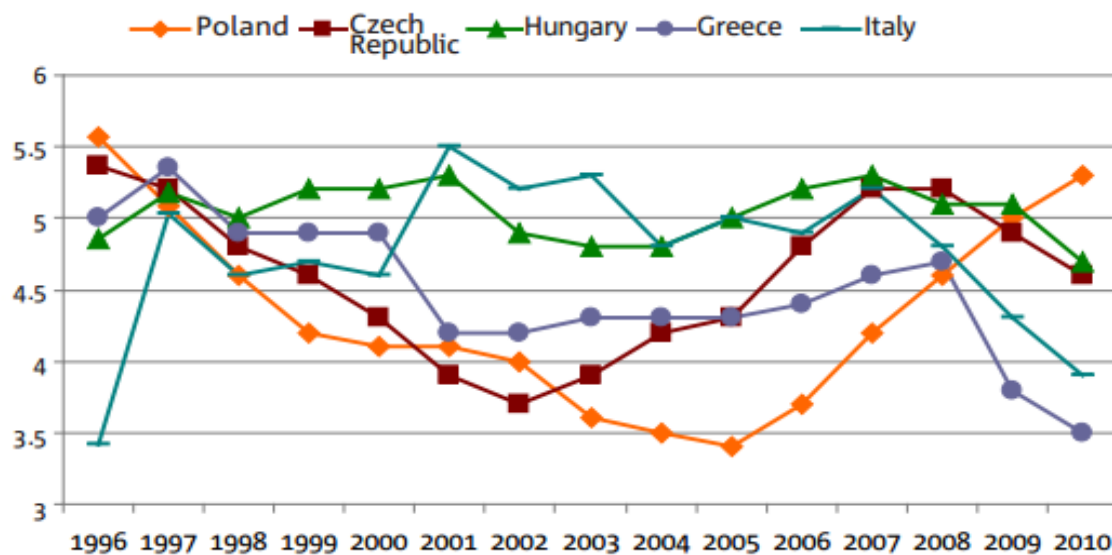
The factor “physical infrastructure” is considered as significant (score of 3.45) by survey respondents. Some of the interviewed entrepreneurs also recognized the improvement of infrastructure as one of the few areas (if not the only one) where government performs well. Having in mind that a great part of the Bulgarian is obsolete and dates back to 1970s and 1980s, it is worth emphasizing on the plausibility of the current infrastructural projects launched by the government. The construction of new roads, harbours, airports and underground is an initiative that corresponds to business demands for higher efficiency, lower transportation costs and easy access to major trading partners (EU, Turkey, etc). In addition, considerable EU infrastructure-related funding is available through the various cohesion programs, so that the national budget position does not deteriorate from these large spending problems.

## 5.2. What needs to be changed

### 5.2.1 Fight corruption

Results unambiguously confirm that corruption remains one of the major factors that inhibit business development in Bulgaria. The problems with corruption are not only suggested by the study participants, but also confirmed by global organisations, such as Transparency International, as shown in the literature review. It can be suggested that fighting corruption effectively requires two major components: brave actions and political will. Bulgaria can learn the lessons from other post-communist countries in transition in order to tackle corruption. The success of the Poland in this area is particularly valuable as both countries share common similarities in historical and cultural background. Hence, applying the measures taken by the Polish government in Bulgarian context should be seen as a realistic and manageable suggestion that takes into account the local culture and mentality. The scores from the Transparency International corruption perception index clearly indicate the progress achieved by Poland. The country has significantly improved its position in the recent years as a result of different measures against corruption. Currently, Poland outperforms not only the other Central European countries, such as Czech Republic and Hungary, but also scores higher than leading European countries like Italy (Czubek et al., 2010).

Fig. 22 The progress of Poland against corruption



Source: Czubek et al. (2010)

In recent years Poland has managed to effectively apply a broad set of punitive and preventive measures against corruption. Few particular examples of punitive measures can be provided and applied in Bulgarian context, as well. In the last ten years, Polish Criminal Code has been amended to include new corruption-related crimes, including corruption in the electoral process, sports and business. The principle of not punishing people giving bribes was also introduced, provided that they inform law enforcement agencies. Moreover, some structural changes were introduced including the creation of two additional agencies that are tasked with fighting corruption: the Internal Security Agency and the Central Anti-Corruption Bureau. These agencies are enabled to plant listening devices, use direct force and monitor purchases as well as other draconian and often controversial right in order to fight corruption. Furthermore, Poland has successfully managed to implement a set of corruption preventing measures in accordance with the United Nations Convention against Corruption ratified in 2006. Strengthening the protection of whistleblowers and the introduction of a Human Rights Defender are particular corruption preventing measures that can be applied accordingly in the Bulgarian context, as well (Czubek et al., 2010).

### **5.2.2. Administrative reform**

The necessity of a broad administrative reform was clearly acknowledged by entrepreneurs during the interview stage of the data collection process. Administration functioning poses a serious burden for doing business in Bulgaria as a result of its inefficiency, number of administrative procedures and the overall staff hostility. Moreover, the inflated administration size is likely to create good conditions for the wide-spread corruption in the country. According to Harsev (2013), the total number of employees in the Bulgarian public administration accounts for 230,000 in comparison to a total labour force of approximately 2.9 million. These numbers are striking and totally unacceptable when put in international perspective. For instance, Switzerland has a quite efficient administration of 35,000 employees and identical total population size (8 million inhabitants). The Netherlands has 17 million inhabitants and administration size of only 40,000 employees (Harsev, 2013).

A number of measures can be applied in order to improve the efficiency of the Bulgarian administration. To start with, a special ministry of the e-government was created in March 2013

in order to facilitate the administrative reform. Focusing on the e-government as a main priority is expected to remove the administrative hassle and improve the speed and efficiency of the administration. Furthermore, encouraging additional deregulation and decrease in the number of procedures can substantially ease the process of business creation and functioning. As already discussed, Bulgaria has an average score (#66 out of 185 economies) in the Doing Business ranking by the World Bank. Evidence reveals that further improvements in of need especially in areas, such as dealing with construction permits, getting electricity, enforcing contracts and resolving insolvency (The World Bank, 2013). These areas of weaknesses require improvements not only in the administrative capacity, but also pose a criticism about the functioning of the judiciary system-a topic of particular interest and criticism for the study participants.

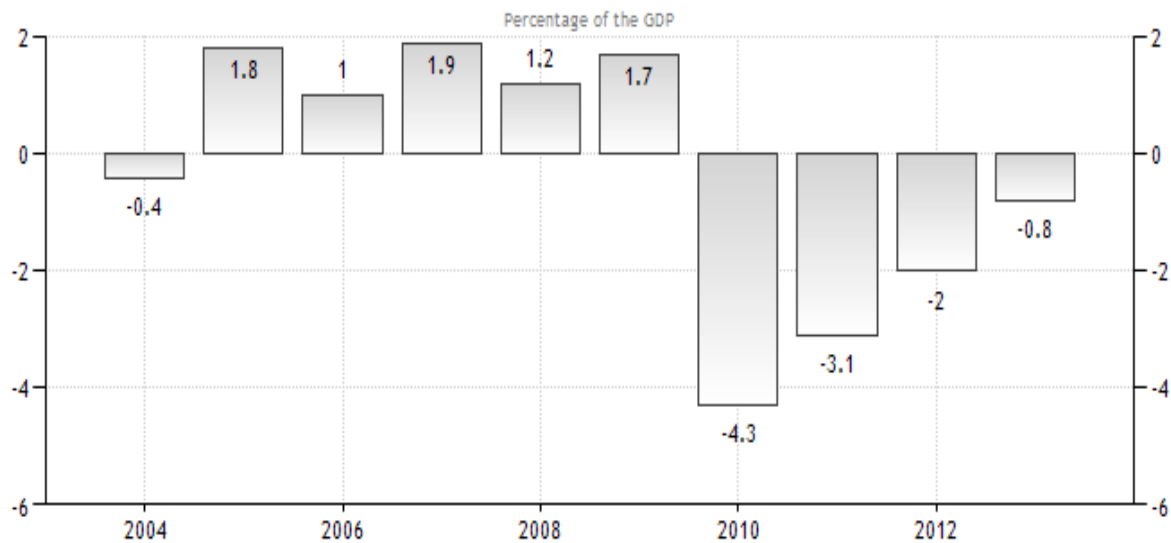
Harsev (2013) goes even further by providing a list of suggestions for dramatically cutting the size of administration at all levels following the Swiss experience. First, he suggests limiting the number of ministries to only seven from the current number of 17. Secondly, draconian cuts in the number of policemen, firemen and especially administrative workers is proposed with the suggestion of introducing electronic-based administration that would offset the decreased number of employees in the sector. Finally, a privatization scheme is to be encouraged, so that many of the government-owned administrative sectors become private and more efficient. An example with the successful privatization of the notary services in Bulgaria is given as an indication of how government-controlled functions can be effectively outsourced to the private sector.

### **5.2.3. Public services and financing**

Survey results clearly show the importance of two distinct factors: “sources of financing” (score=3.82) and “supply of public business services” (score=3.65). At the same time, it becomes evident that entrepreneurs largely rely on equity financing. Interviews results also suggest that obtaining a loan from a private financial institution is either too costly, or impossible due to high lending standards. In this context, it is relevant to suggest a bigger involvement of the government as a credit provider for businesses of different size. Such an initiative can substantially diversify the channels of financing and increase the competition between private and public financial institutions. In addition, the current government debt level of 17% of GDP is the second lowest in the EU and considerable lower than the average rate for the entire

community (Pettinger, 2012). In 2012, Bulgaria had a budget deficit of only 0.8% (the Maastricht criteria allows annual deficits up to 3% of GDP and government debt level up to 60%) which suggests enough room for further fiscal easing in order to boost the subdued domestic demand (Trading Economics, 2013).

Fig. 23 Bulgarian budget surplus/deficit (percentage of GDP)



Source: Trading Economics, 2013

Bulgarian Development Bank (BDB) was established in 1999 as a part of the government efforts to facilitate credit to SMEs. In 2011, authorities' involvement in BDB was increased and 200 million leva (€102 million) are currently available to SMEs. The increase of the BDB funding facility is an encouraging step for providing better public financial services and credit to SMEs (Sofia Globe, 2012). In comparison to the total credit market size in Bulgaria, the role of BDB, however, remains quite modest and negligible. In addition, credit to SMEs is also provided by the Joint European Resources for Micro to Medium Enterprises (JEREMIE). The size of the program accounts for €400 million that target over 3,400 SMEs across Bulgaria (JEREMIE Bulgaria, 2011).

Further increase of the credit facility together with easing of the lending standards should be further considered in order to fully support the business climate and economic recovery in Bulgaria. An increase of the role of the BDB together with new forms of credit financing should be considered, so that the total amount of available credit reaches at least several billion leva in

size- an amount that would have the capacity to seriously support businesses' needs for liquidity in an otherwise rather suppressed private credit environment.

“Access to technology” is identified as the single most important determinant for entrepreneurial development in Bulgaria. Being steadily on the convergence path of economic development, the long-term growth of the country is largely determined by the level of its technological progress and Bulgarian business clearly recognizes the need of that. In this context, government can further facilitate the technological catch-up process by providing a number of stimuli for import of different types of equipment and other machinery that can facilitate the competitiveness of the local industry. Tax breaks, government-backed credit facility for purchasing of equipment, VAT reduction and other similar financial incentives can significantly help businesses in acquiring the necessary technology for its development. It is also worth mentioning that such types of incentives have significant long-term benefits for the country's growth. Respondents in general acknowledge the insignificant role of the existing government programs, so that further involvement in new government-sponsored initiatives that target competitiveness is generally of great need.

### **5.3. What should be considered**

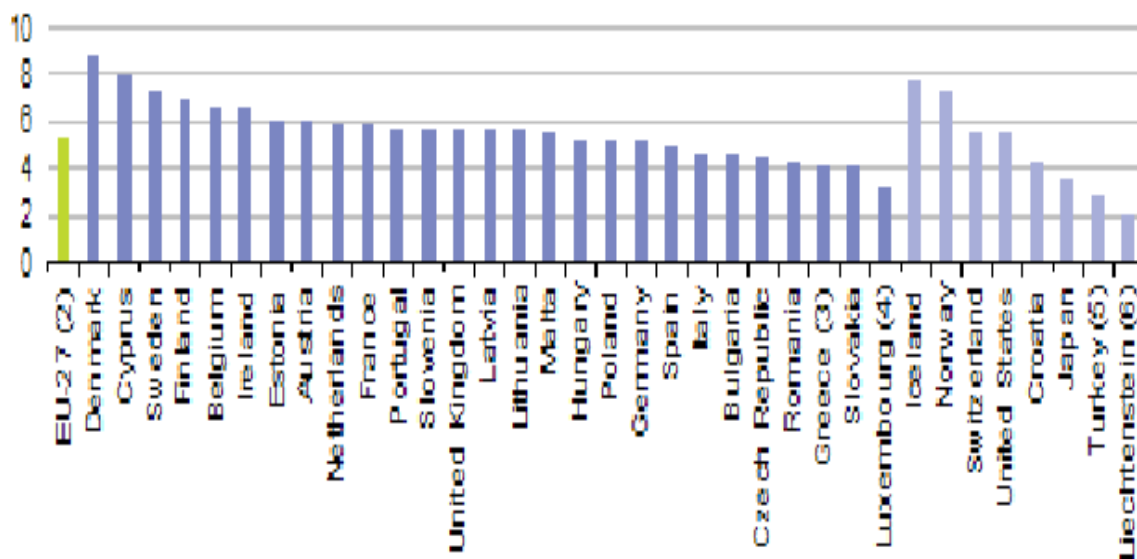
There are three factors that insist further consideration: the role of incubators, private lending and education. To start with, the role of incubators is likely to grow in the future, as they are a relatively new phenomenon on the Bulgarian business landscape. The policy makers' role in affecting their role is quite limited. What is only required at the current stage is the creation of favourable conditions for incubators' functioning, so they expand their supportive role for business creation in the future. Providing these private organisations with more favourable conditions is one of the possible suggestions that should be considered. This can be provided by easing the administrative procedures, as already discussed earlier, or by creating various tax incentives supporting incubators' functioning. Yet, the role of government role should be seen as limited and these recommendations should be seen as second priority.

Survey results identify the insignificance of the “private business services” as a factor for business creation in Bulgaria. In addition, interviewees clearly indicate the hardships when obtaining credit from a Bulgarian bank due to the tight credit conditions and high interest rates.

One of the propositions already suggested increasing the role of public credit provision to SMEs. On the other hand, however, many may argue that the government role in credit supply should be limited due to the government inefficiency in distributing resources. This argument has solid backing having in mind the serious corruption problems in Bulgaria. Hence, greater attention should be put on fostering the private credit institutions' role in funding local business, rather expanding the public one. The US experience in facilitating credit creation can be quite plausible in this context. Banks can effectively lower lending costs and return their interest to SMEs, if government guarantees on some types of loans are introduced, thus eliminating the risk private lending institutions hold. Such tactics, however, should be applied hand in hand with strict regulations that would prevent reckless lending to shaky business entities that cannot meet the credit requirements.

Education is found to directly and significantly affect entrepreneurship activity. Individuals with higher education are more likely to start their own business due to the skills acquired at school/university. This evidence is confirmed by both methods of research: the survey and the interviews. The figure below the average education related expenditure of a list of selected countries as a percentage of GDP.

Fig. 24 Education expenditure (% of GDP)



Source: Eurostat, 2009



Unfortunately, Bulgarian educational expenditure is lower than the EU average. Its level in 2009 is little more than 4%, far behind the leader Denmark with more than 8%. Ensuring long-term growth requires serious investments in education and human capital. Hence, Bulgarian government should re-consider its priorities list and increase its investment in education at least to the average EU levels. It is worth mentioning that effective investment in education does not only require bigger financial resources, but also relevant policies that take into consideration the rapid technological changes around the globe. In this context, establishing public-private partnerships between the government and businesses/universities/incubators can be a suggestion of particular value. The abovementioned private entities know better the market demands and trends in education and this knowledge is likely to improve the efficacy of the higher education in Bulgaria: a key prerequisite for creating capable individuals and successful future business owners.

#### **5.4. Areas for further research**

Having in mind the possible limitations of the current study, it can be suggested that there are areas where future research is of need in order to fully understand the factors that influence entrepreneurial development in Bulgaria. One of the main limitations of the current study is its inability to access a broader range of data. The relatively small sample size of the survey (100 respondents) meets the objectives of the current research paper, as it allows for drawing legitimate conclusions about the Bulgarian entrepreneurs and, at the same time, takes into consideration the limited available resources for conducting the survey. It will be a plausible idea, however, if any future research possesses the resources required for expanding the data base. This includes not only a larger sample size that would have the capacity to generate even more objective results, but also the involvement of a broader mix of interviewees with different business background.

The scope of future research can be enlarged beyond simply increasing the sample of accessed entrepreneurs. For instance, interesting hints can originate, if more attention is placed on examining the variations between the different entrepreneur groups. The observed differences based on business entities' years of experience and gender can serve as a starting point for further investigating the potential differences in these two demographic characteristics. In addition, the

current research could not generate plausible volumes of data that would allow for investigating the variations in terms of education, sector of operation and size. Therefore, future research is to be designed in order to find possible valuable clues that could allow for better understanding the nature of entrepreneurship in Bulgaria.

Another potential area of further investigation is the limitations related to selecting certain entrepreneurship determinants. As already discussed, the initial model proposed by Ahmad and Hoffman (2007) suggests the existence of 35 relevant entrepreneurship determinants. Based on the specifics in Bulgarian context, the necessity of optimizing the survey size and the evidence provided by Arboleda et al. (2009), the number of determinants was finally reduced to just 21. Although sufficient argumentation for implementing the reduced version was provided, one may argue that each optimization is likely to lead to possible loss of valuable information. Therefore, it will be relevant, if a well-funded research in the future has the capacity to investigate the relevance of the entrepreneurship determinants in Bulgaria by including all suggested determinants by Ahmad and Hoffman (2007). Thus, new valuable insights can be found accordingly, so that a better understanding of the problem is achieved.

Next, it should be mentioned that the results of the current study provide a detailed overview of the relevant entrepreneurship determinants in Bulgaria which can be effectively applied by policy makers and private organisations in improving the local business environment. While these results are valid in today's context, it should be noted that they deliver a snapshot of the current situation only. Eventually, Bulgaria remains a quite dynamic place where business innovations and converge policies to the richest European countries are applied. In this context, changes in business environment are likely to occur at a fast pace. Hence, investigating the topic should be done on a periodical basis, preferable every one or two years, so that a dynamic picture of the changes in entrepreneurship determinants is built. Thus, changes in official policies and private organisations' activities (incubators, financial institutions) can be pursued effectively depending on the periodic studies' outcomes.

## 6. Conclusion

This study focused on recognizing the major entrepreneurship development in Bulgaria in an attempt to understand the nature of business creation and propose a list of plausible policy solutions and recommendations that can further facilitate business climate in this post-communistic country. The topic was quite intriguing having in mind that Bulgaria is a market economy for a relatively short period of time and more than a quarter of its active population is engaged in entrepreneurship- one of the highest levels in Europe. Moreover, insufficient previous research suggested that more insights are of need in understanding what factors for entrepreneurship development are.

By accessing data from 100 survey participants together with the conduction of four personal interviews, it became possible to collect enough evidence that reveal not only the significant entrepreneurship determinants, but also outlined important insights about the differences among the various respondents' groups. In general results show that the important business development factors do not belong to a singly group. Instead, entrepreneurs can be motivated by culture and personal motivation factors (*risk taking, status*), resources-related factors (*technological access, supply of private business services, sources of financing, easy supply of equity capital supply of public business services, previous entrepreneurial experience, reliance of equity capital and education*), or institutional and regulatory ones, as well (*judiciary system functioning, corruption as a problem, physical infrastructure*).

Two important clarifications are also of need in fully understanding the research outcomes. Firstly, a great cohesion between the survey and interviews results is observed, despite the different methods of application, thus indicating the strong validity of the collected evidence. Second, a set of hypotheses was tested in order to find whether there are significant differences among the various demographic groups of participants. The results showed that differences indeed exist but they are marginal to explain any serious fluctuations between groups from a practical point of view. Hence, these differences cannot be used as a base of elaborating any meaningful recommendations and policy solutions.

By revealing the entrepreneurship development picture in Bulgaria, three major conclusions can be made. First, some factors have been reformed and work well. These factors capture the

existing taxation regime and the recent progress made in terms of physical infrastructure. Second, there is a lot of space for new reforms that can further improve the entrepreneurship environment in the country. A broad administrative reform aiming to reduce bureaucracy and hassle, more aggressive steps in fighting the persistent corruption, a broader range of public credit initiatives and government programs, as well as facilitated access to technology by establishing a set of incentives can be proposed as urgent actions in this direction. Last but not the least, some additional areas, such as incubators and private credit institutions' functioning together with more energetic investments in education should be evaluated as potential reserves for business creation and fostered economic development.

Despite the unambiguous evidence that have been produced by the current research paper, further steps for evaluating the entrepreneurship development in Bulgaria are to be made in the future. It is essential to understand that Bulgaria is a fast growing catch up country and periodical evaluation of the determinants' importance has the capacity to reveal the dynamic progress and the areas where improvements are to be done over time. In addition, a larger scale research will be on need in addressing all existing difference between entrepreneurs' size, nature of business, years of experience and so on. Testing a broader set of determinants and observing regional differences can also be proposed as plausible alternatives for further research. These proposals essentially aim to facilitate future research and help private organisations and policy makers in creating a better business climate in Bulgaria- a key prerequisite supporting the long-term income converge between Bulgaria and the advanced EU countries.

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## Appendix A

**Questionnaire (online at: <https://www.survey-xact.dk/LinkCollector?key=FTTCFFEX15CN> )**

Please assess the following statements from 1 to 5 (1-strongly disagree; 2-disagree; 3-neutral; 4-agree; 5-strongly agree)

1. My gender is....man/woman
2. My education is...high school/Bachelor/Master/Phd.
3. I have been an entrepreneur for .... Less than 1, 3-5, 5-10, more than 10 Years
4. What is the nature of your business?.. raw materials and agriculture/manufacturing/services
5. How many employees are hired in your business?.. less than 10, 10-50, 51 to 250
6. Being an entrepreneur/businessman provides me with a feeling of a higher status in a society.
7. I can describe myself as an individualist, rather than a team-player.
8. Income tax level in Bulgaria is justified and reasonable.
9. I can describe myself as a risk taker.
10. Corruption in Bulgaria is a serious problem for the development of my business
11. Organized crime is a serious obstacle for me to do business in Bulgaria
12. Private credit incentives stimulate business borrowing.
13. Public credit incentives stimulate business borrowing.
14. Judiciary system functioning is important for the success of my business.
15. Easy liquidation and exit is important for starting business at the first place.
16. Supply of equity capital is essential for business development.
17. Easy access to equity capital is essential for the development of my business.
18. Incubators facilitate business development.
19. Physical infrastructure is an important determinant of business development.
20. Spin-offs facilitate business development.
21. The supply of business services (private and public) is essential for the proper functioning of my business.
22. Access to technology is vital for business development.
23. Government programs and initiatives facilitate business development.
24. Previous entrepreneurship experience is a prerequisite for launching a successful venture.
25. The skills and knowledge acquired during my education (school/university) play an important role for my entrepreneurial development.
26. The availability of a wide range of financing strategies supports my business development.

## Appendix B

### **1. What is the nature of your business?**

R1: Merchandise of meat and meat products.

R2: E-commerce.

R3: Consultancy services.

R4: Grain production process

### **2. How long have you been involved in the current business and how many employees are hired at the present moment?**

R1: We have been involved in meat merchandise for 3 years already. We used to have 10 employees but the slump in demand forced us to leave only 4 employees.

R2: The business was set up several months ago. There are 3 employees currently.

R3: The consultancy firm was established exactly two years ago. The number of employees fluctuates. Two are permanently hired, while two more are engaged when seasonal demand is higher.

R4: Since 1996. The number of employees has been fluctuating. Recently, with the introduction of new and more efficient agricultural technologies, a part of the work force was laid off. There is also seasonality. Normally, around 80 employees are hired but during the winter months between December and March most of them are idle.

### **3. What are the factors that triggered you to start your own company?**

R1: The already successful previous business with a different product before that.

R2: An occupied market niche and the obvious opportunities for offering a well-diversified product at a market place with high growth potential.

R3: Lack of employment opportunities and the possibilities offered by modern technologies to reach individual customers across the world that can benefit from the knowledge in the fields of finance and marketing.

R4: The old agricultural cooperative went bust and that was a good opportunity to start a new business. The assets of the old cooperative could be acquired on a discount and the work force was available. Our municipality has traditions in agriculture, so all resources were available.

### **4. Which personal qualities have helped you in establishing your business?**

R1: Hard work, consistency and ability to work with people.

R2: Experience in business plans creation, entrepreneurial spirit, innovativeness and creativity. Endless commitment should also be added.

R3: Acquired educational experience combined with good organisational skills, belief in me and ability to focus on priorities. The desire to be different than the others and successful entrepreneurial were strong motivational factors, as well.

R4: The expertise acquired during my work in agriculture. Before setting up the business, I have had more than 10 years of experience in the field. Desire for change, self-determination and status in society were also drivers.

**5. How would you assess the possibility of being financed by the existing credit institutions in Bulgaria?**

R1: Very difficult.

R2: Small probability because the business is new and it has no history. Even if we get access to a credit, the conditions will be quite tough and unacceptable.

R3: I don't think any credit institution will be willing to provide eagerly credit facilities to my business. It is entirely equity financed.

R4: Recently, it is harder because interest rates are higher and banks are cautious. Otherwise, we have established a successful long-term relationship with the locally operating bank and credit is available.

**6. How would you evaluate the institutional framework for doing business in Bulgaria in terms of legislation system, infrastructure, corruption and organised crime levels?**

R1: Small and medium business enterprises have been systematically destroyed as a result of the government's policies. All institutional factors inhibit business development in Bulgaria.

R2: Extremely unstable with low level of effectiveness and low trust among the business community. Dealing with the Bulgarian institutions is time consuming due to the under developed administration, high levels of corruption and lack of competence. In terms of infrastructure, some progress has been made recently but what has been achieved is far from being enough.

R3: My business is not dependent on factors, such as infrastructure. Otherwise, the corruption level remains stubbornly high. Judiciary system is slow and inefficient. Organised crime is not longer an issue. It used to be a severe problem in the 1990s.

R4: This is an endless topic. I had to hire two people who are doing the administrative work only. Institutions work slow, there is high level of bureaucracy and many people with power require bribes.

**7. How would you assess the government and local authorities functioning in terms of creating a favourable business environment?**

R1: Good conditions for destroying the local business have been created.

R2: Quite inefficient and incompetent. Some improvements have been made recently.

R3: They are corrupted and do not work in favour of business owners. They create more obstacles instead of being helpful and supportive.

R4: It can be better at a government level. We are a 5,000 people municipality and the locals work ok. We just know each other and act responsibly to each other.

**8. Can you rely on government programs and subsidies for the development of your business?**

R1: No.

R2: No, because there are other priority areas for the government. For example, agriculture is one of them.

R3: No, subsidies are impossible. Otherwise, there are some initiatives but getting access to them requires time, efforts and knowing the right people at the right places.

R4: There are some. Subsidies are given through several channels. This is quite supportive for the business. Without the subsidies our competitiveness will be destroyed within the single European market.

**9. What is the role, if any, of the business incubators and other private initiatives for the development of your business?**

R1: Nonexistent.

R2: Nonexistent.



R3: They get popular in Bulgaria but they restricted their role to specific sectors, such as IT. Moreover, they are reluctant to provide solid financing by restricting the available capital to meager amounts, typically up to €5,000, as far as I know.

R4: We haven't worked with them so far and, as far I know, agriculture is not in a particularly interesting area for them to invest.

## **10. What recommendations can you provide for improving the business environment in Bulgaria:**

### **A) in terms of administration function?**

R1: I would like to see a well functioning administration where most of the procedures can be done electronically. The bureaucracy should be removed, as well.

R2: To be a factor that fosters business development instead of being a factor that inhibits business development.

R3: I would like to see a well-functioning administration where the number of procedures is reduced and where most of the procedures take place via the Internet like in the Western European countries.

R4: It should be improved by removing the hassle. Lower regulation and administrative burden is what I would like to see.

### **B) in terms of the private organisations and business incubators?**

R1: I don't know. Since banks are generally reluctant to lend, I would be happy to see helpful private driven financing initiatives.

R2: I would like to see a change in the banks' behaviour. They should open up to small businesses and offer better and more flexible conditions.

R3: They should be open-minded and enlarge the scope of their initiatives. I have the feeling that financial institutions and business incubators are too cautious. Perhaps, this is a normal behaviour having in mind the reckless lending prior to the crisis. However, there are good ideas and responsible businesses that deserve good attitude instead of being treated as too risky.

R4: I don't know exactly. Maintaining the good relationship with our bank is all we need currently.

### **C) in terms of better financing opportunities?**

R1: Low interest rate loans should be offered to the small business segment.

R2: I want to see a change in their lending requirements. For instance, they require the existence of a successful business history in order to lend to a small business enterprise and this is a serious problem for every young business.

R3: Currently, most of the small business enterprises are almost entirely financed with equity from their owners. Unfortunately, credit availability in Bulgaria remains restricted and this poses a serious obstacle for new start-ups and small business entities.

R4: We are a conservative organisation with predictable cash flows. Therefore, some lending for new machinery and short-term cash availability is what we need in terms of financing. Hence, we don't expect anything different in how financing works.

**D) in terms of institutional framework?**

R1: Bureaucracy should be removed and electronic administration should be introduced.

R2: Online administration introduction, lower levels of corruption and reduction of the administrative procedures.

R3: It should be more efficient and online based. This will reduce the level of corruption and the hassle when dealing with the administration.

R4: Better and more efficient administration.

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## Appendix C

Fig. 1 Homogeneity of variances (gender)

<b>Test of Homogeneity of Variances</b>				
	Levene Statistic	df1	df2	Sig.
Status	,020	1	98	,887
Sense of individualism	2,678	1	98	,105
<b>Income tax level appropriateness</b>	5,518	1	98	,021
Risk taking	1,520	1	98	,220
Corruption as a problem	,123	1	98	,726
Organised crime as a problem	2,195	1	98	,142
Availability of private credit incentives	,000	1	98	,983
Availability of public credit incentives	,002	1	98	,966
Judiciary system functioning	,156	1	98	,694
Easy liquidation and exit	1,626	1	98	,205
Easy supply of equity capital	,469	1	98	,495
Reliance on equity capital	,341	1	98	,560
Incubators appropriateness	,303	1	97	,583
Physical infrastructure level	,854	1	97	,358
Supply of public business services	,569	1	97	,452
Supply of private business services	1,147	1	97	,287
Technological access	,566	1	97	,454
Government programs	,555	1	97	,458
Education	,288	1	97	,593
Previous entrepreneurial experience	,007	1	97	,931
Sources of financing	1,910	1	97	,170

Source: SPSS

Fig.2 Descriptive statistics (gender)

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
Status	1	74	3,57	1,171	,136	3,30	3,84
	2	26	3,50	1,175	,230	3,03	3,97
	Total	100	3,55	1,167	,117	3,32	3,78
Sense of individualism	1	74	2,93	1,220	,142	2,65	3,22
	2	26	2,46	,989	,194	2,06	2,86
	Total	100	2,81	1,178	,118	2,58	3,04
Income tax level appropriateness	1	74	3,62	,975	,113	3,40	3,85
	2	26	2,62	1,235	,242	2,12	3,11
	Total	100	3,36	1,133	,113	3,14	3,58
Risk taking	1	74	3,76	,977	,114	3,53	3,98
	2	26	3,15	1,120	,220	2,70	3,61
	Total	100	3,60	1,044	,104	3,39	3,81
Corruption as a problem	1	74	3,65	1,199	,139	3,37	3,93
	2	26	3,19	1,201	,235	2,71	3,68
	Total	100	3,53	1,210	,121	3,29	3,77
Organised crime as a problem	1	74	3,15	1,235	,144	2,86	3,43
	2	26	2,85	,967	,190	2,46	3,24
	Total	100	3,07	1,174	,117	2,84	3,30
Availability of private credit incentives	1	74	2,82	1,012	,118	2,59	3,06
	2	26	2,65	,936	,183	2,28	3,03
	Total	100	2,78	,991	,099	2,58	2,98
Availability of public credit incentives	1	74	2,73	,997	,116	2,50	2,96
	2	26	2,73	,919	,180	2,36	3,10
	Total	100	2,73	,973	,097	2,54	2,92
Judiciary system functioning	1	74	3,91	1,088	,126	3,65	4,16
	2	26	3,77	1,142	,224	3,31	4,23
	Total	100	3,87	1,098	,110	3,65	4,09
Easy liquidation and exit	1	74	3,00	,936	,109	2,78	3,22
	2	26	2,96	1,076	,211	2,53	3,40
	Total	100	2,99	,969	,097	2,80	3,18
Easy supply of equity capital	1	74	3,62	1,131	,131	3,36	3,88
	2	26	3,77	1,306	,256	3,24	4,30
	Total	100	3,66	1,174	,117	3,43	3,89

Reliance on equity capital	1	74	3,57	1,111	,129	3,31	3,83
	2	26	3,62	1,098	,215	3,17	4,06
	Total	100	3,58	1,103	,110	3,36	3,80
Incubators appropriateness	1	73	3,04	1,098	,129	2,78	3,30
	2	26	3,35	1,056	,207	2,92	3,77
	Total	99	3,12	1,091	,110	2,90	3,34
Physical infrastructure level	1	73	3,41	1,234	,144	3,12	3,70
	2	26	3,58	1,102	,216	3,13	4,02
	Total	99	3,45	1,198	,120	3,22	3,69
Supply of public business services	1	73	3,68	1,039	,122	3,44	3,93
	2	26	3,54	,905	,177	3,17	3,90
	Total	99	3,65	1,003	,101	3,45	3,85
Supply of private business services	1	73	3,84	,958	,112	3,61	4,06
	2	26	3,92	,891	,175	3,56	4,28
	Total	99	3,86	,937	,094	3,67	4,05
Technological access	1	73	4,34	1,044	,122	4,10	4,59
	2	26	4,00	1,058	,208	3,57	4,43
	Total	99	4,25	1,053	,106	4,04	4,46
Government programs	1	73	2,93	1,206	,141	2,65	3,21
	2	26	2,85	1,287	,252	2,33	3,37
	Total	99	2,91	1,221	,123	2,67	3,15
Education	1	73	3,58	1,212	,142	3,29	3,86
	2	26	3,54	1,174	,230	3,06	4,01
	Total	99	3,57	1,197	,120	3,33	3,80
Previous entrepreneurship experience	1	73	3,56	,986	,115	3,33	3,79
	2	26	3,69	1,050	,206	3,27	4,12
	Total	99	3,60	,999	,100	3,40	3,80
Sources of financing	1	73	3,85	,953	,111	3,63	4,07
	2	26	3,73	1,151	,226	3,27	4,20
	Total	99	3,82	1,004	,101	3,62	4,02

Source: SPSS

Fig. 3 Homogeneity of variances (years of experience)

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
Status	,369	3	96	,775
Sense of individualism	,414	3	96	,743
<b>Income tax level appropriateness</b>	2,971	3	96	,036
Risk taking	,698	3	96	,556
Corruption as a problem	,333	3	96	,801
Organised crime as a problem	,960	3	96	,415
Availability of private credit incentives	1,172	3	96	,325
<b>Availability of public credit incentives</b>	4,518	3	96	,005
Judiciary system functioning	,728	3	96	,538
Easy liquidation and exit	1,351	3	96	,262
Easy supply of equity capital	2,262	3	96	,086
Reliance of equity capital	,410	3	96	,746
Incubators appropriateness	,421	3	95	,739
<b>Physical infrastructure level</b>	3,016	3	95	,034
Supply of public business services	1,073	3	95	,365
Supply of private business services	,657	3	95	,581
Technological access	,283	3	95	,838
Government programs	1,947	3	95	,127
Education	,608	3	95	,612
<b>Previous entrepreneurial experience</b>	4,047	3	95	,009
Sources of financing	1,508	3	95	,218

Source: SPSS

Fig. 4 Descriptive statistics (years of experience)

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
Status	1	28	3,50	1,202	,227	3,03	3,97
	2	33	3,58	1,119	,195	3,18	3,97
	3	17	3,94	1,144	,277	3,35	4,53
	4	22	3,27	1,202	,256	2,74	3,81
	Total	100	3,55	1,167	,117	3,32	3,78
Sense of individualism	1	28	2,68	1,124	,212	2,24	3,11
	2	33	2,58	1,226	,213	2,14	3,01
	3	17	3,12	1,111	,270	2,55	3,69
	4	22	3,09	1,192	,254	2,56	3,62
	Total	100	2,81	1,178	,118	2,58	3,04
Income tax appropriateness	1	28	3,61	,916	,173	3,25	3,96
	2	33	3,48	1,121	,195	3,09	3,88
	3	17	3,59	,870	,211	3,14	4,04
	4	22	2,68	1,359	,290	2,08	3,28
	Total	100	3,36	1,133	,113	3,14	3,58
Risk taking	1	28	3,61	1,031	,195	3,21	4,01
	2	33	3,67	1,021	,178	3,30	4,03
	3	17	3,71	,985	,239	3,20	4,21
	4	22	3,41	1,182	,252	2,89	3,93
	Total	100	3,60	1,044	,104	3,39	3,81
Corruption as a problem	1	28	3,64	1,193	,225	3,18	4,11
	2	33	3,39	1,223	,213	2,96	3,83
	3	17	3,88	1,166	,283	3,28	4,48
	4	22	3,32	1,249	,266	2,76	3,87
	Total	100	3,53	1,210	,121	3,29	3,77
Organised crime as a problem	1	28	3,21	1,197	,226	2,75	3,68
	2	33	2,79	1,244	,217	2,35	3,23
	3	17	3,47	,874	,212	3,02	3,92
	4	22	3,00	1,195	,255	2,47	3,53
	Total	100	3,07	1,174	,117	2,84	3,30
Availability of private credit incentives	1	28	3,04	,922	,174	2,68	3,39
	2	33	2,61	1,116	,194	2,21	3,00
	3	17	2,82	,951	,231	2,33	3,31
	4	22	2,68	,894	,191	2,29	3,08
	Total	100	2,78	,991	,099	2,58	2,98

Availability of public credit incentives	1	28	3,04	,693	,131	2,77	3,30
	2	33	2,33	,990	,172	1,98	2,68
	3	17	3,06	1,088	,264	2,50	3,62
	4	22	2,68	,995	,212	2,24	3,12
	Total	100	2,73	,973	,097	2,54	2,92
Judiciary system functioning	1	28	3,89	1,286	,243	3,39	4,39
	2	33	3,82	,950	,165	3,48	4,16
	3	17	3,94	1,088	,264	3,38	4,50
	4	22	3,86	1,125	,240	3,36	4,36
	Total	100	3,87	1,098	,110	3,65	4,09
Easy liquidation and exit	1	28	3,14	,891	,168	2,80	3,49
	2	33	2,91	1,156	,201	2,50	3,32
	3	17	3,18	,809	,196	2,76	3,59
	4	22	2,77	,869	,185	2,39	3,16
	Total	100	2,99	,969	,097	2,80	3,18
Easy supply of equity capital	1	28	3,75	1,041	,197	3,35	4,15
	2	33	3,45	1,325	,231	2,98	3,92
	3	17	3,82	,951	,231	3,33	4,31
	4	22	3,73	1,279	,273	3,16	4,29
	Total	100	3,66	1,174	,117	3,43	3,89
Reliance on equity capital	1	28	3,57	1,136	,215	3,13	4,01
	2	33	3,55	1,121	,195	3,15	3,94
	3	17	3,82	1,015	,246	3,30	4,35
	4	22	3,45	1,143	,244	2,95	3,96
	Total	100	3,58	1,103	,110	3,36	3,80
Incubators appropriateness	1	28	3,07	1,052	,199	2,66	3,48
	2	32	3,25	1,164	,206	2,83	3,67
	3	17	3,06	1,144	,277	2,47	3,65
	4	22	3,05	1,046	,223	2,58	3,51
	Total	99	3,12	1,091	,110	2,90	3,34
Physical infrastructure level	1	28	3,25	1,266	,239	2,76	3,74
	2	32	3,31	1,256	,222	2,86	3,77
	3	17	3,94	,748	,181	3,56	4,33
	4	22	3,55	1,262	,269	2,99	4,11
	Total	99	3,45	1,198	,120	3,22	3,69
Supply of public business	1	28	3,64	1,026	,194	3,24	4,04
	2	32	3,47	,983	,174	3,11	3,82
	3	17	4,06	,827	,201	3,63	4,48



services	4	22	3,59	1,098	,234	3,10	4,08
	Total	99	3,65	1,003	,101	3,45	3,85
Supply of private business services	1	28	3,96	,838	,158	3,64	4,29
	2	32	3,63	,942	,166	3,29	3,96
	3	17	4,00	,866	,210	3,55	4,45
	4	22	3,95	1,090	,232	3,47	4,44
	Total	99	3,86	,937	,094	3,67	4,05
Technological access	1	28	4,32	1,056	,200	3,91	4,73
	2	32	4,44	,948	,168	4,10	4,78
	3	17	4,29	,985	,239	3,79	4,80
	4	22	3,86	1,207	,257	3,33	4,40
	Total	99	4,25	1,053	,106	4,04	4,46
Government programs	1	28	3,18	1,020	,193	2,78	3,57
	2	32	2,91	1,376	,243	2,41	3,40
	3	17	2,65	1,272	,308	1,99	3,30
	4	22	2,77	1,193	,254	2,24	3,30
	Total	99	2,91	1,221	,123	2,67	3,15
Education	1	28	3,64	1,193	,225	3,18	4,11
	2	32	3,63	1,314	,232	3,15	4,10
	3	17	3,76	1,200	,291	3,15	4,38
	4	22	3,23	1,020	,218	2,77	3,68
	Total	99	3,57	1,197	,120	3,33	3,80
Previous entrepreneurial experience	1	28	3,57	1,136	,215	3,13	4,01
	2	32	3,38	1,100	,194	2,98	3,77
	3	17	3,76	,752	,182	3,38	4,15
	4	22	3,82	,795	,169	3,47	4,17
	Total	99	3,60	,999	,100	3,40	3,80
Sources of financing	1	28	3,93	1,152	,218	3,48	4,38
	2	32	3,75	,984	,174	3,40	4,10
	3	17	4,00	,791	,192	3,59	4,41
	4	22	3,64	1,002	,214	3,19	4,08
	Total	99	3,82	1,004	,101	3,62	4,02

Source: SPSS