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MASTER'S THESIS

DETERMINANTS TO SME GROWTH IN KOSOVO

Ljubljana, March 2015   ALBINA KASTRATI

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INTRODUCTION

Prevailing wisdom through the early and mid-20th century led the attention of researchers to investigate the determinants of large firms' growth, due to the general perception that large firms grow faster than small firms, and therefore benefit the general economy more significantly. Policy makers believed that large firms were the motor of the economy within a country (Galbraith, 1967; Schreiber, 1968 & Prais, 1976). Recently, this perception has changed and researchers have started to recognize the role of Small and Medium Enterprises (hereinafter: SMEs) in job creation, innovation and general development of the economy within a country.

Today, many countries see SMEs as the main source of job creation, and as a result they pay attention to the growth trends among these firms. Khan (2004, p.3) considers SMEs as the driving force for the promotion of an economy. Today, in the EU, SMEs account for 99.8 percent of total enterprises (only 0.2 percent are large firms). Speaking in terms of employment, SMEs account for 66.9 percent of total businesses (Wymenga et al., 2011), while in regard to innovation, the rate is considerably in favor of SMEs as compared to large firms.

Given the importance of SMEs, researchers have become thoroughly involved in understanding the determinant factors of their growth. While existing studies have provided extensive insight into the relationship of SMEs with internal and external factors in various regions, some regions and countries have received less attention, especially given a lack of data. One of these countries is Kosovo. Kosovo was the last country to begin the transition process from a controlled economy to free market in the Western Balkans. With a population of 1.7 million, around 40% of Kosovo's labor force is unemployed. This has resulted in substantial social and political tensions, with poverty, migration and crime being constant threats in Kosovo. The inability of the private sector to create new jobs, largely as a result of the hostile economic environment, has significantly handicapped the prospect of economic development in Kosovo. SMEs in Kosovo, similar to other countries, account for more than 99% of total firms, and represent the main potential for economic growth and sustainable development.

The purpose of this thesis is to conduct empirical research that will analyze the factors that impact SME growth in Kosovo. Understanding these factors and their respective intensity can help design policy recommendations that would inform relevant policy makers to provide a more a stable and incentive-driven economic environment.

Throughout this thesis, I make use of Riinvest Institute data gathered in 2011 by a survey of 600 randomly selected SMEs across Kosovo, in an attempt to understand the current operational conditions for active firms in Kosovo. The data provide a thorough review of

individual and firm characteristics, trends, potentials and barriers in the surveyed year. I later employ a Probit technique to estimate a model that is constructed following a literature review. The review aids in understanding the relevant factors identified in other similar studies and also helps us to set the hypotheses for our estimations.

This thesis is organized as follows.

- **Section 1** provides a detailed literature review of SME growth determinants. These determinants are grouped into four main pillars, namely institutions, business environment, human capital and firm characteristics. Through these groups, the most relevant factors that have been investigated across the literature are defined.
- **Section 2** provides a country profile for Kosovo, underlying its recent economic and political history, its actual socio-economic numbers and the importance of studying SMEs for Kosovo.
- **Section 3** provides a general model specification which will serve as a base for estimation.
- **Section 4** of this thesis elaborates on the data, including sample characteristics as well as descriptive statistics of dependent and independent variables in the model.
- **Section 5** discusses econometric issues, focusing on Probit technique and its characteristics. A specific interest is given to the diagnostic tests of the estimation. Results are interpreted following the diagnostic tests.
- **Section 6** concludes by providing a set of policy recommendations designed to inform policy makers in Kosovo, as well as relevant stakeholders in this field.

1 LITERATURE REVIEW

Given the importance of SMEs on employment, economic growth and on balanced development throughout the country, it is critical to understand the determinants of their growth. The purpose of this research is to provide empirical analysis to investigate the main determinants of business growth in Kosovo, and provide a set of policy recommendations that could be of interest to various stakeholders.

Literature on SME development generally acknowledges two main methods to measure the growth of SMEs. The first method looks at the changes in sales trends within a specific calendar year. If firms had an increase in sales as compared to the previous year, with all other things constant, then one can argue that the firm experienced growth. The second method is a less direct measure of growth, looking instead at the number of additional people employed by a firm within a calendar year. This thesis will focus on measuring the growth of a firm through sales trends.

Following a review of literature, for the purpose of this thesis, I have identified a set of determinants that lead to the growth of SMEs. I note, however, that there is no single theory which provides a generalized framework of SME growth (Rordiguez et al., 2003). The barriers or determinants of SME growth can be largely divided into external and internal factors. The general consensus among several studies on transitioning economies is that the external determinants - including level of corruption, legal environment, financial institution, regulatory and taxes - are far more important for SMEs growth than the internal determinants such as individual firm characteristics.

The following section will present the categories of determinants that impact the growth of businesses. The review of these determinants will also act as a basis for model specification in our study.

1.1 Institutions

Institutional factors are mainly external determinants, i.e. out of firms' control, that can promote or constrain the firms' growth. The vast majority of studies dealing with transitioning economies, argue that these factors tend to be the main determinants in firms' growth. Institutional determinants can be manifested in corruption, legal systems, level of crime, and functionality of judiciary systems (Store, 1994; Smallbona & Welter, 2009).

Largest part of the firm theory argues that in transition economies the role of institutions such as legal environment, law, contract enforcement and other institutional factors are crucial to firms' growth (Karsson & Karsson, 2002). There is evidence from different studies that the lack of institution performance impacts SME growth (Aidis & Estrin, 2006; Bartlett & Bukvic, 2001; Hashi 2001; Bartlett & Prisnicar, 1995).

Corruption is one of the most pervasive obstacles to economic and social development (Wang & Jing, 2012). Shleifer and Vishny (1993, p.2) define corruption as personal gain of public officials through government properties. The general consensus in relevant literature is that corruption raises operational costs, creates uncertainty, and thereby deters investment (Gaviria, 2002; Smarzynska & Wei, 2000). Kimuyu (2007, p.203), using firm level data for Kenya, finds that manufacturing firms that receive government contracts pay an average 14.2 percent as bribery to persons that help win those contracts. They also find that differences in firms' size and location are factors in exposure to corruption.

Small and medium firms are more exposed to corruption than the large and micro firms. Most of the studies find that corruption has a negative relationship with firm growth, and reduces the possibility of firms to extend their business in external markets. Aidis and Michiewicz

(2006, p.25), in a survey of 400 firms in Lithuania, also found that corruption as a business constraint has a negative relationship to firms' growth.

Beck et al. (2005, pp.148-151) in a macro study, using a survey covering 54 countries, found similarly that SME's that operate in less developed countries are characterized with higher levels of corruption and tend to encounter more obstacles that affect their growth. They further suggested that reduction of corruption helps significantly in the development of SMEs.

Asiedu and Freeman (2009, pp.204-206) also find that corruption is an important obstacle to firms' growth in transitioning economies. Their study found that among all variables included in the regressions (size of the firm, GDP growth, industry and inflation amongst others), corruption is the main determinant of investment growth in transition economies. Batra et al. (2003, p.3), in a survey of 81 developing and developed countries, found that corruption has a negative impact on firm investment, and consequently on firm growth.

Regardless of the intuition and commonness of empirical studies in relation to corruption, another, less common view of theoretical considerations underlines a positive relationship between corruption and firm growth. For instance, Rose-Ackerman (1996, p.370) explains the positive relationship in this way: when the government is a contractor, a firm may use corruption as a method of gathering information, which will enable the paying firm to be in a winning position. In that way, this particular business will expand its activities and investments, and contribute to the total growth of its assets. In other words, for the specific firm engaging in corruption, the corruption itself might be beneficial.

Corruption can be explained also as cost-reducing (Bliss & Di Tella, 1997). This is the case when a corrupt firm reduces the cost in implementing a public service, by way of paying a bribe to an officer, enabling the firm to be the benefitting party. Although corruption can be beneficial for one single firm, its indirect costs are more damaging in a broader context. For instance, corruption might help one firm but it will cause unfair competitive practices in specific sectors and act as a negative force against the size of other firms.

Legal environment is a proxy for legal performance within a country. Many previous studies conclude that the inability of a country to enforce contracts or ensure property rights will increase the operating costs and uncertainty of businesses, and thus restrict their growth potentials and performance (Manolova & Yan, 2002; Beck et al, 2005). Deficiencies in legal system considerably damage business potential to generate financial resources, which consequently also hamper their growth potentials and investment capacities (Demirguç-Kunt & Maksimovic, 1998).

In another study for Bulgaria, Manolova and Yan (2002, p.30) find that the legal environment is one of the main obstacles for firm growth. Krasniqi (2006, p.24) in a case study for Kosovo also reaches similar results. Balcerowic et al. (1998, p.12), in a case study of Polish firms, find that the strongest negative effect in firms' growth is frequent change and non-transparency in laws and regulations. For Hungary, Balcerowic et al. (1998, p.17) find that change and non-transparency in laws and regulations have a high impact on firms' performance.

Bureaucracy is the measure of bureaucratic presence within a business environment. Bureaucracy may have two opposing effects. On one hand, it may decrease incentives for an individual to launch a new venture. On the other hand, bureaucracy may increase an individual's exposure to innovative opportunities, due to employers' unwillingness or incapability to follow internally generated ideas, and thus make employees of bureaucratic firms more likely to pursue those ideas through new initiatives (Sorensen, 2005).

1.2 Business environment

Business environment factors are also external determinants. The business environment is multidimensional in several ways, as it covers dynamism of business environment, technological opportunities, industry growth and the market demand for products. External barriers play an important role in small firm growth (Hallberg, 2000; Bartlett & Bukvic, 2001; Hoshi et al, 2003). Estrin et al. (2005, p.4) explain the roles of institutions to contribute, through the business environment, to the growth of SMEs. The first role is through the introduction of easier regulations for start-up businesses. The second role implies the inclusion of more a favourable environment, which in turn improves firms' performance and growth.

The government can enact policies that stimulate the expansion of firms, and that this is possible through a safe environment in which the businesses can predict the future and make their investments in low risk circumstances (Baumol, 1990).

The following section will review the tax environment (through tax rate), financial constraints, competition and infrastructure as the most common business environment determinants.

Tax rate is a proxy for the levels of tax rates within a country. Higher tax rates influence significantly the potential for business growth, as they tend to reduce the purchasing and financial power of businesses (Bohata & Mladek, 1999; Hashi, 2001). Higher taxes mean less money on hand for businesses, and subsequently less opportunities for investments, which would drive growth. Furthermore, several studies on transitional economies (Bohata & Mladel, 1999; Hashi 2001; Bartlett & Bukvic, 2001) highlight that high tax rates should be considered important formal barriers for SME growth.

Balcerowicz et al. (1998, p.12), in a sample study of 400 established firms in Poland, found that tax rates and other contributions substantially affect the growth of SME. The findings demonstrated that increasing tax rate levels during the survey period increased the cost of operation and decreased the profit; which consequently had a negative effect on SME growth.

Financial constrains represent the financial costs, access to financing and the level of financial institutional development within a country. Costs of financing in transitioning economies are very high, thus limiting the potential for firms' growth. The sources of increased financial costs, i.e. interest rates, are many, starting from transaction costs and asymmetric information that exist between banks and borrowers, to informality and the incapability of business environments to produce sustainability (Beck, 2007).

Firms that operate in profit have easier access to external financing, as banks or other investors consider these firms as safe investments (Chan et al., 1985). Brown et al. (2005, p.35) in a study of SMEs' growth in Romania find that access to loans is an important determinant in sales growth. The results of this study showed that external financing is considered a huge constraint on firms' growth. Beck et al. (2005, p.145), in a study of 54 countries, found that procedures applied by banks, such as collateral requirements, paperwork and other similar regulations, do constrain significantly the access to financing from firms, which in turn affects the firms' growth. Several studies saw that the development of financial systems in a country also affects SME's growth.

Demirguc-Kunt and Maksimovic (1998, p.2125), in a study using firm level data, found that in countries with developed financial institutions, firms obtain more external financing than firms in countries with less-developed institutions. In transitioning economies, one of the most important sources of financing for firms' investment is retained earnings. This is the case because financial institutions are not well developed, and the cost of borrowing is very high, making investments expensive and thus limiting the growth.

In general, firms that operate in industrial sectors with a high need for external financing grow less in transitioning economies where financial institutions are less developed than in developed countries (Rajan & Zingales, 1998).

Competition is a measure of competition within a business environment. Higher competition results in fewer opportunities for a firm, while more power in the market results in fewer obstacles for a business. Competition poses difficulties for small firms, especially in the early stage of their formation (Nunez-Oviedo & Clement 2008).

Infrastructure is a proxy for infrastructural development within a country. Wide literature has reached a consensus that infrastructure matters in almost all areas of economy. Amongst many, for instance, low quality of roads increase business costs by imposing several barriers towards transportation and business trade. Low quality roads also hamper the access of rural areas to wide markets.

Munel (1990, p.6), in a study of the US market, finds that the level of infrastructure (which is summarized by the presence of highway, roads, water and energy supply capacities) impacts severely the firms' growth. He argues that higher levels of infrastructure were followed usually and most commonly by businesses that had higher rates of growth. The study found that, also that public capital and the states' investments have a positive and significant impact in private output generated especially by SME's.

Similarly, other studies found that public investments within a region had a positive impact on private output (Ebers, 1986; Aschauer, 1990; Mitra et al., 2002; Calderón & Serven, 2003).

1.3 Human capital

Human capital impact on firm growth has been acknowledged by many researchers in both developed and developing countries. Individual characteristics of owners in regards to gender, education and age appeared to be quite significant in supporting firm growth (Sluis et al., 2005).

Gender has been considered as one of the most important individual characteristics in firm studies related to growth. It appears constantly across various empirical studies treating firm growth. In recent years, the role of women in business has grown in both developed and developing countries alike, particularly in Europe and the USA, but there is still a considerable gap between the performances of businesses owned by men and women.

Various studies (Van der Wees & Romijn, 1987; Lowe & Bentson, 1984; Kalleberg & Leicht, 1991; Fischer et al., 1993), suggest that the gender differences are affected by institutions and culture amongst many other factors. This is because several intermediate institutions, including for instance banks and lending institutions, tend to be more restrictive towards female owners.

In addition, women generally tend to be more disadvantaged compared to men in regards to their ownership in assets and inherited wealth, which in turn affect their capability to finance their business activities. Other factors affecting gender differences include the lack of higher-level education among women, levels of experience, and female responsibilities for child and

home care make women more disadvantaged compared to men. Brush (1992, pp.8-9), in her literature review, explained this disadvantage as a tendency of business women to balance economic goals (profit and growth) with non-economic goals (product quality, personal enjoyment and helping others). Other studies suggest that women may face more barriers in running SME's as they have fewer opportunities and smaller networks (Sexton & Robinson, 1989).

Other studies, (Fischer, 1992; Fischer et al., 1993; Rosa et al., 1996; Fasci & Valdez, 1998; Du Rietz & Henrekson, 2000; Watson, 2001; Cooper, 1994) using gender as independent variable in firms' growth models, found that female owned businesses are less likely to grow, as compared to their male-owned counterparts. Rosa et al. (1996, p.467) however, concluded that gender is not a primary determinant as compared to the others.

Some other studies (Kalleberg & Leicht, 1991; Chell & Baines, 1998) find no significant difference in performance of women compared to men. Papadaki and Chami (2002, p.8) in a study of micro-businesses in Canada find no relationship between firm's growth and gender. Their study shows that businesses owned by women perform as well as businesses owned by men. The same results are concluded by Johsen and McMahon (2005, p.129) in a study of 2000 SMEs from Australia.

Education is a measure of the educational level of a firm owner or manager. It is believed that higher education is expected to give entrepreneurs more opportunities in the market. Cooper et al. (1992, p.22) finds that having a bachelor's degree provides more likelihood for firm's growth.

Conversely, Brown et al. (2005, p.35), in a study of Romania, found that high school completion of an entrepreneur has a positive impact on firm growth while university education and education of workers does not have any impact.

Age is a proxy of the age of owner, or manager in charge of a business. The literature suggests that younger entrepreneurs are less risk averse and hence may grow their businesses more as compared to older, typically more risk averse entrepreneurs. Davidsson (1991, p.415-418) argues that owners' ages tend to have negative relationships with growth. He also argues that younger managers have more need for additional income and are more motivation to increase their business.

To the contrary, Papadaki and Chami (2002, p.33), in a study of micro-businesses in Canada, found no significant relationship between owner/manager age and firm performance. Other studies (Store, 1994) have even found that middle-aged entrepreneurs have more experience, energy and resources, and in that way are more likely to grow their business than young

entrepreneurs that have more energy but less experience, or older entrepreneurs that have more experience and resources but less energy.

1.4 Firm characteristics

Firm characteristics represent the very last group of determinants identified to impact the growth of firms. Note that different characteristics across firms have different impacts on their growth. The size, experience, and legal status, amongst others, all affect the behavior and performance of the firms.

The relationship between **firm size** and growth is an issue that can be analysed following two schools of thought. One subset of literature, based on Gibrat's Law, argues that there is no relationship between growth and firm size. Acs and Audretsch (1990, p.572), in a study of US businesses, found evidence supporting Gibrat's law, concluding that the size of manufacturing firms was not related to their growth. Similar findings were reached in many other studies (Wagner, 1992; Fulton et al., 1995; Kumar, 1985).

The second subset of literature argues that smaller firms tend to grow faster. Small firms are more readily adapted to environmental changes and are more flexible than large firms. Smaller firms who have one or few decision makers react faster and more easily to new potential ideas or opportunities. This flexibility makes them more adaptable to a business change, which results in higher growth rate (Franicevic & Bartlett, 2001).

Evans (1987, p.2), in a study making use of 24,244 firms, referring to the period from 1976 to 1980, found a negative relationship between size and growth. Hart and Oulton (1996, p.234) found the same relationship in a sample of 29,230 firms in the UK for the period 1989-1993. Numerous other studies found the same relationship between size and growth (Almus & Nerlinger; 2000; Farinas & Moreno, 2000; Bartlet & Bukvic, 2001).

Firm age is an important determinant of firm stability, which consequently impacts firm growth. Many studies support the Jovanovich (1982, pp.655-657) theory, which argues that firms learn about efficiencies over time and hence are more likely to express growth rates. Evans (1987, p.23), in a study with 100 manufacturing firms, finds a negative relationship between firm growth and firm age; the probability of firm growth decreases as firm age increases.

Dunne and Hughes (1994, pp.123-125), in a sample of 2000 manufacturing firms, find a negative relationship between firm's growth and age. Similarly, Yasuda (2005, p.366), in a sample study of firms' growth in Japan, finds that firm age has a negative impact on firm growth but a positive relationship with firm survivability.

Some studies have also investigated the interactive relationship between size-age and growth. Brock and Evans (1986, p.17) found that firms with less than 25 employees tend to have growth decrease with firm age, but increase with firm age in firms with more than 25 employees. Other studies have also shown that smaller and younger firms grow at higher rates than the larger and more mature firms (Hart, 2000).

Legal status is a representation of the legal status of a firm. Studies have found that limited liability companies have higher experience and are thus more likely to have higher growth trends (Store, 1994; Almus & Nerlinger, 1999; Davidsson et al., 2002).

Others instead, have argued that unlimited liability firms have higher growth than limited firms (Dietmar, 1998). Business governance has been suggested to affect firm growth, too. For instance, while studying the role of business governance in firms' operations, find that independent firms grow faster than corporations (Davidsson et al. 2002). Central decision makers within firms tend to have significant roles in firm growth; when ownership is separate from control of firms, managers who run the firm tend to take more risks and consequently enhance profit.

Some studies suggest that geographic location of firms (**region of the firm**) may be linked to growth opportunities. Davidson et al. (2002, p.342), in a study of Swedish firms, find that firms that operate in areas with small communities grow slower than those located in the capital area. In contrast, a study of UK firms by Store (1994, p.20), suggests that firms located in rural areas grow faster than those in urban centres, while, Almus and Nerliger (1999, p.148) do not find any correlation between location and firms' growth, based on population density as the primary location variable.

Niskanen and Niskanen (2007, p.145) reach the same conclusion in a study of Finnish firms; they measure the location using a dummy of variable whether the firm is location in capital area or not, but they find no significance between growth and location.

The figure below provides a summary of the determinants of SME growth as reviewed in this thesis.

Figure 1. Determinants of Business Growth

INSTITUTITONS
- Corruption
- Rule of law
- Bureaucracy

BUSINESS ENVIRONMENT
- Tax Rate
- Financial constraints
- Competition
- Infrastructure

HUMAN CAPITAL
- Gender of the owner
- Educational level
- Age of the owner

FIRM CHARACHTERISTICS
- Size of the firm
- Age of the firm
- Legal Status
- Region of the firm

2 KOSOVO – COUNTRY PROFILE

Kosovo is located in the Western Balkans, and – following a set of political developments – is the very last country from the region to embark on the road towards the market economy. Kosovo, unlike other countries from the former Yugoslavia, begun the real transition process after the 1999, when the war with Serbia ended through a NATO military intervention.

The intervention and an international administration put in place ended also the colonial ruling that Kosovo was suffering since 1990 – when most of ex-Yugoslavia countries have entered the transition process. In year 2000, Kosovo started benefiting from a huge flow of donations from international community, which helped country a lot. They were initially oriented towards building institutional capacity of the country – by creating institutions from the scratch. It must be noted that these donations did not target the general business environment; they were – and still remain within the field of technical assistance.

The general needs that were in place following the war, such as those related to employment and poverty reduction were not of a priority. Having said that, SMEs and other business operating in Kosovo faced lack of support and hence country moved towards heavy reliance on imports.

In the first years after the war, the economic growth of the country reached double digits – this growth pattern lasted only for the first two years and was driven and determined mainly from the international help (IMF website April, 2014). However, starting from the year 2008, when the independence was declared - the growth rates, though steady, became sluggish; they were averaging roughly about four percent in coming years. The economic growth of Kosovo throughout these years, according to Riinvest (2012, p.3) was driven mainly by consumption and public expenditure, while the importance of foreign aid and donations was there too. And although investments were increasing they were still insufficient to help domestic production which remained unsatisfactory, leaving still the country defendant mainly on imports.

I note that according to SOK (Statistic Office of Kosovo; 2012, p.8) Kosovo exports every year only 293 million EUR of goods and services; while imports around 2.5 billion EUR. Moreover, the dependency on importance and high – unfavorable – trade deficit is increasing from year to year. Over the past five years, for instance, according to SOK (2012, p.12), the imports have increased from 1.9 billion EUR to 2.5 billion EUR per year. Exports on the other side have remained the same, improving only by 1 million in 2012 as compared to 2007. The main trade partners of Kosovo are Serbia, Macedonia, Turkey and Germany; notably most of the regional countries.

Other macroeconomic figures are also far from impressive. For instance, according to SOK (2012, p.14) Kosovo today with 1.7 million inhabitants – most of which live in urban areas – has an unemployment rate of around 41%. Moreover, according to SOK (2012, p.18) more than 12% of Kosovars lives in extreme poverty with daily income of less than dollar. As argued by EU Progress Report (2011, p.16), though the growth rates in Kosovo were amongst highest in the region, they failed to translate into job creation opportunities or poverty reduction inputs.

An important element when analyzing the economy of Kosovo remains the presence of very young population. According to Riinvest (2013, p.3), more than 65% of total population is aged below 35 years. In addition, Kosovo is also experiencing a high growth rate of population, with more than 30.000 new entrances in labor market every year. In other words, though new jobs are being created in Kosovo, the fact that country has very high number of entrances, keeps the unemployment rate constant.

The lack of new jobs, in turn, has also impacted migration throughout these years. Migrants, in turn, have provided an additional source of survival and social stability – that is remittances. According to UNDP (2012, p.16), Kosovo receives around 600 million EUR in form of remittances every year. This important input has failed, unfortunately, to translate into a good growing opportunity, as – according to Riinvest (2012, p.12) – around 97% of money received from diaspora goes for consumption.

Again, given the high trade deficit and dependence on imports, most of the money that flows in Kosovo from diaspora, goes abroad again. In addition, though remittances are important factor for maintaining current social stability in the country, they still remain unsustainable source of growth, as Kosovo is experiencing the problem of third generation; which is a term used to describe the children of migrants that have lost and will lose ties with Kosovo.

Table below provides some of the main economic indicators of the country, as well as the projections for the forthcoming years (IMF website, December 2013). The table provides a summary of growth patterns in regards to main economic indicators. As can be seen from the table, the IMF projections for the future forecast a growth rate of – roughly 5% - which remains unsatisfactory in order to address main unemployment problems of the country.

Encouraging, however, remains the projected growth rates of exports, which are foreseen to increase by roughly 10% every year. Growth in exports, combined with an eventual fall in the growing trend of imports, means that, according to IMF, country is foreseen to improve considerably the trade deficit.

Table 1. Kosovo Main Indicators, 2010-2018

Variables in %	2010	2011	2012 Est.	2013	2014	2015 Project.	2016	2017	2018
Real growth rate									
GDP growth rate	3.2	4.4	2.5	2.5	3.9	4.5	5.0	4.5	4.5
GDP per capita	1.7	3.0	0.9	1.0	2.4	3.0	3.4	3.0	3.0
Consumption	1.9	2.1	1.9	2.2	3.8	3.0	3.3	2.9	3.0
Investments	12.3	11.3	-11.8	-1.1	1.4	7.3	8.1	7.8	7.8
Exports	13.0	8.3	0.7	5.3	10	11.9	12.2	10.5	9.2
Imports	8.5	5.3	-7.2	0.8	4.6	5.7	6.2	5.7	5.6
Price change									
CPL period average	3.5	7.3	2.5	1.9	1.8	1.5	1.5	1.5	1.5
CPL end of period	6.6	3.6	3.7	1.5	1.5	1.5	1.5	1.5	1.5
Import prices	6.5	6.3	4.3	-2.2	0	-0.4	0.2	1.1	-0.2
GDP deflator	3.7	6.5	0.5	2.1	2.0	2.0	2.0	2.0	2.0
General government budget (% of GDP)									
Revenues, incl. interest income	3.2	4.4	2.5	2.5	3.9	4.5	5.0	4.5	4.5
Primary expenditure	1.7	3.0	0.9	1.0	2.4	3.0	3.4	3.0	3.0
Of which									
Wages and salaries	12.3	11.3	-11.8	-1.1	1.4	7.3	8.1	7.8	7.8
Subsidies and transfers	6.3	5.7	5.9	6.1	6.0	5.9	5.9	5.9	5.9
Capital and net lending incl. highways	11.7	11.5	11.3	10.3	9.5	9.4	9.4	9.4	9.4
Capital expenditure on highways	2.9	5.4	5.7	4.7	2.5	3.2	3.6	2.7	0
Overall balance	-2.3	-1.8	-2.6	-2.1	-2.2	-2.2	-2.2	-2.2	-2.0

Source: *2012 IMF, Country Report Financial System Stability Assessment,* Table 4.

In regards to the main macroeconomic indicators, currently Kosovo has a GDP of around 5 billion EUR; translating thus into a GDP per capita of roughly 2,900 EUR (Ministry of Finance of Republic of Kosovo, 2013). The current per capita of Kosovo is almost half of the Republic of Bosnia and Herzegovina (BiH); is almost third of Republic of Macedonia and Republic of Albania, and is almost fourth of the Republic of Serbia.

Table 2. Kosovo GDP Growth Rates, 2006 – 2012

	GDP at constant prices (in millions of EURO	In %
Year 2006	3,105.10	3.40
Year 2007	3,379.40	8.30
Year 2008	3,710.70	7.20
Year 2009	4,077.00	3.50
Year 2010	4,136.50	3.20
Year 2011	4,486.00	4.50
Year 2012	5,021.00	2.90

According to the World Bank estimates in 2012, Kosovo's economy would need to grow each year by 10%, for the next ten years, in order to reach Republic of Albania ten years after – assuming of course that the growth rate of Albania will be in the region of 5% per year. The targeted growth rate can be hardly reached – if not impossible – without substantial improvements on private sector in Kosovo, most notably in SME's, which can in turn provide sustainable growth rates in continuity.

2.1 SME CHARACTERISTICS IN KOSOVO

As in almost every regional country, SME's are the main form of business organization operating in Kosovo. According to the Tax Administration of Kosovo (hereinafter: TAK) they represent around 96% of all active businesses in Kosovo. SME's in Kosovo, though facing various obstacle are the main source of job creation, hence they play a very important role on potential economic development of the country (TAK, 2014).

According to UNDP (2012, p.6), SME's are essentially important for reduction of poverty and extreme poverty. And for the past few years, the government, international actors and independent opinionates have all argued that for a country to be sustainable, a drastic reform on business environment which enables the growth of SME's is required (Riinvest, 2012).

So, SME development in Kosovo is not important for economic growth, but is essential in increasing employment and thus reducing the high unemployment rate, essential for delivering equal regional development, and is essential for engaging youth and women – as groups with great unemployment difficulties.

In order to reach that, many countries today provide incentives for entrepreneurs, so that their SME's can remain very competitive and can grow rapidly in order to provide additional value to the market. Through SME's countries improve their trade misbalances, and as is the case with Kosovo that has huge trade deficit, the growth of SME's can contribute on its reduction. By creating values, by producing and servicing SME's not only can substitute imports – especially of those goods and services that can be easily substituted from Kosovo, but can also provide a profound base for exports; in areas where Kosovo has comparative advantages to the regional countries.

SME's and private sector in general, have been increasingly important for the employment of women. The impact has been of importance on both formal and informal sectors. As is the case with most of developing countries, women – especially in the rural areas are less educated, live in poorer conditions (compared to women living in urban areas), hence setting up a private business helps them get out of the poverty. Kosovo has specific interest to help SME's grow in rural areas not only for the purpose of general employment, but also for the sake of advancing the position of women in such region.

Today in Kosovo, the number of SME's varies across the agencies that record such data. Ministry of Trade and Industry (hereinafter: MTI) has a database which includes all registered businesses. The number of registered business in Kosovo is around 110.000. But, as acknowledged by MTI itself, this number is not realistic. Most of the registered SME's are inactive or have seized to exist, but due to lack of proper update of the database the number has remained same.

TAK has a better database at disposal, which involves those businesses that have acquired fiscal number. A fiscal number is mandatory for active businesses operating in Kosovo. According to TAK, there are 65.000 businesses operating in Kosovo. This number has served as a starting base for most business and economic studies in Kosovo.

Based on MTI official data, and the TAK data, the enterprises are distributed as follows:

Table 3. Registered Enterprises in Kosovo

| Size	Number of employees	%
Micro enterprises	1 to 9	98.37
Small enterprises	10 to 49	1.35
Medium enterprises	50 to 249	0.22
Large enterprises	250 or more	0.06
Total		100.00

Source: *2012 MTI, Private Sector Development Strategy 2013-2017,* Table 6.

As can be seen from the table, the vast majority of firms in Kosovo are consisted of micro-enterprises, with 1 to 9 employees; roughly 98.37 % of the firms in Kosovo are micro. The percentage – one must note – is similar to the regional countries, most notably to Albania and Macedonia.

The second group consists of small-enterprises, with 10 to 49 employees; around 1.35% of the firms in Kosovo are small ones. Kosovo has only 0.22% of medium enterprises, while the large firms consist of 0.06% of total number of businesses.

Further, according to the regional distribution of SME's, the region of Prishtina has the largest number of businesses. Around 20.000 firms (almost one third of total active businesses) operate in this region; followed by roughly 9.500 in the region of Prizren, and by 6000 for Ferizaj, Peja and Gjilan.

Figure 2. Regional Distribution of Enterprises
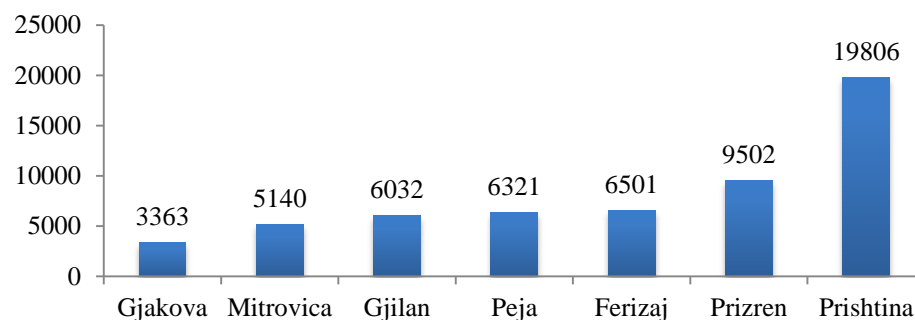
Source: *2012 MTI, Private Sector Development Strategy 2013-2017,* Table 7.

One can note that largely, the number of enterprises follows the same path as does the number of population that is distributed around Kosovo (SOK, 2011). Prishtina has the largest market

in Kosovo because it is the most populous city. This in turn provides sufficient incentives for the firms to operate around this region. But this is not the only reason why firms are concentrated around Prishtina. One can fairly argue that most of the administrative, logistic and other facilitating activities occur in the capital city; hence increasing the attractiveness of the business.

As no surprise come last two regions, that of Mitrovica and Gjakova. Both regions, prior to the war and especially during ex-Yugoslavian ruling before 90's, were fully depended on heavy industries. Most of the country's factories were located in these two cities. During the 90's and Serbian ruling, these cities suffered most deindustrialization – given their heavy dependence on industry.

In addition, both cities suffered from the war and post war consequences mostly. Gjakova is known for being the most damaged city during the war, while Mitrovica – being divided in two parts (South with Albanian majority and North with Serbian majority) – has suffered considerably from ethnic tensions and highly risky business environment.

According to the type of the ownership, sole proprietorships are the most dominant form of business organization; with roughly 90 percent of total businesses falling within this category. Sole proprietorships are followed by limited liability company with 5.8 percent and general partnerships, with 3.2 percent. According to the official data – as seen from the Table 4, roughly 0.5 percent of total companies are foreign owned companies; the remaining 99.5 percent – are domestically owned.

Table 4. Enterprises According to Type of Ownership

Type of ownership	in %
Sole proprietor	90.00
General partnership	3.20
Limited partnership	0.08
Limited liability company	5.80
Join stock company	0.35
Foreign owned company	0.46
Socially owned company	0.01
Publicly owned company	0.01
Agricultural company	0.06
Other	0.03
Total	100.00

Source: *2012 MTI, Private Sector Development Strategy 2013-2017,* Table 4.

The UNDP report, which cites data from the TAK, shows the sectorial distribution of SME's in Kosovo to be as follows:

Figure 3. Sectorial Distribution of Businesses in Kosovo
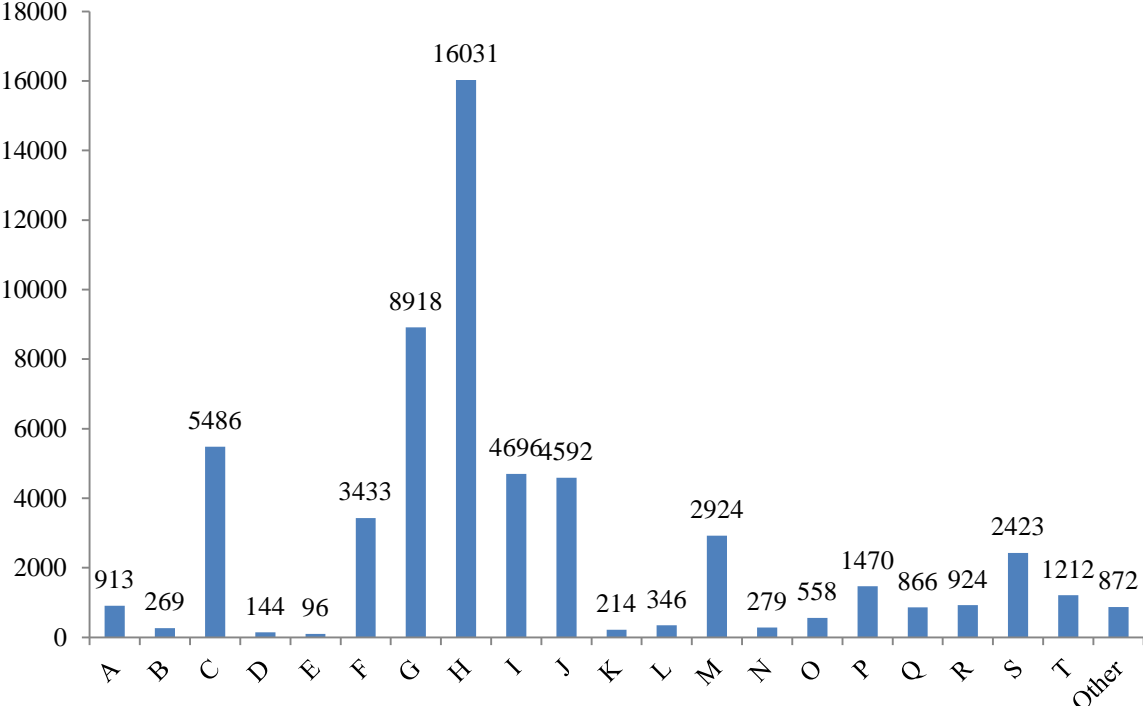
Source: *2012 UNDP, Human Development Report: Private Sector Development Kosovo.*

According to the NACE classification, the sectors are organized in sectors: a) agriculture; b) mining; c) production/manufacturing; d) electricity; e) water supply and waste management; f) construction; g) wholesale and retail – as well as repair of motor vehicles; h) transportation; i) accommodation and food services; j) financial services; k) real estate activities; l) scientific activities; m) administrative services; n) is public administration; o) compulsory social security, p) education; q) is health activities; r) arts and entertainment; s) other services; t) activities for household own use; and u) is exterritorial institutions.

Figure 5 shows that the dominant sector in Kosovo is sector (H), followed by sector (G), and sector (C) electricity. In terms of employment, the biggest contributor is the G sector (Wholesale and retail trade; repair of motor vehicles and motorcycles sector) employing around 17 percent of the workforce employed in the private sector. It is followed by the manufacturing sector which employs over 15 percent of workforce employed in the private sector.

Figure 4. Contribution of Companies in Employment
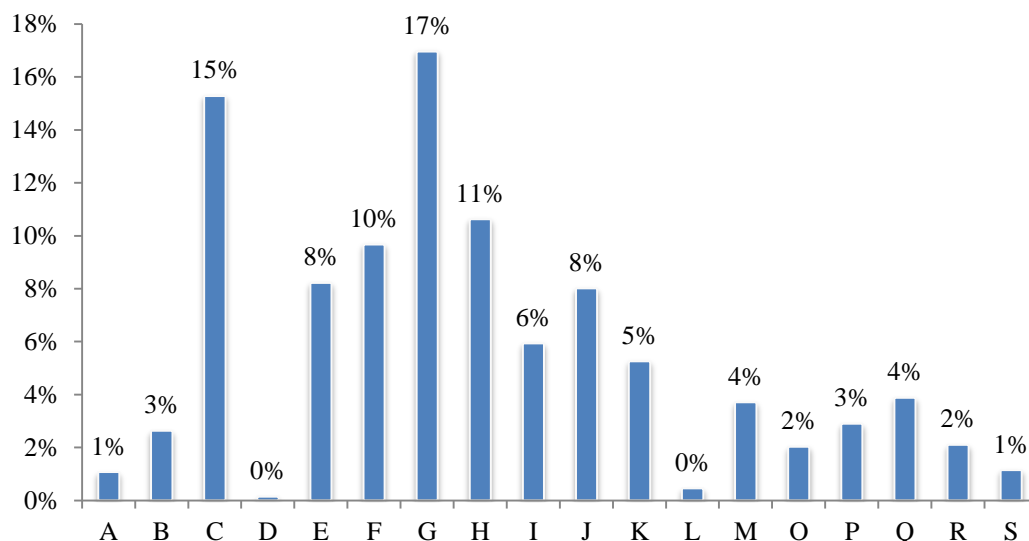
Source: *2012 UNDP, Human Development Report: Private Sector Development Kosovo*

The sectors such as accommodation, construction, water and waste management, IT, contribute with about 8-10 percent on average. In addition, the sectors such as financial services; and those related to the professional, scientific and technical activities; education and health services contribute with on average around 4 percent each in employment. The rest of the sectors which are listed have largely insignificant contribution in employment.

3 DATA DESCRIPTION

Riinvest Institute is a think-tank institution operating in Kosovo since 1995. Apart from socio-economic analysis of the country, Riinvest is known also for conducting regular surveys to obtain a clear picture on kosovan business environment – especially the characteristics, performance and barriers of SME's. In 2011, Riinvest Institute and United Nations Development Programme (hereinafter: UNDP) have conducted a survey with 600 SME's.

The author of this work has ensured a full access to this database for the purpose of this thesis. Given the lack of information and data in Kosovo, the availability of SME data is rare and precious for any kind of study. Hence, the insights delivered from this study become increasingly important for the kosovan context.

Initially, Riinvest Institute has referred to the TAK database, which, as already argued under section 2.1, has most accurate database of active businesses operating in Kosovo. According to

TAK, there are 65.000 active businesses. TAK managed to reduce the size of businesses registered under MTI when – in 2009 – a fiscal registration procedure has begun; hence only businesses that were active obtained fiscal number, inactive businesses no. The TAK database has also very updated addresses and contact information for SME's, which makes the job of finding SME's for interview quite easy.

TAK database holds also very important information on SME's size, sector where they operate, regions and owners personal information. These characteristics are important when obtaining a sample – by comparing the characteristics of sample (size and/or sector), with characteristic of whole population (TAK database), one can understand whether or not the sample represents the population.

According to Riinvest team, which was responsible for conducting the survey, in order to obtain reliable result, a sample with 600 SME's around Kosovo was selected. Riinvest team, during the sampling phase, identified additional 50 SME's that would eventually substitute those SME's that either refuse to respond, or, given the oldness of database have seized to exist but were not updated in the database. I note that the number of 600 SME's for a survey is the largest number any institution obtained in Kosovo.

Riinvest team has than engaged its numerators to conduct the survey. Prior to the engagement, these enumerators were trained and tested with real life cases. Moreover, the Riinvest team has tested the questionnaire with several testing SME's in order to capture for potential mistakes in the questionnaire.

Once the final questionnaire was drafted and printed, enumerators conducted the survey for a period of five weeks. During this time, completed questionnaires were submitted to Riinvest offices, where a controlling team conducted two parallel processes; the first one being logical control – that is a process where controllers check whether there are answers that contradict logically each other – and the second one being field control. Riinvest team applies a field control to 30 percent of total surveys conducted, in order to check whether the obtained responses truly represent SME's opinions. In order to ensure credibility in answers, Riinvest enumerators had to interview only owners or top managers.

Data, once obtained and controlled, were consequently coded into Microsoft Excel sheets, and through SPSS software package, were cross tabulated to understand whether there were some discrepancies. Each discrepancy – if present – was corrected by Riinvest representatives following a procedure of strict control. The final Microsoft Excel database was provided to the author of this work for further analysis. In the following part of this section, I elaborate on the questions and answers provided by SME's owners or top managers.

I start with the main question of this study, which determines the dependent variable in my model In order to construct a proxy for the business growth variable; I make use of the question Q.25 from the survey. This question asks businesses to provide an answer in regards to their sales from the past operating year.

Q.25 – Have your sales a) increased; b) decreased; c) had no change – over the past year?

Respondents were asked to provide a single answer from the three options provided for them; declare an increase in sales, decrease or no changes in sales. From this question, I then create a dummy variable for the dependent variable by grouping all answers declaring an increase in sales on one side, and all answers that show a fall and no change in sales on the other side. Therefore, our dependent variable has two values; with 1 representing firms that declared growth (in terms of sales) and 0 representing firms that declared a decrease or no change in sales. This construction in turn enables us to apply the Probit model, which I discuss later under Section 5.

Figure 5. Business Performance
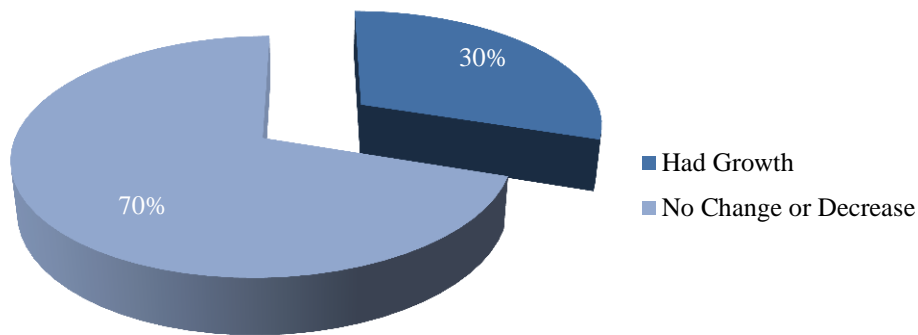
Out of 590 interviewed businesses 577 answered this question, while the remaining 13 did not provide any data and consequently were dropped from our sample. Out of 554 responses on the changes in sales, 30% (174 firms) have declared growth of business for the past twelve months, and the remaining 70% (403 firms) have declared otherwise (no change or decrease).

In the following section, in line with the literature review discussed under *Section 2*, as well as the model specification in Section 3, I present the independent variables that will be estimated in our model. These are again categorized into institutional determinants, human capital and firm characteristics.

The variables discussed in this section are: corruption, bureaucracy, functioning of judiciary, tax rate, unfair competition, electricity supply, export, competition, loan, size, legal status, age

of firm, region, ISO standards, privatisation, ownership type, performance and finally gender and age of the owner. I discuss these variables in three main groups: a) continuous variables; b) dummy variables; and c) categorical variables constructed from the list of barriers and transformed to dummies.

3.1 Continuous variables

The first group of variables focuses on continuous variables that are derived from various questions from the survey. In this group I discuss size, performance, export, bureaucracy, education and age of the owner, and age of the firm.

The **size** variable is derived from the question Q.6 which asks respondents to declare the number of full time works that the firm has, including the owner.

Q.6 – Including the owner of the firm, how many people work here?

I introduce this variable as continuous, given the lack of variations for medium sized enterprises in the respondent's database (and hence creation of dummies for micro, small and medium sized enterprises). I have already argued in the literature review that the views on the impact of size in growth are opposing. Some views argue that the smaller firms are more likely to perform at higher growth rates, while other views argue the opposite. Therefore, the expected sign is ambiguous.

Performance is a variable derived from the rate of sales to labour force. I have calculated this ratio from dividing question

Q. 22 – **What were the total sales in your firm in the past year?**

With the screening question determining the number of full time employees, **Q.***6* – Including the owner of the firm, how many people work here? I argue that the higher the ratio, the higher the probability for firms' growth; therefore, the expected sign is **positive.**

Export is a variable representing the access of businesses to foreign markets. Respondents were asked to provide a single answer confirming how much they export. The following question was posed:

Q.37– How much percent of your goods or services is exported?

Out of 554 responses (with the remaining responses opting not to answer this question), 6% (or 31 firms) are exporting firms, with the remaining operating only domestically.

Figure 6. Proportion of Exporting Firms
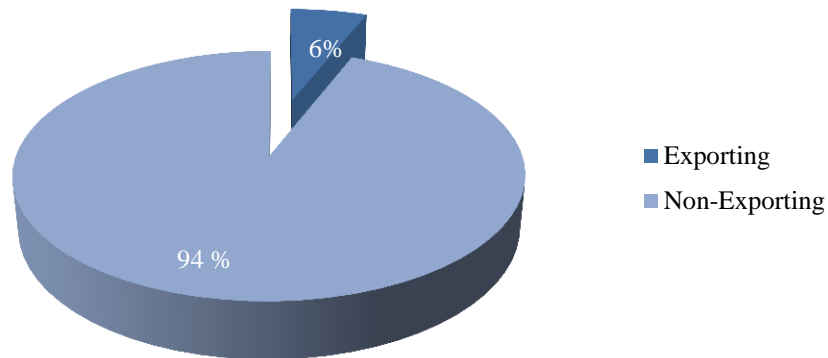
This figure again represents the real picture of the kosovan economy. As already argued, most of kosovan economy is dependent on imports; with private sector being unable to substitute imports or to export for the matter. The variable is continuous and is measured as a percentage of firms' sales for exports. Firms with access to more markets are expected to have higher growth rates, and so the expected sign is positive.

Bureaucracy is a proxy for the relationship of businesses with several enforcing mechanisms. I use the amount of days a business has to deal with public officials. Higher amounts of time in interactions mean that the public administration is rather bureaucratic; this in turn increases business costs. In order to estimate for bureaucracy, I construct a variable form the following question:

Q.46 – How much of your time goes into dealing with officials in applying or interpreting regulations or laws that are applicable to your firm; including the time to access or obtain several public services?

Respondents were asked to provide a single answer, in days, making this a continuous variable with values ranging from 1 to 7 days. As already argued in the literature, bureaucracy is expected to hamper business growth, hence the expected sign from our estimations is *negative.*

Age of owner is a measure of the age of the owners. I derive this variable from a screening question of the survey:

Q.15 – What is the current age of the owner of this firm?

The average age of entrepreneurs in Kosovo is 39.4 years. As already argued, younger entrepreneurs are more likely to have growth as compared to older entrepreneurs. As a result, the expected sign for this variable is negative.

Education is a measure of the level of the education of the owner, derived again from a screening question of the survey:

Q.15 – What is the current level of education of the owner of this firm?

Respondents could provide three answers: a) primary; b) secondary and c) tertiary. From the total of 590 of responses, 21.1% (or 128 respondents) have primary education, 47.5% (or 280 respondents) have secondary education, and 25.3% (or 149 respondents) have tertiary education. Given the standard years of education in Kosovo, I convert this data into a continuous variable by giving values 8 (years) for primary education, 12 for secondary and 16 for tertiary. The remaining 6.1% (or 36 respondents) did not provide answers. As already argued under the literature review, the expected sign is positive; more educated entrepreneurs have higher chances for growth.

Figure 7. Educational Level of owners
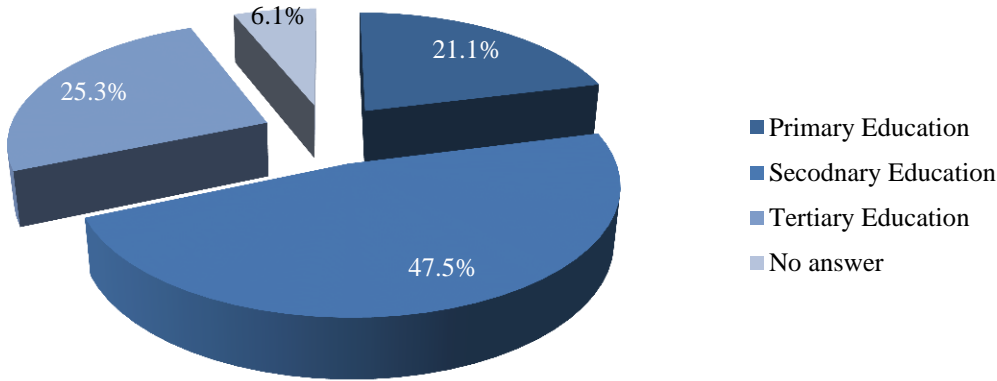
Age of firm represents the year of establishment of the business.

Q9. In what year was this firm established?

From this question I generate a variable representing the age of the firm; by subtracting the year 2011 from the year of establishment, I consequently create a continuous variable. I have already argued under the literature review that older firms are less likely to have higher growth rates as compared to new firms; therefore the expected sign is negative.

3. 2 Dummy variables

In this subsection I discuss the dummy variables that are constructed mainly from the screening questions. These variables include: loan, competition, legal status, gender of the owner, region of the firm (if from capital region or not), ISO standards, and whether or not the firm had been privatized.

Loan is a variable measuring whether the firm had received any external financing from banks, in the form of a loan, over the previous twelve months. The following question was asked:

Q.70 – Did your business receive any loan from financial institutions in the past year?

Two answers were provided, with firms confirming or not confirming the receipt of a loan. I create a dummy variable accordingly. I assign the positive answers a value of 1 and negative answers a value of 0. Out of 590 answers, 49.5% (or 292 respondents) have received a loan in the past year; 45.6% (or 269) did not, while the remaining 4.9% did not provide any answer.

Figure 8. Receiving Loans
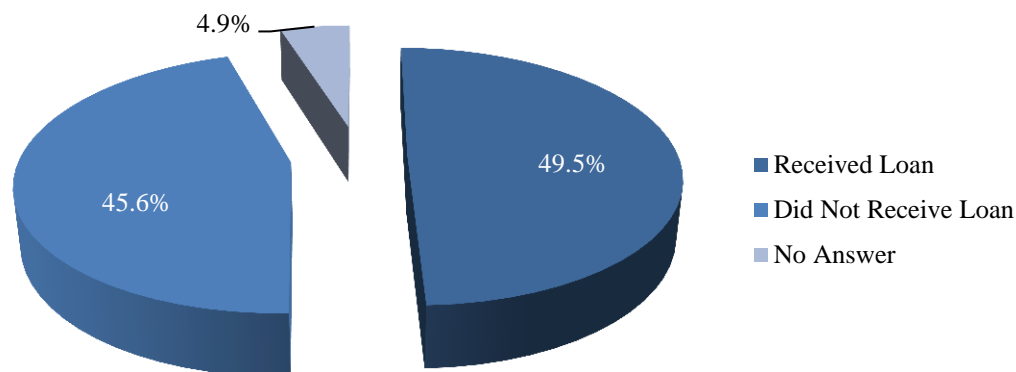
Competition is a measure of elasticity of demand for the specific market where a respondent operates. I make use of a question designed exclusively to measure the level of the competition, by asking respondents a hypothetical question on potential changes in demand if their prices were to change accordingly. The question asked was as follows:

Q.46 – What would happen if your firm would decide one day to increase their prices for 10 percent above the current level of prices? Assuming your main competitors would maintain their prices, which of the following answers would describe best the responsiveness of competitors?

Respondents could provide four answers: a) nothing would happen, we will still maintain the current consumers and we will sell the same quantity as until today; b) some slight changes would happen, as our consumers would still buy from us, but the quantity sold would fall; c) some changes would occur immediately, few consumers would remain with us, but the quantity sold would decrease considerably; and d) much would happen, as our current consumers would immediately switch to our competition. I have constructed a dummy variable with the value of 1 if the answers were signalling presence of competition (c and d) and 0 if otherwise (elasticity of demand being low). Around 30.3% (179 respondents) have answered under a); 32.9% (194 respondents) have answered under b); 20.3% (120 respondents) have answered under c); and 16.4% (97 respondents) have answered under d). Given the theoretical discussion under literature review, I argue that businesses operating in more competitive markets are less likely to face growth opportunities. Hence the expected sign is negative.

Figure 9. Elasticity of Demand
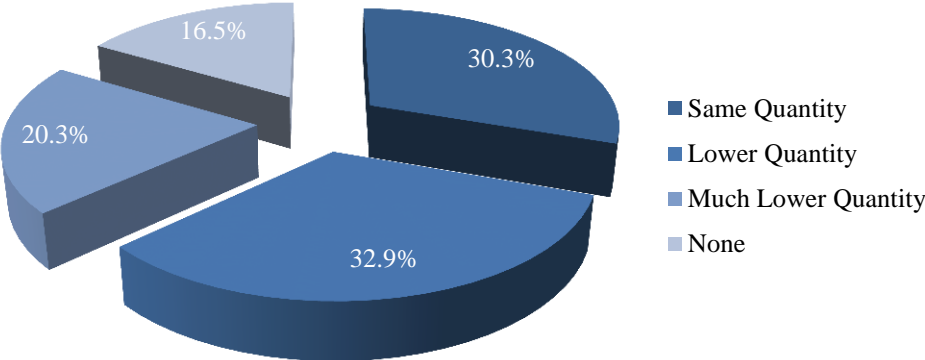
Legal Status is derived from a screening question **Q.5** which asks respondents to provide an answer in one of three categories, namely a) sole proprietorship; b) partnership; and c) corporation.

Q.5 – What legal status has your firm?

I then construct a dummy variable with a value of 1 if the firm is sole proprietorship and 0 if otherwise; given the lack of variations for the corporations I am unable to produce any further diversifications. As argued in the literature review, sole proprietorships are more likely to exhibit growth as compared to any other form; therefore, the expected sign of this variable is positive.

Gender variable is related to individual characteristics of owners, namely gender. The question asked is as follows:

Q.15 – What gender is the owner of this firm?

I create a dummy variable with a value of 1 for male respondent and 0 for female respondents. Around 81% of businesses in the survey (or 478 respondents) are male-owned; while 17.1% (or 101 respondents) are female-owned; the remaining 1.9% gave no answer (11 responses). The statistical proportion between male-owned businesses and female-owned businesses (from this sample) is consistent with the official data of ownership across Kosovo (for the whole population). The expected sign is positive, as male owners are more likely to have higher growth rates.

Figure 10. Gender of the Owner
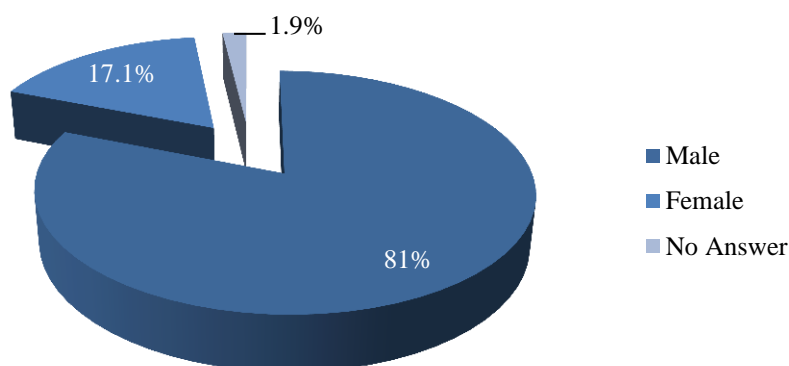
Foreign represents the type of ownership. In this model I also check whether the firm is domestic or foreign owned. The assumption here is that the foreign firms, given the potentials, experience, and other advantages are more likely to perform better. Respondents were asked to provide an answer on the screening question which determines whether the firm is owned by foreign entities (at any percentage):

Q.14. Is any percentage of your firm owned by foreign individuals or organizations?

I created a dummy variable with a value of 1 if firm had a foreign ownership and 0 if wholly owned domestically. Out of 590 respondents, 8.1% (or 48 respondents) have a foreign owner, while 88.3% (or 522 respondents) are wholly owned domestically; the remaining 3.6% of respondents submitted no answer.

Figure 11. Ownership Type

■	Domestic
■	Foreign
■	No Answer

8.1%   3.6%

88.3%
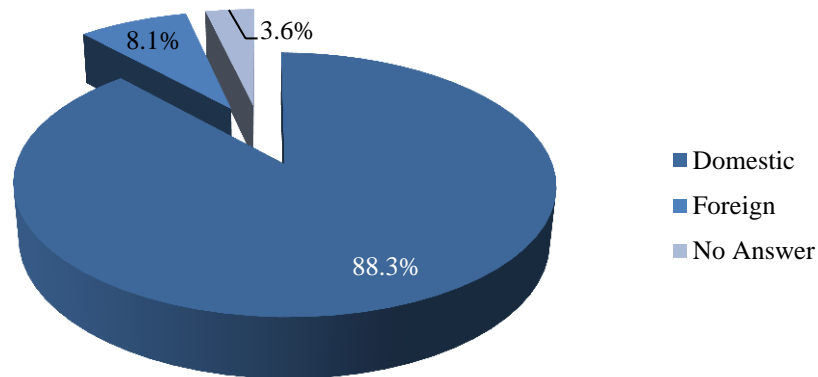
Capital represents the region. Screening questions determining the locations of the firms enabled me to group firms in two categories; firms operating in the capital city of Kosovo, Prishtina, and firms operating in other regions. In this case I create a dummy variable with a value of 1 if the firm is from the capital city and 0 if otherwise. Again, consistent with the literature review, the expectations are twofold; first, firms operating in the capital have more growth potential, and second, firms operating in the rural areas, given the lack of competition, are more likely to grow faster. The expected sign is consequently ambiguous.

ISO stands for quality standard. In regards to firm characteristics I check whether the firm has international quality standards, known as ISO standards.

Q.32. Is your firm equipped with any standards provided from the International Standards Organization (ISO)?

Figure 12. ISO Standards

■	Have ISO
■	Do Not Have ISO
■	No Answer

2.9%   11.2%

85.9%
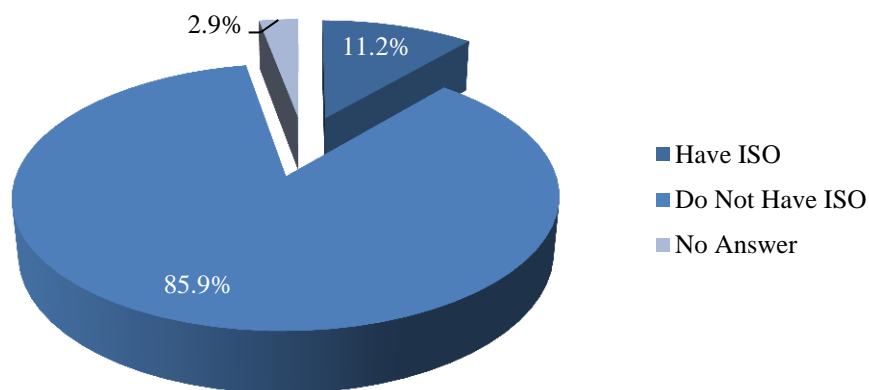
I create a dummy variable with a value of 1 if the firm has such standards and 0 if not. Out of 590 respondents, 11.2% (or 65 respondents) have declared that they have ISO standards; 85.9% (or 507 respondents) declared that they do not, while the remaining 2.9% (or 17 respondents) did not provide any answer. The expected sign is positive.

Member of association is a measure of firms' participation in any of the registered business associations operating in Kosovo. The question asked is:

Q.18. – Is your firm member of any chamber of commerce or business association operating in Kosovo?

Out of 590 respondents, 12.2% (or 72 respondents) have declared that their firm is a member of a business association. The remaining 86.4 (or 510 respondents) of firms represented in the survey said they were not. The remaining 1.4% (or 8 responses) provided no data. The expected sign is positive.

Figure 13. Member of Association
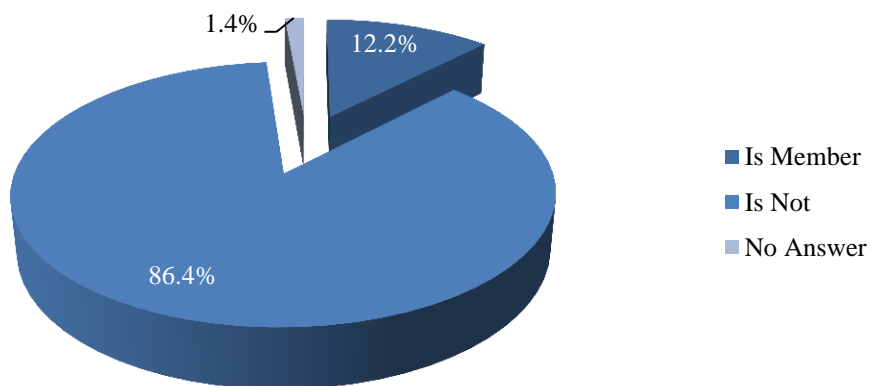
Privatized is the next variable introduced in our model, and is derived from a screening question asking respondents to provide an answer to whether the firm was established originally as private, or was privatized after its inception.

Q.12 How was your firm established?

I look at this variable to see whether privatized firms are more likely to grow as compared to originally private firms. In this case I create a dummy variable with the value of 1 representing privatized firms, and the value of 0 for firms originally registered as private.

Figure 14. Origin of the Establishment
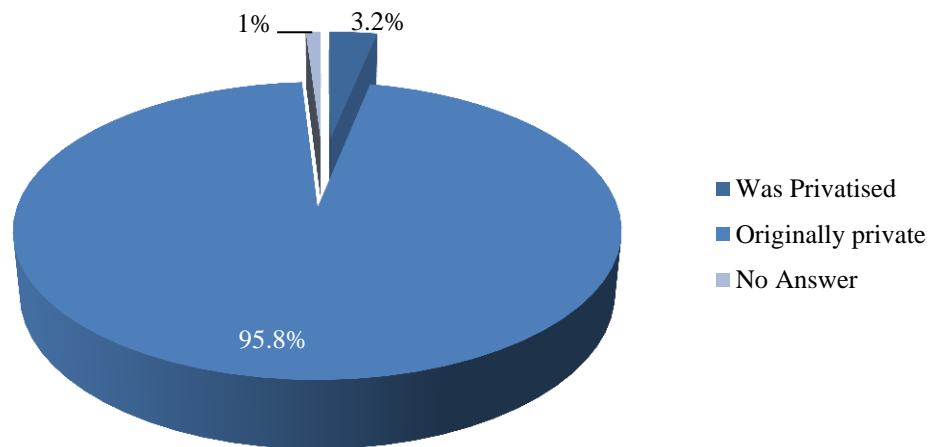
Out of 590 respondents, 3.2% (or 19 respondents) declared that their firm was privatized. 95.8% (or 565 respondents) of firms subject to the survey were originally established as private entities; the remaining 1% (6 respondents) provided no data.

Again this proportion is consistent with the general structure of firms in Kosovo, when compared to this filtering. The expected sign is positive as privatized firms are expected to perform better (given the level of investments post privatization).

3. 3 Barriers

The third group of variables is measured through questions that gauge the intensity of barriers to business within a country. The list in this case consisted of 23 barriers chosen by the survey team. The answers for these variables, however, have two notable characteristics. First, there are many missing values, so including all of them in the model would reduce the sample from 591 observations to just 100 firms. This would be a major drawback in the sample size. The second characteristic is that some of the questions are correlated with each other. In this case, a factor analysis would have been appropriate. However, missing data causes serious problems in factor analysis.

I selected from the list of 23 barriers 5 of the most important barriers, as determined by the businesses surveyed. These barriers are not correlated to each other, and indeed do not reduce the sample size drastically if included together. The selected barriers are: corruption, functioning of judiciary, unfair competition, tax rate and electricity.

Corruption is a measure of the perceived level of corruption within Kosovo by SME's, and its level of existence as a barrier for those businesses. Each respondent was asked to rate

corruption as a barrier on a scale from 1 to 4, with (1) representing no obstacle; (2) minor obstacle; (3) moderate obstacle; and (4) major obstacle.

Q.40.15 – What sort of an obstacle represents corruption for your firm?

Roughly 37.5% (221 respondents) answered that corruption is no obstacle; 8.6% (51 respondents) answered that corruption is minor obstacle; 12% (or 71 respondents) answered that corruption is moderate obstacle; and 36.1% (213 respondents) answered that corruption is major obstacle. The remaining 5.8% (34 respondents) did not provide any answer to this question. From the answers provided, we create a dummy variable with a value of 1 if corruption is seen as "major" obstacle, and a value of 0 if considered otherwise.

Converting categorical variables into dummies, in this form, is a common practice across papers that have dealt with this topic (Hashi, 2001). As argued in the literature review, higher levels of corruption are expected to slow business growth; hence the expected sign of this variable in our model is negative.

Figure 15. Corruption as Obstacle
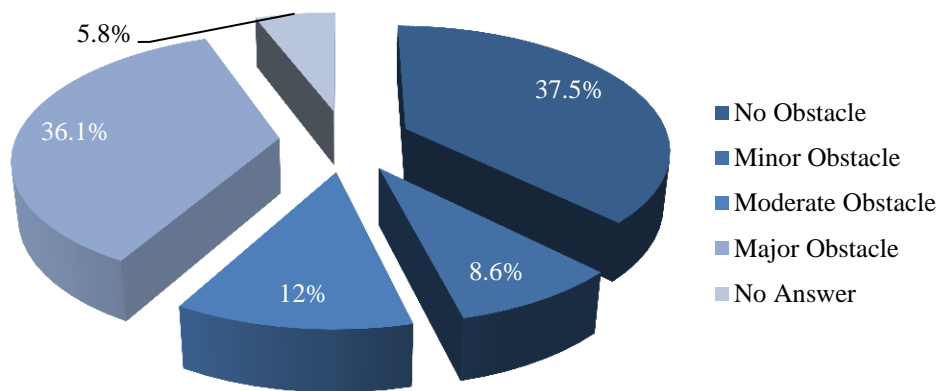
Functioning of judiciary is representative variable for rule of law in Kosovo, as perceived by the firms surveyed. Similar to the corruption determinant, a question determining functioning of judiciary as a barrier to business was constructed. Respondents were asked again to provide answers in four categories, with (1) being no obstacle and (4) representing a major obstacle.

Q.40.14 – What sort of an obstacle represents function of judiciary for your firm?

Around 43.9% (or 259 respondents) answered that judiciary is no obstacle; 12.7% (or 75 respondents) answered that judiciary is minor obstacle; 17.6% (or 104 respondents) answered that judiciary is moderate obstacle; and 19.3% (or 114 respondents) answered that judiciary is

major obstacle. The remaining 6.5% (or 36 respondents) did not provide any answer to this question.

From the answers provided, I create a dummy variable with a value of 1 if the judiciary is seen as a "major" obstacle, and a value of 0 if considered otherwise. As argued in the literature review, lack of judiciary enforcement increases business costs and consequently prohibits businesses from growth opportunities. The expected sign on growth is negative.

Figure 16. Functioning of Judiciary
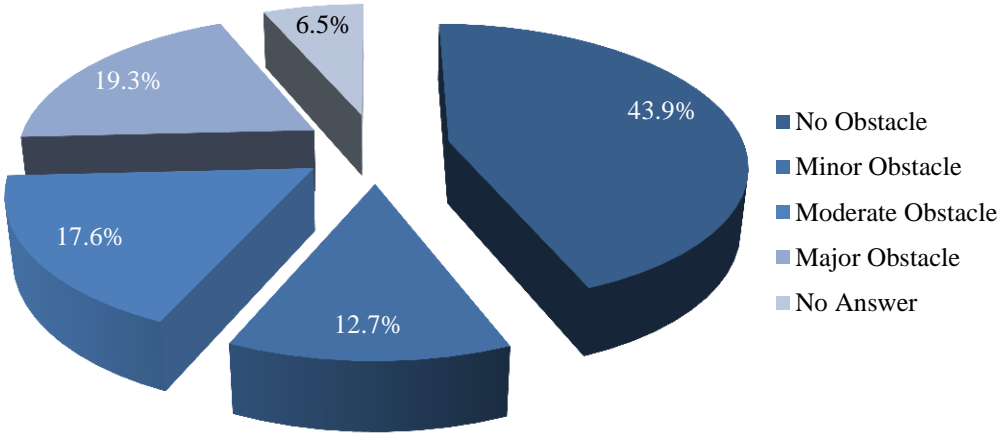
Unfair Competition is a measurement of unfair treatment, given the presence of tax evasion and informality in Kosovo, as perceived by the firms. Similar to the previous barriers, respondents were asked again to provide answers in four categories, with (1) representing no obstacle and (4) representing a major obstacle.

Q.40.14 – What sort of an obstacle represents unfair competition for your firm?

Around 22% (or 130 respondents) answered that unfair competition is no obstacle; 7.6% (or 45 respondents) answered that unfair competition is a minor obstacle; 10.2% (or 60 respondents) answered that unfair competition is a moderate obstacle; and 53.9% (or 318 respondents) answered that unfair competition is a major obstacle. The remaining 6.3% (or 37 respondents) did not provide data in response to this question.

Figure 17. Unfair Competition
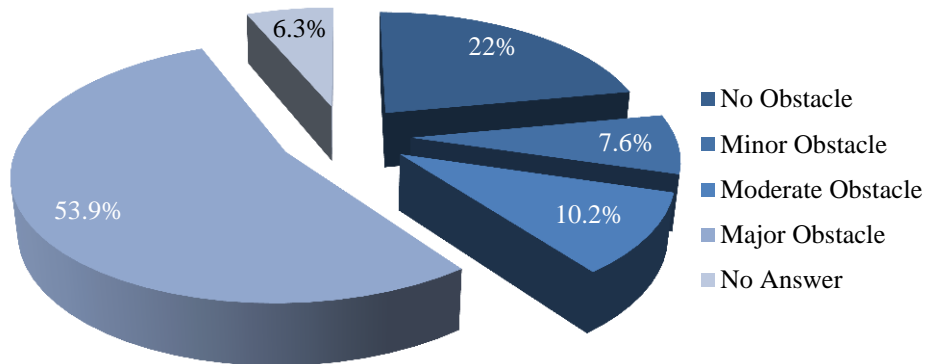
From the answers provided, I create a dummy variable with a value of 1 if unfair competition is seen as a "major" obstacle, and a value of 0 if considered otherwise. I argue that higher unfair competition caused by unfair treatment results in less growth for businesses. Consequently, the expected sign is negative.

Tax Rate is a measurement of the fiscal burden in Kosovo, as perceived by businesses. Each respondent was asked to categorize the tax rate as a barrier to their growth in four principal categories; with values (1) representing no obstacle and (4) representing a major obstacle.

Q.40.7 – What sort of an obstacle represent the current level of tax rates for your firm?

Figure 18. Tax Rate
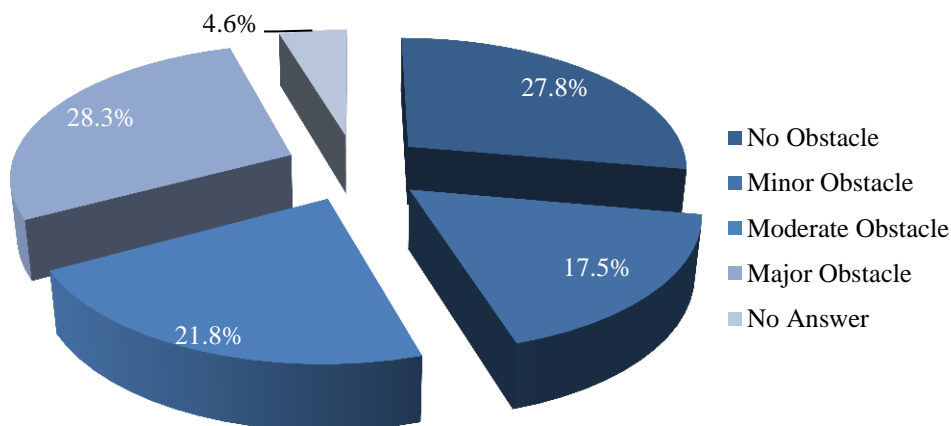
Around 27.8% (164 respondents) answered that tax rate is no obstacle; 17.5% (103 respondents) answered that tax rate is a minor obstacle; 21.8% (129 respondents) answered

that tax rate is a moderate obstacle; and 28.3% (167 respondents) answered that tax rate is a major obstacle. The remaining 4.6% (27 respondents) did not provide an answer to this question.

From the answers provided, I create a dummy variable with a value of 1 if the tax rate is seen as a major obstacle, and a value of 0 if considered otherwise. I have already argued that higher tax rates leave less potential for businesses to make new investments, and in turn limit growth potential. The expected sign in this case is negative.

Electricity is the only proxy for infrastructural development in Kosovo, and its impact on business growth. I measure this variable, again, using the survey question regarding barriers to business. Respondents were asked to provide an answer of 1 to 4, with (1) being no obstacle and (4) being a major obstacle. The following question was asked:

Q.40.4 – What sort of an obstacle represents electricity supply for your firm?

Around 39.5% (or 233 respondents) answered that electricity is no obstacle; 14.2% (or 84 respondents) answered that electricity is minor obstacle; 20.7% (or 122 respondents) answered that electricity is moderate obstacle; and 22.4% (or 132 respondents) answered that electricity is major obstacle. The remaining 3.2% or (19 respondents) did not provide an answer.

From the answers provided, I create a dummy variable with a value of 1 if electricity is seen as "major" obstacle, and a value of 0 if considered otherwise. Low levels of infrastructural developments, including electricity supply, mean that businesses encounter higher costs in their operations or eventually have less possibilities and potential for growth. The expected sign of electricity is negative.

Figure 19. Electricity
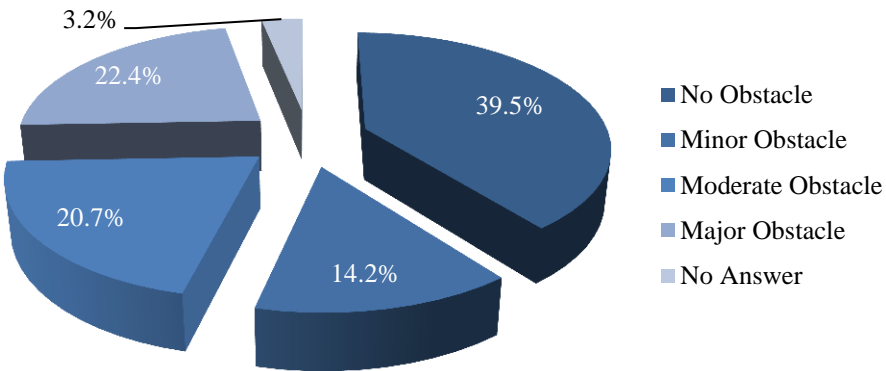
In this section I have summarized the data used in our estimations. Now I provide three tables; the first two provide simple descriptive statistics of each variable, as calculated by the

statistical package STATA; while the last one summarizes the current discussion for ease of presentation.

Table 5. Descriptive Statistics: Continuous Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Size	590	4.639	11.307	1	200
Age of Firm	590	9.386	8.224	1	91
Exporting	537	4.348	12.919	0	100
Education	555	12.144	2.820	8	16
Age	590	39.407	10.000	20	75
Bureaucracy	574	4.157	2.088	1	7
Sales to Labor Force	468	14308	2.1036	77.8	200000

Table 6. Descriptive Statistics: Dummy Variables

Variable	Obs	% of "0"	% of "1"
Growth	577	69.7	30.3
Single	587	7.2	92.8
Capital City	589	69.6	30.4
Foreign Ownership	568	91.6	8.4
Privatized	584	96.7	3.3
ISO Standards	572	88.7	11.3
Member of Association	582	87.6	12.4
Gender	579	17.1	82.9
Competition	590	63.2	36.8
Loan	561	47.9	52.1
Electricity	571	76.9	23.1
Tax Rate	563	70.4	29.6
Judiciary	553	79.4	20.6
Corruption	556	61.7	38.3
Unfair Competition	553	42.5	57.5

Table 7. Summary of Variables

Variable	Description	Expected Sign	Description
Dependent Variable:			
GROWTH	Q.25 – Have your sales a) increased; b) decreased; c) had no change – over the past year?		Dummy, 1 if growth in sales and 0 otherwise
Independent Variables:			
Single	Q.5 – What legal status has your firm?	AMBIGUOUS	Dummy, 1 if Single Proprietorship and 0 otherwise
Size	Q.6 – Including the owner of the firm, how many people work here?	AMBIGUOUS	Continuous, from 1 to 200
Age of the firm	Q.9 – In what year was this firm established?	POSITIVE	Continuous, from 1 to 91
Capital	Q.2 – Location of the firm	AMBIGUOUS	Dummy, 1 if from Capital and 0 otherwise
Foreign	Q.14 – What percentage of your firm is owned by foreign capital?	POSITIVE	Dummy, 1 if Foreign and 0 otherwise
Privatized	Q.12 – How was your firm established?	POSITIVE	Dummy, 1 if Privatized and 0 otherwise
Exporting	Q.37– How much percent of your goods or services is exported?	POSITIVE	Continuous (in percentage)
ISO	Q.31 – Is your firm equipped with any standards provided from the International Standards Organization (ISO)	POSITIVE	Dummy, 1 if Yes and 0 otherwise

(table continues)

Variable	Description	Expected Sign	Description
Membership	Q.18. - Is your firm member of any chamber of commerce or business association operating in Kosovo?	POSITIVE	Dummy, 1 if Yes and 0 otherwise
Education	Q.15 – What is the current level of education of the owner of this firm?	POSITIVE	Continuous, 8,12 and 16
Gender	Q.15 – What gender is the owner of this firm?	POSITIVE	Dummy, 1 if Male and 0 otherwise
Age	Q.16 - What is the current age of the owner of this firm?	AMBIGUOUS	Continuous, from 20 to 75
Competition	Q.46 – What would happen if your firm would decide one day to increase their prices for 10 percent above the current level of prices? Assuming your main competitors would maintain their prices, which of the following answers would describe best the responsiveness of competitors?	NEGATIVE	Dummy, 1 if answers 4 and 3, and 0 otherwise
Bureaucracy	Q.46 – How much of your time goes into dealing with officials in applying or interpreting regulations or laws that are applicable to your firm; including the time to access or obtain several public services?	NEGATIVE	Continuous, from1 to 7

Variable	Description	Expected Sign	Description
Loan	Q.70 – Did your business receive any loan from financial institutions in the past year?	POSITIVE	Dummy, 1 if Yes and 0 otherwise
Sales to lab	Ratio between Q.22 – What were the total sales in your firm in the past year? and Q.6 – Including the owner of the firm, how many people work here?	POSITIVE	Continuous
Electricity	Q.40.4 – What sort of an obstacle represents electricity supply for your firm?	NEGATIVE	Dummy, 1 if major obstacle and 0 otherwise
Tax Rate	Q.40.7 – What sort of an obstacle represent the current level of tax rates for your firm?	NEGATIVE	Dummy, 1 if major obstacle and 0 otherwise
Judiciary	Q.40.14 – What sort of an obstacle represents function of judiciary for your firm?	NEGATIVE	Dummy, 1 if major obstacle and 0 otherwise
Corruption	Q.40.15 – What sort of an obstacle represents corruption for your firm?	NEGATIVE	Dummy, 1 if major obstacle and 0 otherwise
Unfair Comp	Q.40.14 – What sort of an obstacle represents unfair competition for your firm?	NEGATIVE	Dummy, 1 if major obstacle and 0 otherwise

4 MODEL SPECIFICATIONS

Given the review of the data above, our regression will look like:

$$\begin{aligned}
\textbf{BGROWTH}_i = \ & \beta_0 + \widehat{\beta}_1 SINGLE_i + \widehat{\beta}_2 SIZE_i + \widehat{\beta}_3 AGEOFFIRM_i + \widehat{\beta}_4 CAPITAL_i + \\
& + \widehat{\beta}_5 FOREIGN_i + \beta_7 PRIVATIZED_i + \widehat{\beta}_7 EXPORTING + \widehat{\beta}_8 ISO_i + \\
& + \widehat{\beta}_9 MEMBERASSOC_i + \widehat{\beta}_{10} EDUCATION_i + \widehat{\beta}_{11} GENDER_i + \\
& + \widehat{\beta}_{12} AGE_i + \widehat{\beta}_{13} COMPETITION_i + \widehat{\beta}_{14} BUREAUCRACY_i + \\
& + \widehat{\beta}_{15} LOAN_i + \beta_{16} SALESTOLAB_i + \widehat{\beta}_{17} ELECTRICITY_i + \\
& + \widehat{\beta}_{18} TAXRATE_i + \widehat{\beta}_{19} JUDICIARY_i + \widehat{\beta}_{20} CORRUPTION_i + \\
& + \widehat{\beta}_{21} UNFAIRCOMP_i + \varepsilon_i
\end{aligned}$$

$$(1)$$

In equation (1) the variable SINGLE and SIZE denotes legal status of the business (sole proprietorships) and size, respectively; AGEOFFIRM is the age of the business as a difference from the survey date to the year of its establishment; CAPITAL is for the businesses operating in the region of Prishtina; FOREIGN is for the presence of foreign capital in the firm; PRIVATIZED is for whether the firm was privatized or established as private company; EXPORTING is for the percentage of sales that a firm exports; ISO stands for quality standards if applicable in a firm; MEMBERASSOC is for whether a firm is a member of any business association; EDUCATION is the actual level of education of the owner; GENDER denotes the gender of the owner; AGE is age of the owner; COMPETITION stands for the elasticity of demand; BUREAUCRACY for the bureaucratic procedures in doing business; LOAN is for whether the firm has received a loan in the past year; SALESTOLAB is a ratio between sales and labour force measuring firm's performance; ELECTRICITY stands for electricity supply as a barrier; TAXRATE for tax rates as a barrier; JUDICIARY stands for the functioning of judiciary as a barrier; CORRUPTION is for perceived level of corruption as a barrier; UNFARICOMP is for perceived unfair competition as a barrier by businesses; and is ε_i the error term.

Description of data and expected coefficients are summarized in Table 7.

5 METHODOLOGY

Ordinary Least Squares (OLS) is the most known method in running regression in econometrics. This famous method, however, appears to be inappropriate in many cases. For instance, sometimes the dependent variable can have two values – that is 1 or 0. This type of variable is known also as dichotomous variable.

According to Gujarati (2004, p.183), applying OLS to cases where the dependent variable has two values is inappropriate, as OLS itself will provide inconsistent estimates of coefficients. Having said that, the most appropriate approach in such cases are Probit and Logit models.

Both, the Probit and Logit models can be written as:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + ... \beta_k X_{ki} + u_i \qquad (2)$$

where, Y_i is the dummy variable, X's are independent variables and u_i is the error term.

According to wide literature, there is no clear difference between both models. For instance, Gujarati (2004) argues that Logit, compared to Probit has a distribution that is slightly fatter in tails.

I have chosen the Probit as throughout the literature review of my topic, I have noticed it to be the most commonly used method. However, I do report also the Logit estimates to see if there is any potential difference and to provide sort of a robustness check for my results.

In my case I estimate the probability of business growth:

$$\Pr{}_t(y_i = 1 \mid X_i) = \Phi(X_i \beta) \qquad (3)$$

In this formulation, the dependent variable has two values, $Y_i=1$ indicating that the firm had an increase in sales in the last year, and 0 otherwise; i represent the indexes individuals, Φ represents the standard cumulative normal probability distribution and $X_i \beta$ is the Probit estimation.

As elaborated in Section 5, the independent variables consist of institutional, business environment, firm and human capital characteristics.

There is a slight disadvantage in using the Probit, as the model provides some results that are difficult to interpret. Hence, once the estimation is conducted, one must apply additional step

to obtain the marginal effects. According to Camron and Trivedi (2009, p.8) what marginal effects does basically is measuring the effect on the conditional mean of Y once one of the independent variable changes. Authors also argue that marginal effects are equal to slope coefficients in OLS models, hence the interpretation becomes simple.

So, in other word, marginal effects estimate the change in dependent variable Y caused by one unit change in independent variable X_i; offering thus same advantage of Linear Probability Model (LPM) which – as argued by Gujarati (2004, p.184) is not appropriate for models with dummy variables.

One very common in interpreting the Probit result, is by setting all the independent variables at their means. From here then one can calculate the effect on dependent variable when the independent variable moves by one unit – starting from their mean values. This form of calculation is best known as the Average Marginal Effect (AME). In addition, I can also declare and set specific dummy variables at values 1, and interpret the impact of other, let's say, continuous variables – starting from their mean values – on the dependent variable.

6 ESTIMATION RESULTS

Before I interpret the results from the Probit estimation and marginal computations through AME, I need to check if the model is performing well statistically, through a set of diagnostics. Most of the software packages, including STATA (which I use), provide several adequate post-estimation diagnostics. Checking for diagnostics is precondition in interpreting the results; that is, if the diagnostics tell us that the model is performing well then I can interpret with more certainty the results. Otherwise, not performing models (verified by diagnostics) provide us usually with incorrect estimates – that is, the estimates do not represent the model.

The first and most commonly used tests in STATA are the so-called "Goodness-of-fit" tests. Both: Pearson goodness-of-fit and Hosmer-Lemeshow goodness-of-fit, tests examine if and how well the Probit model fits the data at the disposal. The test we apply, both Pearson and Hosmer-Lemeshow (Appendix 2) show that our model fits the data very well and that there is a high chance of making type I error if I reject the null hypothesis that the model fits well. The second test is the Wald Test, reported in Appendix 1. This test verifies again the fit of the model with the current variables. The statistical significance of the Wald Test shows that the model fits the data well. The third, and perhaps the most important test in Probit models, is the Classification test. What practically this test does, is cross-tabulating observed and predicted outcomes; where a positive outcome is predicted if the probability is higher than 0.5 while a negative outcome is predicted with the probability is less than 0.5. The results, which are

presented in the Appendix 3, show that in our case the Probit model predicts around 92.32% of the cases correctly; according to the STATA manual, this is a highly sufficient prediction. To sum up, our tests show that the Probit model in our case performs very well and that I can interpret the results with confidence.

Table 8 provides a summary of the results from the Probit estimation. The table has four (4) columns. As argued in our empirical discussion, the difference between Probit and Logit models is very small, and authors worldwide have different preferences in this regard. For that matter I report results of both Probit and Logit estimations. Probit results are reported in Column 1 while the Logit results are reported in Column 3. This is done also for the purpose of checking robustness, to verify that our findings are robust regarding the different sets of variables being used in the estimations. Moreover, as already argued, I cannot interpret the Probit (or Logit) straightforwardly. For that matter, I have to calculate marginal effects. One method of calculating marginal effects is through Average Marginal Effects (AME). In Table 8, Column 2 reports the AME of our Probit estimation while Column 4 reports the AME of the Logit estimation. I note that the interpretation of the results in this part will be fully based on the Probit AME in Column 2.

The first major conclusion of the findings is that the Probit and Logit results, and their respective AMEs, are almost identical. This provides, as argued, significant robustness in our estimation. This result comes as no surprise; after all, the difference between Probit and Logit is almost irrelevant, thus the results are alike. The second major conclusion is that most of our signs are consistent with the theoretical expectations.

By studying Table 8, we can observe that the institutional variables (corruption and bureaucracy) are the most significant variables in our model. The findings of our study suggest that corruption is statistically significant at the 1% level of significance and, as expected with the theoretical discussion, is negatively related to business growth (the negative sign of the coefficient). Bureaucracy too appears to be statistically significant at the 5% level and is also negatively related to firms' growth, as predicted by the theory. The estimated marginal effect of bureaucracy suggests that an increase by one unit (day) will decrease the probability of growth by 0.01 percentage point, given that the change by one unit starts from its average value, and all other variables are at their own average. In other words, if management spends one additional day dealing with bureaucracy issues, the probability of growth decreases by 0.01 percentage point, with all other variables held constant (ceteris paribus). I fail to establish any statistically significant relationship in regards to the third institutional variable, judiciary. At this point I note that I do not interpret, as expected, results that did not appear statistically significant.

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Table 8. PROBIT Estimation Results

Dependent: GROWTH	PROBIT			PROBIT AME			LOGIT			LOGIT AME		
	1			2			3			4		
	Coef.		Robust S.E	Coef.		Robust S.E	Coef.		Robust S.E	Coef.		Robust S.E
Single	-0.71	*	0.43	-0.08	*	0.05	-1.60	*	0.92	-0.10	*	0.05
Size	0.01		0.01	0.00		0.00	0.01		0.01	0.00		0.00
Age of Firm	-0.06	***	0.02	-0.01	***	0.00	-0.12	***	0.04	-0.01	***	0.00
Capital City	0.27		0.30	0.03		0.03	0.69		0.63	0.04		0.04
Foreign Ownership	-0.73	*	0.43	-0.08	*	0.05	-1.14		0.82	-0.07		0.05
Privatized	0.07		0.62	0.01		0.07	0.42		1.24	0.03		0.07
Exporting	0.02	***	0.01	0.00	***	0.00	0.05	**	0.02	0.00	***	0.00
ISO Standards	-0.06		0.29	-0.01		0.03	0.04		0.53	0.00		0.03
Member of Association	1.10	***	0.31	0.12	***	0.03	2.24	***	0.73	0.13	***	0.04
Education	0.13	***	0.05	0.01	***	0.01	0.24	**	0.10	0.01	***	0.01
Gender	0.59		0.38	0.07		0.04	1.25		0.82	0.07		0.05
Age	-0.01		0.02	0.00		0.00	0.00		0.03	0.00		0.00
Competition	-0.43	*	0.27	-0.05	*	0.03	-0.71		0.49	-0.04		0.03
Bureaucracy	-0.12	**	0.06	-0.01	**	0.01	-0.22	**	0.12	-0.01	**	0.01
Loan	2.16	***	0.30	0.24	***	0.03	3.83	***	0.62	0.23	***	0.03
Sales to Labor Force	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00
Electricity	-2.42	***	0.58	-0.27	***	0.05	-4.98	***	1.56	-0.30	***	0.07
Tax Rate	-0.41		0.43	-0.05		0.05	-1.21		1.14	-0.07		0.06
Judiciary	0.39		0.50	0.04		0.05	1.28		1.08	0.08		0.06
Corruption	-2.25	***	0.55	-0.25	***	0.05	-4.55	***	1.29	-0.27	***	0.05
Unfair Competition	0.23		0.27	0.03		0.03	0.33		0.54	0.02		0.03
Constant	-1.79	*	1.11				-3.75		2.40			
Number of observations			332			332			332			332

Note* at 10% level of significance; ** at 5% level of significance; .*** at 1% level of significance.

Our results also show that firms' individual characteristics are of substantial importance in terms of impacting firm growth. Legal status (sole proprietorship), Age of Firm, Foreign Ownership, Exporting and Member of Association variables have all appeared to be statistically significant.

The results from Table 8 show at 10% level of significance that firms operating as *sole* proprietorships have lower probabilities for growth, as compared to partnerships and corporations. Results, at the 1% level of significance, also show that an exporting firm has higher probabilities for growth compared to non-exporting firms. This result in particular shows that firms that have access to more markets have more opportunities for growth. Additionally, results at the 1% level of significance show that firms that were indebted in the past 12 months, have higher chances for growth, compared to the firms that did not receive any loans. Again, this result confirms the expectation that external financing helps firms to achieve growth.

The next significant result (1% level of significance) is related to the member of association variable, showing that association membership increases the chances for growth, as compared to firms that are not members. In Table 8 I also note that age of the firm is statistically significant at the 1% level of significance, and is negatively related to the firm's growth. An increase in the age of firm by one year, starting from the average point (average age of all firms in our data), decreases the probability of the firm to experience growth by 0.01 percentage point; that is, older firms tend to grow at a slower rate than younger firms. In practice, this number is economically significant, but the magnitude is too small. This number more or less suggests that, although older firms are less likely to show growth, this likelihood is quite small. *Foreign* Ownership appears to be statistically significant at 10%, and has a negative relation with growth if everything else stays the same (*ceteris paribus*), suggesting that the domestic firms are more likely to exhibit growth as compared to foreign-owned firms. One explanation of this issue could be that domestic firms find the general business environment in Kosovo easier to adapt to as compared to their foreign-owned counterparts, especially in the vein of unfair competition, bureaucracy, corruption and tax evasion.

As for the infrastructure impact on growth, electricity, as a proxy for infrastructure, appears to be significant at the 1% level, and is negatively related to firm growth. Results from our table show that firms that view electricity as a barrier have less probability for growth. This result comes as no surprise, as shortages in electricity supply in Kosovo have been quite common, thus increasing business operational costs.

Finally, **competition**, measured by the elasticity of demand as perceived by respondents appears to be statistically significant at the 10% level. The results show that competition plays a very significant role in business growth. As expected, more competition is associated with

lower likelihood for growth, while firms operating with more monopoly power command higher probabilities for growth. In other words, firms operating in less competitive markets have a higher probability, by 0.05 percentage points, to experience growth.

Size, one of the most discussed variables in the literature, fails to provide any statistical significance. I will refrain from providing any commentary in regards to variables with no statistical significance. No statistical significance is established also for capitol city, privatized, ISO Standards, gender, age, sales to labour force, tax rate and unfair competition.

In addition to the standard interpretation from the Table 8, I provide a robustness check of the current results by building up gradually the final model, as presented in Table 9. I start with the variables grouped as institutions, and then add to this basic model the additional groups: business environment; human capital and firm characteristics.

Table 9 shows that, regardless of model specification, the results appear to be robust. All variables that have appeared significant in the fully specified model also appear to be statistically significant in less specified models. Only tax rate and unfair competition lose their statistical significance in the fully specified model; both of which are significant at the 1% level in two other specifications.

With this I conclude the interpretation of our Probit results. In the next section I provide a conclusion for the thesis as well as a set of policy recommendations.

Table 9. Robustness Check

Growth	Institutions			+ Business Environment			+ Human Capital			+ Firm Characteristics		
	Coef.		Rob S.E	Coef.		Rob S.E	Coef.		Rob S.E	Coef.		Rob S.E
Corruption	-1.44	***	0.20	-1.79	***	0.33	-1.72	***	0.34	-2.25	***	0.55
Judiciary	0.19		0.25	0.54		0.36	0.29		0.39	0.39		0.50
Bureaucracy	-0.28	***	0.03	-0.18	***	0.04	-0.16	***	0.05	-0.12	**	0.06
Tax rate				-0.86	***	0.24	-0.84	***	0.29	-0.41		0.43
Electricity				-1.58	***	0.28	-1.58	***	0.31	-2.42	***	0.58
unfair competition				0.50	**	0.19	0.54	***	0.20	0.23		0.27
Competition				-0.55	***	0.20	-0.53	***	0.20	-0.43	*	0.27
Loan				1.76	***	0.21	1.60	***	0.23	2.16	***	0.30
Education							0.15	***	0.04	0.13	***	0.05
Gender							-0.24		0.28	0.59		0.38
Age							-0.03	***	0.01	-0.01		0.02
Single										-0.71	*	0.43
Size										0.01		0.01
Age of firm										-0.06	***	0.02
Capital										0.27		0.30
Foreign										-0.73	*	0.43
Privatized										0.07		0.62
Exporting										0.02	***	0.01
Iso										-0.06		0.29
Member										1.10	***	0.31
Sales to labor										0.00		0.00

CONCLUSION AND POLICY RECOMMENDATION

SMEs represent an important factor in economic development for all countries, specifically in the creation of new jobs, balanced regional development, human capital and other socio-economic innovations. For this matter, studying the determinants of SME growth is an important aspect of research.

In this thesis I have focused on SME growth in Kosovo, the last European country to enter the transition process from controlled to free market economy, where SMEs account for 99% of total businesses. Kosovo currently faces several economic constraints, most notably high unemployment rates, low GDP growth rates and a set of institutional difficulties given its past and current political development. In contrast, SMEs have been acknowledged as commanding sustainable potential to change the current situation.

I start this thesis by providing a comprehensive literature review on the identified determinants of SME growth throughout the literature. I involve studies on different areas of the world, but I also focus on countries with similar characteristics to Kosovo, notably developing countries and transitioning economies. I then group these determinants into four main categories. The first category includes institutional determinants, the second includes business environment factors, the third relates to human capital and the last includes firm characteristics. Following a review I then set a general estimation model.

I make use then of Riinvest Institute/UNDP data, which were collected during 2011. A survey with 600 SMEs was conducted throughout Kosovo, in an attempt to identify the current state and the current characteristics of businesses operating in Kosovo. The database served also for the extraction of variables of interest in order to estimate a model, as reviewed in this thesis.

Given the dichotomous nature of the dependent variable, I choose to focus on Probit estimation, which, contrary to OLS, constraints the estimated probabilities between 0 and 1, and also relaxes the assumption that the effect of the independent variable is constant across different predicted values of the dependent variables (one of the main disadvantages of OLS).

Post estimation, I conduct a set of diagnostic tests, which confirm that our model is well specified and has a predictability rate of 92.32%. This enables us to interpret with more confidence the estimated results. In addition, I estimate also the Logit model to add robustness to our findings. I calculate Average Marginal Effects to interpret Probit estimations.

The results of our findings show that there is consistency, hence robustness, across various estimations. Moreover, most of the signs of coefficients are consistent with the theoretical

expectations. These results remain robust across different specifications in regards to the declaration of dummy variables.

The results show that the institutional determinants are amongst the most important factors that impact business growth. I find that corruption and bureaucracy are strongly related to business growth, according to their statistical significance. The substantial presence of corruption and bureaucracy in Kosovo reduces opportunities for business growth and impedes the addressing of several economic problems through SME development. These two phenomena are likely to increase business costs, which in turn negatively affect their investments and growth. Moreover, the lack of proper functioning courts affects strongly the opportunities for businesses, as well as the safety of their investments. Indeed, in the presence of an anarchic environment, growth opportunities are minor.

A very important finding from our study derives from business environment estimations, such as loans. I find, as expected, that external financing increases the growth chances of the firm. Businesses that have experienced external financial input have also increased their potentials for investment, which have paid off ultimately in higher growth rates. With the same certainty in terms of statistical significance, I find that infrastructure (estimated by electricity supply) plays an important role in business growth. I also find that the market characteristics (competition and export opportunities) also affect business growth. This particular finding suggests that any firm that has more access to markets, whether that is through competitive power or presence in foreign markets, has more chances for growth. This claim is consistent with the general expectations.

Consistent with the third group of determinants, human capital, I find less significance as compared to the previous two categories. I find that educational level of the owners is important in the path of business development. I fail to establish any finding in regards to gender and age differences amongst business owners in Kosovo, as those variables pertain to business growth.

Last, in regards to firm characteristics, I find that legal status, age of firm, membership (cooperation) and origin of ownership (foreign or domestic) are all important factors. Our results support the findings that sole proprietorships exhibit lower growth rates than partnerships or corporations. The results also demonstrate that firms that originate domestically, perhaps due to familiarity with the market, have higher growth rates. In addition, an interesting finding comes from the result regarding age of the firm; the coefficient of the age of the firm (though statistically significant) is very small, suggesting, perhaps, that the age factor is irrelevant in business growth.

In light of the above findings, I suggest the following policy recommendations:

- First, institutions should tackle immediately the presence of corruption and bureaucracy in Kosovo, as these two phenomena seriously harm the potential for business growth and the potential for economic development in Kosovo. While corruption can be addressed through the improvement of political will, as well as the improvement of the judiciary system (which again appears to be a general obstacle to business growth), the bureaucracy should be addressed through a set of policies that simplify the relationship between businesses and the administration. Doing Business guides from the World Bank can serve to direct policy in this regard. Indeed, recent engagement of the Kosovan Government in improving the business environment in the country have improved also the general ranking of Kosovo in the Doing Business ratings.

- Second, the placement of a proper judiciary system reduces risk for businesses operating in Kosovo. This not only provides grounds for fair competition, but also starts a chain reaction in other sectors. For instance, improving court performance (and independence) not only improves contract enforcement in Kosovo, but might also start a reduction of interest rates in banks, which claim that the risky environment fuelled by lack of courts is the prime reason behind high costs of capital.

- Third, reduction of the bureaucratic burden allows businesses greater ease of operation, which in turn increases the opportunities for investments. Opportunities for investments can also be increased by facilitating the access of businesses to financing, particularly with commercial banks. Institutions should find proper policies that improve this relationship.

This thesis intends to contribute to the literature by investigating a wider range of determinants of business growth in Kosovo for the first time. Some of the variables in our model have not been investigated previously in Kosovo. In addition, I provide a set of policy recommendations that, based on empirical research, inform policy makers in their engagement for the economic development of Kosovo. As expected, this thesis is subject to limitations. First, I note the information derived from the survey is subject to perception, and hence in several variables, may not faithfully represent actual conditions. However, in the case of data limitation, surveys have been widely applied in research. Another limitation is the inability to account for sector-specific characteristics of the firm, given the inability of the survey to gain any relevant information in this field. I suggest future research to engage in these regards.

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APPENDICES

LIST OF APPENDICES:

Appendix A: List of Abbreviations

AME	Average Marginal Effects
EUR	Euros
GDP	Gross Domestic Production
IMF	International Monetary Fund
ISO	International Standards Organization
LPM	Linear Probability Model
ME	Marginal Effects
MTI	Ministry of Trade and Industry of Kosovo
NATO	North Atlantic Treaty Organization
OLS	Ordinary Least Squares
SMEs	Small and Medium Size Enterprises
SOK	Statistical Office of Kosovo
TAK	Tax Administration of Kosovo
TE	Transition Economies
UNMIK	United Nation Mission in Kosovo
UNDP	United Nation Development Programme
US	United States
WB	World Bank

Appendix B: Probit Estimation

. probit growth single size ageoffirm capital foreign privatized exporting iso memberassoc
> education gender age competition bureaucracy loan salestolab electricity taxrate judiciary
> corruption unfaircompetition, vce(robust)

```
Iteration 0:  log pseudolikelihood = -206.39735
Iteration 1:  log pseudolikelihood = -82.067561
Iteration 2:  log pseudolikelihood = -67.764611
Iteration 3:  log pseudolikelihood = -66.679347
Iteration 4:  log pseudolikelihood = -66.674458
Iteration 5:  log pseudolikelihood = -66.674457
```

```
Probit regression                      Number of obs   =      332
                                       Wald chi2(21)   =   129.68
                                       Prob > chi2     =   0.0000
Log pseudolikelihood = -66.674457      Pseudo R2       =   0.6770
```

```
------------------------------------------------------------------------------
             |              Robust
      growth |   Coef.   Std. Err.    z   P>|z|    [95% Conf. Interval]
-------------+----------------------------------------------------------------
      single | -.706121   .426437   -1.66  0.098  -1.541922    .1296802
        size |  .0064794  .0064994   1.00  0.319   -.0062591    .019218
    ageoffirm | -.0586917  .0187617  -3.13  0.002   -.0954639   -.0219194
      capital |  .2688409  .3001328   0.90  0.370   -.3194085    .8570903
      foreign | -.7302504  .4335923  -1.68  0.092  -1.580076    .1195749
    privatized |  .0724367  .6210644   0.12  0.907  -1.144827    1.289701
     exporting |  .0220595  .0080449   2.74  0.006    .0062918    .0378272
          iso | -.0563475  .2926698  -0.19  0.847   -.6299697    .5172747
   memberassoc |  1.097841  .3057101   3.59  0.000    .4986604    1.697022
     education |  .1321256  .047955    2.76  0.006    .0381355    .2261157
       gender |  .5884187  .3813578   1.54  0.123   -.1590289    1.335866
          age | -.0093396  .0154109  -0.61  0.544   -.0395444    .0208651
   competition | -.4315343  .2651554  -1.63  0.104   -.9512294    .0881607
   bureaucracy | -.1247486  .0593966  -2.10  0.036   -.2411638   -.0083334
         loan |  2.156941  .3006301   7.17  0.000   1.567717    2.746165
    salestolab |  5.56e-06  3.81e-06   1.46  0.144   -1.90e-06    .000013
    electricity | -2.424307  .583804   -4.15  0.000  -3.568541   -1.280072
       taxrate | -.4078021  .4344254  -0.94  0.348   -1.25926     .4436559
      judiciary |  .3934157  .4973176   0.79  0.429   -.5813088    1.36814
    corruption | -2.249463  .549259    -4.10  0.000   -3.32599    -1.172935
   unfaircomp~n |  .2286072  .2749642   0.83  0.406   -.3103127    .7675271
        _cons | -1.787762  1.105182   -1.62  0.106   -3.953879    .3783551
------------------------------------------------------------------------------
```
Note: 20 failures and 0 successes completely determined.

.

Appendix C: Goodness of Fit Tests

. estat gof

Probit model for growth, goodness-of-fit test

```
        number of observations =      332
number of covariate patterns =      332
          Pearson chi2(310) =     298.97
              Prob > chi2 =       0.6632
```

. estat gof, group(10)

Probit model for growth, goodness-of-fit test

 (Table collapsed on quantiles of estimated probabilities)

```
      number of observations =      332
           number of groups =       10
     Hosmer-Lemeshow chi2(8) =       11.06
              Prob > chi2 =       0.1984
```

.

Appendix D: Classification Test

. estat classification

Probit model for growth

```
         -------- True --------
Classified |      D       ~D  |    Total
-----------+--------------------------+-----------
     +     |     94       14  |      108
     -     |     10      214  |      224
-----------+--------------------------+-----------
   Total   |    104      228  |      332
```

Classified + if predicted Pr(D) >= .5
True D defined as growth != 0

Sensitivity   Pr(+| D)   90.38%
Specificity   Pr(-|~D)   93.86%
Positive predictive value   Pr(D| +)   87.04%
Negative predictive value   Pr(~D| -)   95.54%

False + rate for true ~D   Pr(+|~D)   6.14%
False - rate for true D   Pr(-| D)   9.62%
False + rate for classified +   Pr(~D| +)   12.96%
False - rate for classified -   Pr(D| -)   4.46%

Correctly classified   92.77%

.

Appendix E: Probit Average Marginal Effects (AME)

. margins, dydx(*)

Average marginal effects   Number of obs =   332
Model VCE   : Robust

Expression   : Pr(growth), predict()
dy/dx w.r.t. : single size ageoffirm capital foreign privatized exporting iso memberassoc
             education gender age competition bureaucracy loan salestolab electricity
             taxrate judiciary corruption unfaircompetition

```
------------------------------------------------------------------------------
             |            Delta-method
             |    dy/dx   Std. Err.     z    P>|z|    [95% Conf. Interval]
-------------+----------------------------------------------------------------
      single |  -.0799483  .0465551   -1.72   0.086   -.1711947    .0112981
        size |   .0007336   .000731    1.00   0.316   -.0006991    .0021664
    ageoffirm |  -.0066452  .0019238   -3.45   0.001   -.0104157   -.0028747
      capital |   .0304387  .0331635    0.92   0.359   -.0345605    .0954378
      foreign |  -.0826803  .0501629   -1.65   0.099   -.1809978    .0156373
   privatized |   .0082014  .0702015    0.12   0.907    -.129391    .1457939
    exporting |   .0024976  .0008414    2.97   0.003    .0008484    .0041468
          iso |  -.0063798   .033211   -0.19   0.848   -.0714722    .0587126
  memberassoc |   .1242996  .0323473    3.84   0.000       .0609    .1876991
    education |   .0149595  .0053532    2.79   0.005    .0044673    .0254517
       gender |   .0666218  .0421893    1.58   0.114   -.0160678    .1493114
          age |  -.0010574  .0017632   -0.60   0.549   -.0045133    .0023984
  competition |  -.0488591  .0299619   -1.63   0.103   -.1075834    .0098652
  bureaucracy |  -.0141243  .0065808   -2.15   0.032   -.0270223   -.0012262
         loan |   .2442128  .0312446    7.82   0.000    .1829744    .3054512
    salestolab |   6.30e-07  4.22e-07    1.49   0.136   -1.97e-07   1.46e-06
   electricity |  -.2744844  .0531046   -5.17   0.000   -.3785675   -.1704012
      taxrate |  -.0461721  .0479791   -0.96   0.336   -.1402094    .0478652
     judiciary |   .0445432  .0543948    0.82   0.413   -.0620687    .1511551
   corruption |  -.2546882  .0470993   -5.41   0.000   -.3470011   -.1623753
  unfaircomp~n |   .0258833  .0312216    0.83   0.407   -.0353098    .0870764
------------------------------------------------------------------------------
```

.

Appendix F: Logit Estimation

logit growth single size ageoffirm capital foreign privatized exporting iso memberassoc ed
> ucation gender age competition bureaucracy loan salestolab electricity taxrate judiciary c
> orruption unfaircompetition, vce(robust)

```
Iteration 0:  log pseudolikelihood = -206.39735
Iteration 1:  log pseudolikelihood = -94.189441
Iteration 2:  log pseudolikelihood = -68.893107
Iteration 3:  log pseudolikelihood = -65.296297
Iteration 4:  log pseudolikelihood = -65.208705
Iteration 5:  log pseudolikelihood = -65.208467
Iteration 6:  log pseudolikelihood = -65.208467
```

```
Logistic regression                    Number of obs   =      332
                                       Wald chi2(21)   =    87.21
                                       Prob > chi2     =   0.0000
Log pseudolikelihood = -65.208467      Pseudo R2       =   0.6841
```

```
------------------------------------------------------------------------------
             |               Robust
      growth |   Coef.   Std. Err.    z    P>|z|    [95% Conf. Interval]
-------------+----------------------------------------------------------------
      single | -1.599453  .9202894  -1.74  0.082  -3.403187   .2042809
        size |  .0127179  .0112716   1.13  0.259  -.0093741   .0348098
   ageoffirm | -.1178251   .038284  -3.08  0.002  -.1928603  -.0427899
     capital |  .6923929  .6266263   1.10  0.269  -.5357721   1.920558
     foreign | -1.138564  .8215945  -1.39  0.166   -2.74886   .4717313
  privatized |  .4210865  1.239752   0.34  0.734  -2.008782   2.850955
   exporting |  .0473751  .0187006   2.53  0.011   .0107226   .0840276
         iso |  .0424284   .528711   0.08  0.936  -.9938262   1.078683
  memberassoc |  2.237169  .7254918   3.08  0.002    .815231   3.659106
   education |  .2449137   .097678   2.51  0.012   .0534683   .4363591
      gender |  1.248349   .817489   1.53  0.127  -.3538998   2.850598
         age | -.0021604  .0349666  -0.06  0.951  -.0706937   .0663728
 competition | -.7066505  .4860763  -1.45  0.146  -1.659343   .2460415
  bureaucracy |  -.222229  .1163841  -1.91  0.056  -.4503377   .0058797
        loan |  3.831994  .6159806   6.22  0.000   2.624694   5.039294
   salestolab |  .0000113  7.91e-06   1.42  0.154  -4.23e-06   .0000268
  electricity | -4.976233  1.557807  -3.19  0.001  -8.029478  -1.922988
      taxrate |   -1.2095   1.13697  -1.06  0.287   -3.43792    1.01892
    judiciary |  1.283056   1.07885   1.19  0.234  -.8314514   3.397563
   corruption | -4.552607  1.294365  -3.52  0.000  -7.089515  -2.015699
  unfaircomp~n |  .3301271  .5388546   0.61  0.540  -.7260084   1.386263
       _cons | -3.748874  2.396315  -1.56  0.118  -8.445565   .9478175
------------------------------------------------------------------------------
```

.

Appendix G: Logit Average Marginal Effects (AME)

margins, dydx(*)

Average marginal effects   Number of obs =   332
Model VCE   : Robust

Expression   : Pr(growth), predict()
dy/dx w.r.t. : single size ageoffirm capital foreign privatized exporting iso memberassoc
        education gender age competition bureaucracy loan salestolab electricity
        taxrate judiciary corruption unfaircompetition

```
------------------------------------------------------------------------------
             |            Delta-method
             |    dy/dx   Std. Err.     z    P>|z|    [95% Conf. Interval]
-------------+----------------------------------------------------------------
      single | -.0959548  .0493509   -1.94   0.052   -.1926808    .0007711
        size |   .000763  .0006661    1.15   0.252   -.0005425    .0020684
    ageoffirm | -.0070686  .0018359   -3.85   0.000   -.0106669   -.0034703
      capital |  .0415382  .0355349    1.17   0.242   -.0281089    .1111854
      foreign | -.0683051  .0508868   -1.34   0.180   -.1680413    .0314312
   privatized |  .0252619   .073472    0.34   0.731   -.1187405    .1692644
    exporting |  .0028421  .0009333    3.05   0.002    .0010129    .0046714
         iso |  .0025454  .0316415    0.08   0.936   -.0594709    .0645617
  memberassoc |  .1342129  .0359636    3.73   0.000    .0637254    .2047003
    education |  .0146929  .0054487    2.70   0.007    .0040138    .0253721
      gender |  .0748913  .0472147    1.59   0.113   -.0176478    .1674304
         age | -.0001296  .0021044   -0.06   0.951   -.0042542     .003995
  competition | -.0423936  .0296251   -1.43   0.152   -.1004577    .0156705
  bureaucracy |  -.013332  .0068061   -1.96   0.050   -.0266717    7.66e-06
        loan |  .2298901  .0312127    7.37   0.000    .1687144    .2910658
    salestolab |  6.76e-07  4.55e-07    1.49   0.137   -2.16e-07    1.57e-06
   electricity | -.2985356  .0686342   -4.35   0.000   -.4330562   -.1640149
      taxrate | -.0725606  .0629112   -1.15   0.249   -.1958643     .050743
     judiciary |  .0769734  .0590459    1.30   0.192   -.0387544    .1927013
    corruption | -.2731213   .052388   -5.21   0.000   -.3757999   -.1704427
  unfaircomp~n |  .0198051  .0326452    0.61   0.544   -.0441784    .0837886
------------------------------------------------------------------------------
```