

ERENET PROFILE**PUBLISHER**

Dr. Számely Gábor – Editor
 Dr. Antal Szabó – Scientific Director
 Dr. Szabó Zsuzsanna - Info Director
 Tamás Tóth – Designer

INTERNATIONAL BOARD

Desislava Yordanova
St. Kliment Obridski University
 Dr. Sanja Pfeifer
University of Osiek
 Dr. Hans-Jürgen Weißbach
Fachhochschule Frankfurt am Main
 Dr. Dumitru Matis
Babeş-Bolyai University
 Dr. Szabo Zsuzsanna
University of Tîrgu Mures
 Dr. Eric Dejan
University of Belgrade
 Dr. Mateja Drnovsek
University of Ljubljana
 Dr. Miroljub Hadzic
Singidunum University
 Dr. Toni Brunello
Studiocentroveneto
 Dr. Ladislav Mura
J. Sehye University Komárno
 Dr. Krzysztof Wach
Cracow University
 Dr. Sonia Heptonstall
UBIS Geneva
 Dr. Sybille Heilbrunn
Kinneret College on the Sea of Galilee
 Dr. Dilek Cetindamar
Sabancı University
 Dr. László Szerb
University of Pécs
 Dr. Zoltán Bajmócy
University of Szeged

Published by:

**ERENET NETWORK
 HUNGARIAN YOUTH
 ENTERPRISE SUPPORT
 SOCIETY**

www.erenet.org

©ERENET PROFIL, 2018
 ISSN 1789-624X

CONTENT

| | |
|---|----|
| SPRING MESSAGE | 2 |
| PAPERS | |
| General Outlook on Business Environment, Competitiveness and Innovation | 3 |
| Amila Boshnjaku – Ledia Thoma – June Dafa | |
| Entrepreneurship Education and Technopreneurial Attitude Among Bulgarian Science and Engineering Student | 14 |
| Desislava Yordanova | |
| Entrepreneurship and ICT | 26 |
| Gueorgui Stoev | |
| Entrepreneurial Mindset – New Way of Education | 34 |
| Katarina Jagic | |
| Most Favourable Financial Instruments for Entrepreneurship Development | 41 |
| Marija Zarezankova- Potevska | |
| Serbia –Entrepreneurs Recognized Improves Environment for Business | 51 |
| Miroljubov Hadzic – Petar Pavlovic | |
| SMES' Technological Innovation in Turkey | 56 |
| Meltem Ince-Yenilmez | |
| INSTITUTIONAL PROFILE | 66 |
| • Frankfurt University of Applied Sciences | |
| NEW EVENTS – CALL FOR PAPERS | |
| • Management, Entrepreneurship and Benchmarking Conference – MEB 2018 Budapest | 68 |
| • Bilbao Annual Conference 2018 | 69 |
| NECROLOGY | |
| • Homage a Dipl.-Kfm. Dieter Ibielski | 70 |



SPRING MESSAGE OF THE SCIENTIFIC DIRECTOR

Distinguished Readers and Friends,

From this issue we continue publishing papers on entrepreneurship, education, innovation from ERENET Members and friends according to regional orientation. This ERENET PROFILE we shall devote to papers from South-Eastern Europe, while in the next periodical to be published in April 2018 we shall focus on the European countries of the Commonwealth of Independent States. At the time being we are preparing the 16th International Conference on Management, Enterprise and Benchmarking - the MEB 2018 – to be held in April 2018 at the Keleti Faculty of Business and Management of Óbuda University in Budapest.

Since June 2000 (European Council of Feira), all EU partners in the Western Balkans involved in the Stabilisation and Association process, which are not yet recognised as candidates, are considered potential candidates for EU membership. Currently, Albania, Bosnia and Herzegovina and Kosovo are potential candidates. Albania – along with other Western Balkans countries, like Macedonia – was identified as a potential candidate for EU membership during the Thessaloniki European Council. In June 2014, Albania was awarded candidate status by the EU. In 2008 Macedonia received accession partnership status. Serbia negotiation has been started, however, the European Commission is playing for time. There is an ongoing problem over Kosovo. Macedonia has a naming problem with Greece and Brussels are not run to help to solve the problem.

For many centuries the Western Balkan region has been a place for origin of migration into Europe. The 2015-16 migration crises brought the region onto spotlight as a large number of migrants basically from the Middle East used the Balkan route on their way to Western Europe. The migration crisis has revealed the fragile relationship between the EU and the Western Balkan states. The refugee crisis has been acknowledged as a fundamental test of the European politics and national identity. In spite of the Schengen Agreement the European policymakers are doing nothing to prevent the mass migration, defeat the individual nations from the invasion and prevent member states from pushing back migrants at their borders. Furthermore, it is driven by foreign liberal forces with intention to replace the European Christianity with a Muslim face by creating and Euroarabia. In spite of the weak financial situation, Bulgaria builds fences on the Turkish boundary and thinks to continue building on the Greek boundary to stop the migrants.

We are in the 24th hour to stop changing the European race and culture.

Europe, wake up, no much time left to defeat yourself!

Dr. Antal Szabó
Scientific Director of ERENET

Prof. Assoc. Anila BOSHNJAKU

Pedagogue, Agricultural University of Tirana, Faculty of Economy and Agribusiness
Tirana – Albania

E-mail: aboshnjaku@ubt.edu.al

Prof. Assoc. Ledia THOMA

Pedagogue - Chief of Marketing Education & Research Unit, Agricultural University of Tirana, Faculty of Economy and Agribusiness
Tirana – Albania

E-mail: ledia.thoma@ubt.edu.al

Msc. Juna DAFA

Pedagogue, University of Tirana, Faculty of Economy
Tirana – Albania

E-mail: junadafa@gmail.com

SME IN ALBANIA: GENERAL OUTLOOK ON BUSINESS ENVIRONMENT, COMPETITIVENESS AND INNOVATION

ABSTRACT

Micro and small and medium enterprises make an important contribution to the economic development of Albania. Due to globalization and EU integration process, business environment in our country is becoming more and more complex and SMEs have to undertake proper actions in order to compete at national and international markets. Under these circumstances, more attention should be paid to innovation as the main tool to remain competitive in a globalized world. This paper aims to provide a descriptive analysis of SMEs sector in Albania focusing on their contribution to the national economy as well as at the status of Albania and its SMEs with regard to competitiveness and innovation. The data used were mostly retrieved from Doing Business, Global Competitiveness Indexes (GCI) & Global Innovation Indexes (GII) and Albanian Institute of Statistics (INSTAT). Over the last years significant progress is made toward the establishment of the proper business environment for SMEs. Government policies and initiatives seem to have produced concrete results with regard to some specific indicators of Doing Business such as paying taxes, while in terms of innovation more efforts need to be put either by the government or by the same SMEs in the country in order to improve innovative capabilities. Despite some initiatives towards the establishment of proper infrastructure to enterprise innovation, this latter remains weak and Albanian SMEs still lack funds for innovation, and skilled workers.

Keywords: SMEs, competitiveness, innovation, business environment.

JEL Classification: O30, O38, L59

1. ROLE OF SME-s IN ECONOMIC DEVELOPMENT

1.1 SMEs vs. large scale enterprise

There have been many debates about the role of the size of enterprises in the efficiency and effectiveness of the production. According to Schumacher (1973), SMEs, observing the market closely, understanding the requirements of customers better and having intimate relations with its employee, have more elasticity than the large ones in terms of manufacturing, marketing and service. This means that SMEs overpass troubles lightly with less damage. A comparative analysis between small firms and large firm is presented in Table 1. As it is shown by the table, there is significant difference related to marketing, management and communication and so on. Among advantages we can emphasize: i) opportunity to fast reaction to changes, because of single structure, ii) SMEs are the manufacturer of intermediate goods and

inputs of large industrial enterprises iii) SMEs reflect small savings and family savings directly to the investments. In this regard the small firms are too important, have a significant impact on creating the future business generation. However, SMEs have also some disadvantages. These are lack of general administration, especially the lack of total participation of low level workers to the decisions taken by the owners or partners, lack of capital and financial planning, not taking enough support from the banks and other financial corporations, lack of product development, lack of coordination between production and sale, not showing the activities of modern marketing, risk of bankruptcy and losing its independency, etc.

Table 1: COMPARISONS BETWEEN SMALL AND LARGE FIRMS

| | Small Firms | Large Firms |
|---|---|--|
| Marketing | <ul style="list-style-type: none"> • Ability to react quickly to keep abreast of fast-changing market requirements | <ul style="list-style-type: none"> • Comprehensive distribution and servicing facilities. • High degree of market power with existing products. |
| Management | <ul style="list-style-type: none"> • Lack of bureaucracy. • Dynamic, entrepreneurial managers react quickly to take advantage of new opportunities and are more willing to accept risk. | <ul style="list-style-type: none"> • Professional managers able to control complex organizations and to establish corporate strategies. |
| Internal Communication | <ul style="list-style-type: none"> • Efficient and informal internal communication network. • Affords a fast response to internal problem-solving. • Provides ability to recognize rapidly to adapt to change in the external environment. | <ul style="list-style-type: none"> • Internal communications often cumbersome: this can lead to slow reaction to external threats and opportunities. |
| Qualified technical manpower | <ul style="list-style-type: none"> • Frequent lack of suitably qualified technical specialists. • Often unable to support a formal R&D effort on an appreciable scale. | <ul style="list-style-type: none"> • Ability to attract highly-skilled technical specialists. • Can support the establishment of a large R&D laboratory. |
| Economies of scale and system approach | <ul style="list-style-type: none"> • In some areas scale economies of form substantial entry barriers to small firms. • Inability to offer integrated product lines or systems. | <ul style="list-style-type: none"> • Ability to gain scale economies in R&D, production and marketing. • Ability to offer a range of complementary products. |

| | | |
|---|---|--|
| Finance | <ul style="list-style-type: none"> • Great difficulty in attracting capital, especially risk capital • Innovation can represent a disproportionately large financial risk. | <ul style="list-style-type: none"> • Ability to borrow on capital market. • Ability to spread risk over a portfolio of projects. • Better able to fund diversification into new technologies and new markets. |
| Economies of scale and system approach | <ul style="list-style-type: none"> • In some areas scale economies of form substantial entry barriers to small firms. • Inability to offer integrated product lines or systems. | <ul style="list-style-type: none"> • Ability to gain scale economies in R&D, production and marketing. • Ability to offer a range of complementary products. |
| Economies of scale and system approach | <ul style="list-style-type: none"> • In some areas scale economies of form substantial entry barriers to small firms. • Inability to offer integrated product lines or systems. | <ul style="list-style-type: none"> • Ability to gain scale economies in R&D, production and marketing. • Ability to offer a range of complementary products. |
| Economies of scale and system approach | <ul style="list-style-type: none"> • In some areas scale economies of form substantial entry barriers to small firms. • Inability to offer integrated product lines or systems. | <ul style="list-style-type: none"> • Ability to gain scale economies in R&D, production and marketing. • Ability to offer a range of complementary products. |
| Economies of scale and system approach | <ul style="list-style-type: none"> • In some areas scale economies of form substantial entry barriers to small firms. • Inability to offer integrated product lines or systems. | <ul style="list-style-type: none"> • Ability to gain scale economies in R&D, production and marketing. • Ability to offer a range of complementary products. |
| Economies of scale and system approach | <ul style="list-style-type: none"> • In some areas scale economies of form substantial entry barriers to small firms. • Inability to offer integrated product lines or systems. | <ul style="list-style-type: none"> • Ability to gain scale economies in R&D, production and marketing. • Ability to offer a range of complementary products. |
| Growth | <ul style="list-style-type: none"> • Can experience difficulty in acquiring external capital necessary for rapid growth. | <ul style="list-style-type: none"> • Ability to finance expansion of production base. • Ability to fund growth via diversification and acquisition. |

| | | |
|-------------------------------|--|--|
| Patents | <ul style="list-style-type: none"> • Can experience problems in coping with the patent system. • Cannot afford time and costs involved in patent litigation. | <ul style="list-style-type: none"> • Ability to employ patent specialists. • Can afford to litigate to defend patents against infringement. |
| Government regulations | <ul style="list-style-type: none"> • Often cannot cope with complex regulations. • Unit costs of compliance for small firms often high. | <ul style="list-style-type: none"> • Ability to fund legal services to cope with complex regulatory requirements. • Can spread regulatory costs. • Able to fund R&D necessary for compliance. |

Source: ISB, 2006

1.2 Definitions of SMEs

There are several definitions on SMEs from International Institutions based on the economic size of countries. Thus, SMEs phrase have economical meaning rather than legal meaning. Number of employees and turnover seems to be main factors determining SMEs. Different countries define SMEs differently. Small and medium-sized enterprises (SMEs) are as well defined in the European Union (EU) recommendation 2003/361. The main factors determining whether a company is an SME are: i) number of employees and ii) turnover or balance sheet total. According to the European Union the category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding EUR 43 million. Small and medium enterprises are thus defined as firms with 10 to 250 employees, and more than EUR 10 million turnover or annual balance sheet total.

Table 2: SMES DEFINITION IN EU AND ALBANIA

| Company category | EU | | Albania | |
|------------------|-----------|----------|-----------|-------------|
| | Employees | Turnover | Employees | Turnover * |
| Medium sized | < 250 | ≤ € 50 m | < 250 | ≤ 250 ALL m |
| Small | < 50 | ≤ € 10 m | < 50 | ≤ 50 ALL m |
| Micro | < 10 | ≤ € 2 m | < 10 | ≤ 10 ALL m |

*EUR is approximately ALL 134.

Albania is an EU candidate country from 2014. In its way to EU integration Albania revised the Law on SMEs, in order to bring the SME definition closer to EU standards. According to this law (article 4): “Micro, small and medium enterprises (SMEs) includes those entities which employ fewer than 250 people and have an annual turnover that does not exceed 250 million Albanian Lek (ALL) (approx. EUR 2 million). Small enterprises are those entities which employ less than 50 persons and have an annual turnover that does not exceed 50 million ALL (approx. EUR 50,000). Micro enterprises are entities which employ less than 10 persons and have an annual turnover that does not exceed 10 million ALL (approx. EUR 75,000). At the end as all these definitions exist, the important thing is that every definition is related to the size of each economy, and micro, small or medium is a relative concept in different countries.

1.3 The importance of SME in Albanian economy

During the years of transition, SMEs have played a significant role in the economy. SMEs contribute around 75% to the GDP of the country, while its contribution to exports is around 50% (INSTAT, 2017a). SMEs constitute the vast majority of businesses in Albania. SMEs generate over two thirds of value added and 81.6 % of employment, compared to the EU value added average of 56.8 % and employment average of two thirds. Micro-firms are the backbone of the Albanian economy, providing 40 % of employment, but they are providing only 20% of value added. As for small and medium sized enterprises, contributions to employment and value added are at comparable levels with EU average (Table 3).

Table 3: SMES RELATED TO ADDED VALUE, EMPLOYMENT AND NUMBER (ALBANIA VS. EU)

| Class size | Number of enterprises | | | Number of persons employed | | | Value added | | |
|------------|-----------------------|------|------|----------------------------|------|------|--------------|------|------|
| | Albania | | EU | Albania | | EU | Albania | | EU |
| | No. | % | % | No. | % | % | Million Euro | % | % |
| Micro | 87,854 | 94.5 | 93.0 | 162,261 | 40.8 | 29.8 | 95,250 | 21.9 | 20.9 |
| Small | 4,105 | 4.4 | 5.8 | 79,713 | 20.0 | 20.0 | 105,294 | 24.2 | 17.8 |
| Medium | 833 | 0.9 | 0.9 | 82,650 | 20.7 | 16.7 | 89,397 | 20.5 | 18.2 |
| SMEs | 97,792 | 99.9 | 99.8 | 324,984 | 81.6 | 66.6 | 289,940 | 66.6 | 56.8 |
| Total | 92,920 | 100 | 100 | 398,507 | 100 | 100 | 435,419 | 100 | 100 |

Source: SBA Fact Sheet Albania, 2017

The number of SMEs has increased continuously during last years. In 2016, the number of SME registered was about 30 % higher compared to 2012, while employment increased by nearly 20 % during the same period. However, despite this increase, value added rise by only 3 %, and overall value added as a share of the economy still remains below its 2012 level (INSTAT, 2017a). The most significant improvements took place in 2015, with SME employment increasing by 18.7 % and value added by 6.5 %. This was mainly due to a significant increase in the number of SMEs. The major part (90%) of the enterprises are those with 1-4 employed and then 5% and 4% are enterprises with 5-9 and 10-49 employed respectively. Those enterprises that have over 50 employed consists only the 1% of the total (INSTAT, 2017b)

The Albanian economy is dominated by services, but agriculture still retains an important role. Enterprises with main activity “Trade” and “Accommodation and food service activities” dominate with 46% of total active enterprises (Figure 1). The manufacturing sector is relatively small (7% of the total) and mainly produces low value added and labor-intensive products such as textiles and footwear. Construction's share of the economy greatly diminished over recent years as private credit and investment weakened. Another growth driver in the manufacturing sector was exports, which reached an all-time high in 2014. From 30% in 2012, in 2015, 37 % of total exports consisted of textiles and footwear, followed by exports of minerals, fuel and electricity (SBA Fact sheet, Albania, 2017).

SMEs realize 66.3 % of value added. Trade sector occupies the highest percentage of value added realized by small and medium enterprises with 22.2 %, followed by other services with 11.5 %, construction with 10.1 % and manufacturing industry with 10.0 %. Electricity, water & waste management and mining & quarrying sector have the lowest percentage of value added respectively by 2.2 % and 2.5 % (INSTAT, 2017a).

Small and medium sized enterprises play an important role in terms of employment. Accommodation and food services sector has the highest percentage of employment in micro enterprises by 78.9 %. Construction sector has the highest percentage of employment in small sized enterprises with 39.0 %.

Manufacturing sector has the highest percentage of employment in medium sized enterprises by 36.4 %. (INSTAT, 2017b).

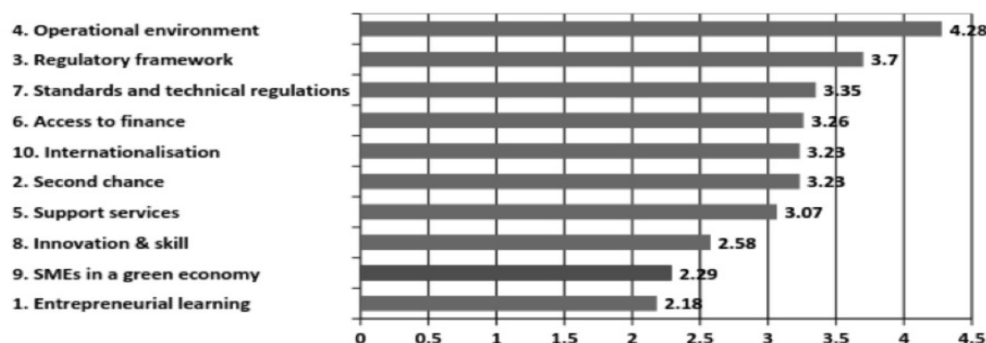
1.4 Business environment and public private dialogue

The Albanian Government has always paid attention to SMEs development a catalyst for rapid increases in domestic production and employment. Strong and dynamic development of private sector is considered a priority of the government since the beginning of economic reforms. The creation of a suitable business environment and the support of the sustainable development of SMEs, are basic conditions for the economic development and the increase of social welfare as an employment source, innovation and productivity. For this reason Business and Investment promotion strategy for 2014-2020 is approved by Albanian Government. This is the main document for the identification and implementation of the national policies for the promotion of business investments for the period 2014-2020. The Business and Investment Strategy is part of the National Development and Integration Strategy. The Strategy is in line with the principles of the Stabilization and Association Agreement linked also with principles of the Small Business Act/ SBA. The primary objective of this strategy is to transform Albania to a country that has developed and improved the business climate, an open competitive market, development of industrial SMEs and an attractive investment destination and an inclusive and sustainable growth.

Albania continued to implement the 2014-2020 business and investment development strategy in order to facilitate the business environment. According to the 2016 Small Business Act policy findings, since 2012 Albania has made progress on several parameters, such as standardization, technical regulation and simplifying business procedures. Procedures for market entry were further streamlined and business registrations soared. Efforts were made to facilitate doing business and improve government communication with enterprises, but they have yet to produce tangible results on the ground (EC, Albania 2016 Report). The National Business Centre became operational in April 2016, providing a single business registration and licensing window and offering online registration services. Secondary legislation on strategic investment and economic development zones was adopted identifying priority sectors of investment, projects of strategic potential and strategic investment evaluation procedures.

According to the SME Policy Report (OECD, 2016), SMEs development in Albania is rated 3.12 out of a maximum of 5 points. This is a slight improvement from 2012 when Albania fared only slightly less than the regional average at 3.17 points. The report was based on ten dimensions derived from the ten principles of the EU Small Business Act. Detailed information about dimensions for policy on SMEs is provided by Figure 1 below.

Figure 1: ASSESSMENT OF SME POLICY IN ALBANIA



Source: OECD, 2016.

Despite the progress made, a number of key components of a SME-friendly business environment are missing, such as fostering the entrepreneurship in the school curriculum, setting up regulatory impact assessment procedures, developing alternative sources of finance besides traditional bank lending, and setting up fast-track and specific bankruptcy procedures for SMEs, especially with regard to the issue of non-performing loans (SBA Fact Sheet, Albania, 2017)

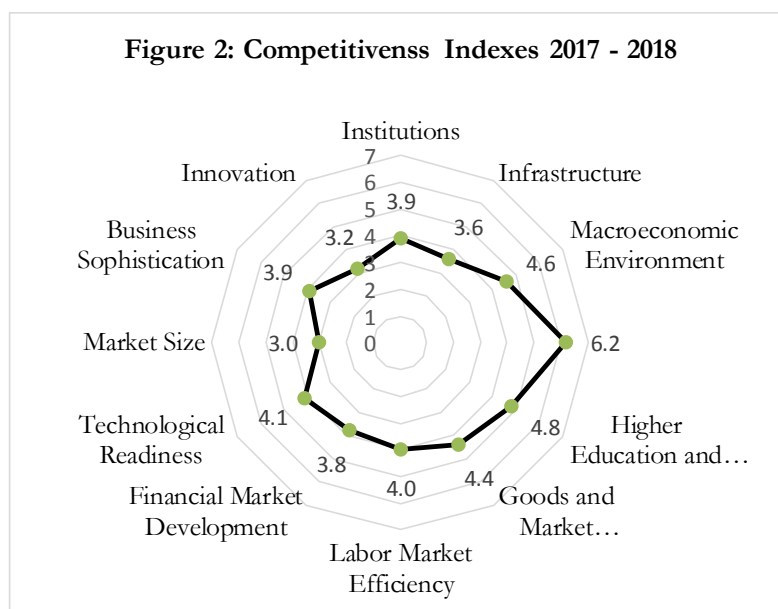
Albanian Government has undertaken significant steps to further increase the dialogue with the business community for economic and development policies. Important structures are in place to formalize this dialogue such as:

- **National Economic Council (NEC)**. NEC is set up by law in 2014 to guarantee institutional cooperation and public-private partnership, ensuring **dialogue and consultation** between the government and the private sector. The National Economic Council is a forum of consultation between the business community and the government (with comments, observations and suggestions coming from the business community to the government). The Council has also an advisory function to the Government with recommendations for economic policy decisions and practices.
- With the support of the European Bank for Reconstruction and Development, the Albanian Government has established the **Investment Council**. Investment Council is a platform set up by the Albanian authorities to intensify the dialogue between the government and the private sector, improve the business climate and promote good governance.
- In 2017, in the new structure of Government is established a new position, **Minister of State for Entrepreneurship Protection**. The mission of the Minister is to assist and protect the entrepreneurs as well as to promote inter-institutional cooperation aiming at improvement of the public services to private business.

2. COMPETITIVENESS AND INNOVATION AMONG SMEs IN ALBANIA

2.1 Albania's Competitiveness

The performance of SMEs is strongly influenced by the business conditions and factors which define the competitiveness of an economy. Nowadays several instruments are established to measure either business conditions or competitiveness of a given country. Going through these indicators, analyses and comparisons can be performed in order to get a clear picture of the situation. Actually, different studies have considered data of Doing Business and Global Competitiveness Index (GCI) provided respectively by World Bank and World Economic Forum in order to analyze and compare business environment and competitiveness in Albania. GCI measures national competitiveness defined as a set of institutions, policies and factors that determine the level of productivity. According to the latest report of GCI, Albania has made progress on the overall ranking. For 2017 – 2018, our country is listed 75th among 137 nations and it is considered as an



efficiency driven economy. Being at this stage of development, Albania has to develop more efficient production processes and increase product quality. Hence, further improvements and further developments need to take place with regard to specific pillars of competitiveness such as education, goods and labor market efficiency, financial markets as well as technological readiness (Figure 2).

The World Bank 2017 Doing Business Report placed Albania at the 58th position up 32 places from the 2016 assessment. The score improvement was mostly due to reforms undertaken in dealing with construction permits, paying taxes and getting electricity. Regarding the construction permits, the 2017 Doing Business placed Albania at the 106th position up 83 places from the 189th position of 2016 Doing Business. For the indicator of paying taxes and getting electricity, the 2017 Doing Business Report puts Albania respectively up 12 and eight places. Reforms undertaken with regard to these indicators consisted in:

- ✓ Reintroducing the issuance of building permits and streamlining the process of receiving the final inspection and compliance certificate.
- ✓ Speeding up the process for obtaining a new electricity connection.
- ✓ Introducing an online system for filing and paying taxes.

One of the indicators in which Albania has made steps back forward is trading across borders. Data of 2018 shows that trading across borders has become more difficult due to the introduction of mandatory scanning inspections for exports and imports which increased the time and cost for border compliance. Currently, Doing Business report provides the following data with regard to this indicator (Table 4).

Table 4: TRADING ACROSS BORDERS INDEXES FOR ALBANIA

| | Exports | | Imports | |
|-------------|------------------------|-------------------|------------------------|-------------------|
| | Documentary Compliance | Border Compliance | Documentary Compliance | Border Compliance |
| Time (hrs.) | 6 | 9 | 8 | 10 |
| Costs (USD) | 10 | 55 | 10 | 77 |

Source: Doing Business 2018

2.2 Innovation in Albania- An analysis at macro and micro level

Innovation is one of the contributors to the sustainable national economic growth. In 2017, Albania was ranked 93 out of 127 countries in the Global Innovation Index (GII). Actually, there is no significant change on the ranking of Albania compared to 2016 in none of the indicators listed in the table below. Innovation Input Indexes (III) involve 5 pillars (institutions, human capital and research, infrastructure, market and business sophistication) of the national economy which enables innovative activities while Innovation Output Indexes (IOI) involve 2 pillars (knowledge & technology outputs and creative outputs) and represent the results of innovative activities. The figures for 2017 indicate a better ranking of Albania in innovation input sub – indexes (rank 70) rather than in innovation output sub – indexes (rank 115). As it is shown in GII report, ease of starting a business, resolving the insolvency and protecting the minority investors are among the strength for enabling innovative activities. Data from the same report also show that innovative activities results are reflected at the level of ICT services export and the number of ISO certificates issued.

Table 5: ALBANIA’S RANKING AT GLOBAL INNOVATION

| | Score 0 - 100 | | Rank | |
|-----------------------------|---------------|------|------|------|
| | 2016 | 2017 | 2016 | 2017 |
| Global Innovation Index | 28.4 | 28.9 | 92 | 93 |
| Innovation Output sub-index | 16.2 | 15.7 | 115 | 115 |
| Innovation Input sub-index | 40.5 | 42.0 | 71 | 70 |
| Innovation Efficiency Ratio | 0.4 | 0.4 | 121 | 122 |

Source: Global Innovation Index 2016 & 2017

GII also consider Intellectual Property to contribute in the knowledge creation, impact and diffusion. Laws and institutions managing Intellectual Property Rights are among the most important instruments to encourage innovation. Actually, IP legislation in Albania is fully in compliance with the TRIPs Agreement and also with the EU Directives on IP matters. The most recent development in this field is the adoption of the new law on Copyright and Related Rights on March 2016 as well as of the national strategy on intellectual and industrial property. Albania has also ratified the most important treaties and conventions with regard to IPRs under WIPO and WTO organization. The main institutions engaged in IPRs matters are the Albanian Copyright Office (ACO) and the General Directorate of Patents and Trademarks (GDPT). The following table provides some valuable information with regard to the number of granted and registered patents and trademarks & industrial designs in Albania by the end of 2016.

Table 6: INTELLECTUAL PROPERTY GRANTS AND REGISTRATION STATUS BY 2016

| | Patents grants | | Trademark registrations | | | Industrial Design registrations | | |
|--------|------------------|---------------|-------------------------|---------------------|---------------|---------------------------------|----------------------|---------------|
| | <i>Residents</i> | <i>Abroad</i> | <i>Resident</i> | <i>Non-resident</i> | <i>Abroad</i> | <i>Resident</i> | <i>Non-residents</i> | <i>Abroad</i> |
| Number | 5 | 1 | 526 | 2891 | 357 | 3 | 238 | 38 |

Source: http://www.wipo.int/directory/en/details.jsp?country_code=AL

Innovation is crucial to SMEs since it can lead to increased market share and revenues, greater production efficiency and productivity growth. (Shefer & Frenkel, 2005, pp. 25-32). Innovation can also serve as an instrument / tool SMEs can use in order to gain competitive advantage. It helps companies to offer a wider range of differentiated products improving their financial performance. (Zahra et al., 2000, pp. 925-

930). Many times SMEs are seen as a source of innovation at the aggregate level because they are flexible, dynamic and sensitive to changes in demand in comparison to larger companies.

Despite improvements in the business environment for SMEs in Albania, innovation of this category of businesses still remains a challenge ahead. Albania's capacity for technological absorption and research, development and innovation (RDI) is low. Key obstacles include low expenditure on research and development (about 0.4 % of GDP); weak links between the scientific and private sectors; as well as fragmentation of the national research and innovation system. As a result of this weak innovation policy infrastructure, almost all sectors of the economy mainly provide low-technology, labor-intensive and low-cost products and services. (EC, Albania 2016 Report). Increased funding and a more focused RDI strategy, would support the country's capacity to attract investment in RDI. Actually, innovation fund managed by AIDA, provided in 2016, in total 2,223,350 ALL (approx.. 17,000 Euro) only to five companies, while some funding was provided to SMEs by several national funds, the Italian Cooperation SME credit line program and the European Fund for Southeast Europe (EFSE). Since the beginning of its implementation, EFSE has provided loans to 525 clients disbursing about 35,000,000 euro. In 2016, around 5,000,000 euro was disbursed to 125 contracts. As part of Europe and since granted the “candidate” status, Albania is also involved in several EU programs targeting research & development and innovation in SMEs such as COSME and Horizon 2020. Currently, efforts to involve Albanian enterprises at COSME program are still at the preparatory phase and are focused more at raising awareness of business community while the participation of private sector at Horizon 2020 remains very low.

Albania still has considerable gaps to close between education outcomes and labor market. According to Global Competitiveness Report (GCI), a large share of enterprises report lack of appropriately skilled workers. Businesses in agriculture and agro-processing, textile and foot wear, tourism, construction, transport and communication, energy, information communication technology lack specialists and technicians. The relations between the vocational education and training system and industry are weak and most curricula offer little scope for practicing the skills learnt. Vocational education is perceived as a second best path to tertiary education, rather than a route to labor market entry. On the other hand, few companies provide formal training for their employees.

SMEs not only constitute an important segment of the Albanian economy, but they also have the ability to be a dynamic force in the country's economic development. SMEs specifically contribute as an integral part of economic structure as they are suppliers of the major enterprises and contribute to foreign competition of these firms. Hence, it is crucial that SMEs in Albania remain competitive. In order to comply with this, they continually monitor changes in the market and in the activities of the competitors. They also try to be innovative. Types of innovation used by SMEs in Albania are those related to marketing, product and organizational innovation. Hence, SMEs improve their products before competitors, introduce changes in the products' design & packaging and in distribution or sales practices (online sales, franchising, direct sales or distribution licenses). They also try to create alliances, partnerships or outsourcing with other firms and public institutions. Most of Albania SMEs spend 1 – 5% of the total capital for innovation. Among barriers Albanian SMEs face to adopt innovation are high innovation costs and instability in the markets (IJEMS, 2016). Even though studies performed show that Albanian SMEs are innovative considering all the above mentioned activities, such a finding should always be taken with a “grain of salt”. In most of the cases what SMEs representatives consider as innovation include simple changes performed in production lines or machineries and management practices (Rembeci, 2017, pp. 213-221).

3. CONCLUDING REMARKS

Today, economic development is at the heart of many economic scholars' debates, and the role of small and medium enterprises in this context, is a very important one, based on the contribution it makes to the economy of a country.

SMEs play an important role in Albania – fuelling the economic growth, providing flexibility, engaging in bridge-building between Albania and the European Union, and promoting employment. The reforms of the government has aimed promoting a friendly business climate, and to provide assistance and incentives for SMEs. Strategies for the business development are based on European Union directives, and are some of the priority obligations that Albania has to fulfill towards European integration. Significant progress has been made in improving the strategic framework for SMEs development and promoting the dialogue between Government and business community.

During the last decade, efforts of the government and policy makers in Albania were focused on the establishment of the proper and sustainable business environment to encourage private initiatives and promote Albanian enterprises to be competitive and further expand their activity domestically and internationally. These efforts are reflected to the improvement of Albania's position in the overall ranking of Doing Business and Global Competitiveness Indexes. However, as an efficiency driven economy, Albania still has to put more efforts on some specific directions such as education, business crediting and trading across borders. On the other hand, much more need to be done in order to improve R&D and innovative capabilities of private companies operating in our country since their efforts with these regards still remain “infantile”. Establishment and promotion of proper infrastructure and increased budget and funding possibilities for innovation would definitively support Albanian enterprises to be competitive in a global environment.

REFERENCES

- EU, 2017, SBA Factsheet, Albania available from https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/albania_sba_fs_2017.pdf. [22 January 2018]
- EUROPEAN COMMISSION, 2016, Albania 2016 Report, available from https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/pdf/key_documents/2016/20161109_report_albania.pdf. [26 January 2018]
- http://www.wipo.int/directory/en/details.jsp?country_code=AL
- INSTAT (2017a). Statistics on Small and Medium Enterprises, 2015. Tirana.
- INSTAT (2017b). Business Register 2016. Tirana
- INTERNATIONAL JOURNAL OF ECONOMICS AND MANAGEMENT STUDIES, 2016, Business Strategies of SMEs, Innovation Types and Factors Influencing their Innovation: Albania Case, available from <https://www.omicsonline.org/open-access/business-strategies-of-smes-innovation-types-and-factors-influencing-their-innovation-albanian-case-2162-6359-1000319.pdf>. [21 January 2018]
- Ministry of Economic Development, Trade and Entrepreneurship: “BUSINESS AND INVESTMENT DEVELOPMENT STRATEGY FOR THE PERIOD 2014- 2020.
- Rembeci G., 2017, Building an information system to enhance innovative SMEs in Albania, EUROPEAN JOURNAL OF ECONOMICS AND BUSINESS STUDIES, Elsevier, Vol. 7, No.1, Jan - Apr 2017, pp. 213-221.
- Schumacher E.F (1973), Small is Beautiful - Economics as If People Mattered. London.
- Shefer D. and Frenkel A., 2005, R&D, firm size and innovation: an empirical analysis, TECHNOVATION, Elsevier, Vol. 25, pp.25–32.
- THE INSTITUTE FOR CONTEMPORARY STUDIES XHEPA, S. (2006), Competitiveness and the SME Development, 2006, [available from at http://www.western-balkans.info/upload/docs/1___Albania_SMEnew.pdf]. [22 January 2018]
- WIPO, The Global Innovation Index 2016, available from http://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2016.pdf. [24 January 2018]
- WIPO, The Global Innovation Index 2017, available from http://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2017.pdf. [24 January 2018]

WORLD BANK GROUP, Doing Business 2016, available from <http://www.doingbusiness.org/~media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB16-Full-Report.pdf>. [30 January 2018]

WORLD BANK GROUP, Doing Business 2017, available from <http://www.doingbusiness.org/~media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB17-Report.pdf>. [30 January 2018]

WORLD BANK GROUP, Doing Business 2018, available from <http://www.doingbusiness.org/~media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB2018-Full-Report.pdf>. [05 February 2018]

WORLD ECONOMIC FORUM, 2017, The Global Competitiveness Report 2017 – 2018, available from <http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>. [31 January 2018]

Zahra, S. A., Ireland D.R. and Hitt, M.A., 2000, International expansion by new venture firms: international diversity, mode of market entry, technology learning, and performance, *ACADEMY OF MANAGEMENT JOURNAL*, United States, Vol. 43, No. 5, pp.925–950.



ERENET Team at the BSEC-KAF Workshop on “SMEs in the Time of Global Crises” held in April 2010 in Tirana
(in the middle Jan Senkyr, Resident Representative of the KAF in Turkey)

Photo © by Dr. Antal Szabó

Desislava Yordanova, PhD

Associate Professor

Department of Business Administration,

Sofia University “St. Kliment Ohridski”

125 Tzarigradsko Shosse Blvd., blok 3, Sofia, Bulgaria

E-mail: d_yordanova@abv.bg

**ENTREPRENEURSHIP EDUCATION AND TECHNOPRENEURIAL ATTITUDES
AMONG BULGARIAN SCIENCE AND ENGINEERING STUDENTS****ABSTRACT**

This study examines entrepreneurial attitudes toward technology entrepreneurship among science and engineering students in 15 Bulgarian universities. The better understanding of entrepreneurial attitudes toward technology entrepreneurship may help to devise and implement policies and measures for stimulating interest in technology entrepreneurship, entrepreneurial intentions and behaviour among students, who graduate science and engineering majors in Bulgarian universities. The results of the present study reveal that technology entrepreneurship is perceived as a desirable career choice among Bulgarian science and engineering students. However, there is a gap between feasibility and desirability toward technology entrepreneurship among respondents. The participation in entrepreneurship education affects positively feasibility and desirability toward technology entrepreneurship among respondents.

Keywords: entrepreneurial attitudes, technology entrepreneurship, students, Bulgaria

JEL Classification: I25, L26

1 INTRODUCTION

The provision of entrepreneurship courses and programs is a widespread practice in most developed and developing countries including countries from Central and Eastern Europe (Katz, 2003; Matlay, 2001). Entrepreneurship education is seen as important factor for building entrepreneurial capacity (Hannon, 2006). The role and the need for entrepreneurship education and training are justified by the view that entrepreneurship is a discipline (Drucker, 1985) that “*can* be taught” (Kuratko, 2005:580, Gorman et al., 1997). This standpoint finds a considerable support in entrepreneurship theoretical and empirical research (Veciana, 1999). Indeed, the investigation of entrepreneurial traits failed to provide conclusive evidence about who the entrepreneur is (Gartner, 1989). Instead, Gartner (1989) emphasizes that behaviours rather than personality traits differentiate entrepreneurs from non-entrepreneurs and calls for shifting attention to what the entrepreneur does (behavioural approach). While psychological traits are impossible or difficult to change, the entrepreneur’s skills and abilities, which determine entrepreneurial behaviour can be learned (Veciana, 1999). Empirical research demonstrates that entrepreneurship education has a positive impact on students’ human capital assets, intentions, interests, attitudes and aspirations for entrepreneurship and entrepreneurial behaviour (Bae et al., 2014; Dickson et al., 2008; Martin et al., 2013; Mwasalwiba, 2010). The emphasis in the research on entrepreneurship education has gone beyond the question whether entrepreneurship can be thought to deal with the questions what and how should be thought (Pittaway and Cope, 2007; Solomon et al., 1994). Mosey et al. (2017) call for more research exploring the role of entrepreneurship education particularly in the field of technology entrepreneurship. (Fayolle & Liñán, 2014; Fayolle and Gailly, 2015; Mwasalwiba, 2010).

Some specific characteristics of Central and Eastern European context, however, are related to increasing need of entrepreneurship education for university students at both bachelor and master level in all fields of study. First of all, the institutional environment is characterized by the relative lack of tax incentives, frequent changes in regulations, underdeveloped legal system and insufficient governmental assistance (Fogel, 2001; Ivy, 1997; Smallbone and Welter, 2001; Kuznetsov et al., 2000; Puffer and McCarthy, 2001; Svetličič et al., 2007). Second, the environment in post-socialist countries is characterized by inadequate business infrastructure and scarcity of all types of resources (Fogel, 2001; Ivy, 1997; Smallbone and Welter, 2001; Kuznetsov et al., 2001; Puffer and McCarthy, 2001; Svetličič et al., 2007). Third, the image of entrepreneurs in societies in Eastern Europe is still highly controversial due to problems with corruption, imperfect property rights, lack of transparency of privatization process, etc. In addition, due to lack of history of successful entrepreneurs, young people lack positive entrepreneurial role models.

The existing scientific knowledge about the impact of entrepreneurship education is very limited (Fayolle and Gailly, 2009). Little research has been done on entrepreneurship education in Central and Eastern Europe, and particularly on the impact of entrepreneurship education on entrepreneurial attitudes of students. The research objective of the present study is to investigate the influence of the participation in entrepreneurship education on technopreneurial attitudes of Bulgarian science and engineering students.

2 LITERATURE REVIEW

2.1. Technology entrepreneurship

There is no consensus among scholars about the definition of the concept of technology entrepreneurship. Although the available definitions in the literature emphasize on different activities or stages of entrepreneurial process, ascribe different meanings, refer to different levels of analysis and mention explicitly diverse outcomes of technology entrepreneurship, they coincide that technology entrepreneurship is a combination of two different concepts: entrepreneurship and technology (Petti, 2009; Nacu and Avasilcăi, 2014). Several authors perceive technology entrepreneurship as the act of creation of a new technology-based business (Gans and Stern, 2003; Antoncic and Prodan, 2008; Colovic and Lamotte, 2015). Other authors view technology entrepreneurship as a process of development of innovative products and services (Nacu and Avasilcăi, 2014; Spiegel and Marxt, 2011; Pathak et al., 2013). For example, Nacu and Avasilcăi (2014) argue that technology entrepreneurship involves technological innovations and their evolution from idea to “prototype”. Spiegel and Marxt (2011:1626) define technology entrepreneurship as a process of “formation, exploitation and renewal of products, services and processes”. Bailetti (2012:9) emphasizes that technology entrepreneurship:

- is about creating and capturing value for the firm through projects that combine specialists and assets to produce and adopt technology;
- involves collaborative experimentation and production of new products, new assets, and their attributes, which are intricately linked to scientific and technology advances and the firm’s asset ownership rights;
- may entail projects that search for problems or applications for a particular technology, launch new ventures, introduce new applications, and exploit opportunities that rely on scientific and technical knowledge provided that their ultimate outcome is to create and capture value for the firm;
- is not about the general management practices used to operate small businesses owned by engineers or scientists or just about small businesses.

The proposed definitions of technology entrepreneurship state explicitly various outcomes including value creation (Bailetti, 2012; Petti and Zhang, 2011), value capture (Bailetti, 2012), enhancing the quality of life (Mirchev and Dicheva, 2013), satisfaction of newly originated needs (Mirchev and Dicheva, 2013), creation of new resource combinations (Burgelman et al., 2004), creation of new technology-based firms (Gans and

Stern, 2003; Antoncic and Prodan, 2008; Colovic and Lamotte, 2015), creation of (new/innovative) products, services or processes (Spiegel and Marxt, 2011; Pathak et al., 2013).

There are different levels of analysis in technology entrepreneurship (Spiegel and Marxt, 2011; Burgelman et al., 2004; Phan and Foo, 2004). Burgelman et al. (2004:3) emphasize that technology entrepreneurship “can involve one individual (*individual* entrepreneurship) or the combined activities of multiple participants in an organization (*corporate* entrepreneurship)”.

Several authors have attempted to identify distinctive characteristics of technology entrepreneurship. Beckman et al. (2012) argues that technology entrepreneurship emerges between two major fields: entrepreneurship and technology-based innovation. According to Beckman et al. (2012) technology entrepreneurship may be distinguished from mainstream entrepreneurship because it is concerned with new opportunities stemming particularly from innovation in science and engineering. Bailetti (2012:10) identifies several differentiating aspects of technology entrepreneurship relative to economics, entrepreneurship and management which require particular attention:

- the interdependence between scientific and technological change and the selection and development of new products, assets, and their attributes;
- the application of technology entrepreneurship to both new and established firms as well as to both small and large firms;
- conceptualization of technology entrepreneurship as an investment in a project;
- the interdependence between technology entrepreneurship and the resource-based view of sustainable competitive advantage;
- the interdependence between technology entrepreneurship and the theory of the firm.

Hsu (2008) emphasizes that technology entrepreneurship, by its nature, is an innovation-based, which can be interpreted as a barrier to entry and therefore technology entrepreneurship may be differentiated from other forms of entrepreneurial entry. Barr et al. (2009) distinguishes between teaching general entrepreneurship and teaching high technology-focused entrepreneurship. They stress that technology entrepreneurship education creates specific challenges stemming from its greater reliance on existing and emerging technologies as a learning base.

2.2. Entrepreneurial attitudes

The founding of a new business occurs in an environment characterized by uncertainty and ambiguity (Busenitz and Barney, 1997). Therefore, it was suggested that the cognitive approach includes the strengths and may help to overcome deficiencies of traits and demographic approaches to understanding the contribution of the entrepreneur as a person to new venture formation (Mitchell et al., 2002; Robinson et al., 1991). According to Mitchell et al. (2002:95) cognitive approach represents “a theoretically rigorous and empirically testable approach” that may help to fill the research gap about the unique contribution of the entrepreneur as a person to the entrepreneurial process. Since the entrepreneur plays a key role in the entrepreneurial process, the influences of cognitive factors tend to be “more direct and immediate” in new ventures, which are usually created under condition of uncertainty and ambiguity than in large, established organizations (Forbes, 1999:415). In circumstances of uncertainty and ambiguity, cognitive factors are suggested to be especially relevant for understanding human behaviour (Forbes, 1999). Entrepreneurial cognition is defined as “the knowledge structures that people use to make assessments judgments, or decisions involving opportunity evaluation, venture creation, and growth” (Mitchell et al., 2002:97). The cognitive approach has been applied in empirical research to investigating various facets of entrepreneurial cognition including perceptions of new venture desirability and feasibility (Krueger, 1993), entrepreneurial attitudes (Kolvereid, 1997), entrepreneurial intentions (Krueger and Carsrud, 1993, Kolvereid, 1997), risk perceptions and opportunity emergence and appraisal (Krueger, 2007; De Carolis and Saperito, 2006), cognitions, biases, attributions and heuristics (Busenitz and Barney, 1997), cognitive styles (Lindblom et al., 2008). Cognition

literature emphasizes the role of perceptions, intentions, attitudes, beliefs and other cognitive factors that precede or accompany the entrepreneurial decision.

Empirical research reveals that attitudes have statistically significant influence on entrepreneurial intentions and behaviour. Attitudes toward entrepreneurship and autonomy emerge as the best predictor of entrepreneurial intentions among students (Schwarz et al., 2005; Luthje and Franke, 2003). Douglas and Shepherd (2002) examine the relationship between entrepreneurial intentions and people's attitudes toward income, risk, independence, and work effort. Their findings indicate that people with more positive attitudes toward risk and independence have higher entrepreneurial intentions. Attitudes toward income and work effort do not determine the intention to be an entrepreneur. Davidsson (1995) reports that the conviction that running one's own business is a desirable alternative is the primary explanation for variations in entrepreneurial intentions. General attitudes related to change-orientation, autonomy, competitiveness, and achievement have been found to be significantly associated with conviction. Domain attitudes such as pay-off, societal contribution, and know-how attitudes also exercise significant positive influence on conviction. In a survey of 97 senior university business students currently facing important career decisions, Krueger et al. (2000) found that attitude toward entrepreneurship and perceived self-efficacy act as significant predictors of entrepreneurial intentions. Kolvereid (1997) illustrates that attitudinal constructs contribute significantly to the explanation of the variance in intentions. The effect of background variables such as gender, self-employment experience, and family background on intentions is completely mediated by the attitudinal variables. Tkachev and Kolvereid (1999) demonstrate that attitudes, subjective norms and perceived behavioural control determine entrepreneurial intentions among Russian students as well. They also find that demographic characteristics and tracking models affect intentions only to the extent that they influence the three attitudinal antecedents of intentions. Tegtmeier (2006) shows the predictive validity of both direct measures of the attitudinal constructs and belief-based measures in a sample of 208 German students. The use of indirect measurement model indicates that attitudes and subjective norms impact significantly intentions ($R^2 = 0,543$), whereas perceived behavioural control has no additional contribution to the estimation of intentions. The model based on direct measures reveals that all attitudinal constructs are associated significantly with intentions ($R^2 = 0,446$). Souitaris et al. (2007) report that attitude toward self-employment, subjective norm, and perceived behavioural control are significantly and positively correlated to intentions to become self-employed in a sample of science and engineering student in two major European universities (in UK and France). Li (2007) find that except for social norms the other determinants of entrepreneurial intentions proposed in the TPB are able to predict entrepreneurial intentions among international students in the USA.

2.3. Entrepreneurship education

Béchar and Toulouse (1998:320) define entrepreneurship education as “a collection of formalized teachings that informs, trains, and educates anyone interested in participating in socioeconomic development through a project to promote entrepreneurship awareness, business creation, small business development, or to train the trainers”. Jones and English (2004:416) suggest that entrepreneurship education is “the process of providing individuals with the ability to recognize commercial opportunities and the insight, self-esteem, knowledge and skills to act on them”. Hindle (2007:107) adopts a broader definition which states that entrepreneurship education is “the transfer of knowledge about how, by whom and with what effects opportunities to create future goods and services are discovered, evaluated and exploited”. A common definition of “entrepreneurship teaching” proposed by a European expert group representing all EU member states is composed of two distinct elements (European Commission, 2004):

- a broader concept of education for entrepreneurial attitudes and skills: involves the development of personal qualities and does not emphasize directly on new venture creation;
- a more specific concept of training on how to create a business.

Existing definitions of entrepreneurship education relate this concept to (Mwasalwiba, 2010):

- an educational or training process aiming to influence individuals' attitudes, behaviour, values or intentions toward entrepreneurship as a possible career option or to enhance among the audience an appreciation of entrepreneurship role in the community;
- acquisition of personal skills in entrepreneurship;
- new business formation;
- opportunity recognition;
- managing of existing small firms.

Drawing upon an extensive literature review, Mwasalwiba (2010) concludes that the structure of the available definitions of entrepreneurship education reflects the general objectives to be achieved among the selected target audiences, mainly:

- creating or increasing entrepreneurial attitudes, spirit and culture among individuals and in the general community;
- new venture creation and job creation;
- contribution to the community by helping local entrepreneurs to form and grow;
- imparting of entrepreneurial skills among individuals.

Several authors distinguish among different modes of entrepreneurship education in terms of educational objectives and pedagogical approaches (Mwasalwiba, 2010; Haase and Lautenschläger, 2011). Education about entrepreneurship means to provide knowledge about theories on entrepreneurs, new venture creation, economic effects of entrepreneurship, success and failure factors of small and medium-sized enterprises as well as to increase awareness about entrepreneurship and to stimulate the sensitization activities among different stakeholders such as policy makers, financiers and the general public (Mwasalwiba, 2010; Haase and Lautenschläger, 2011). Education for entrepreneurship refers to the provision of tools for new venture start-up and stimulation of entrepreneurial process among potential entrepreneurs in order to create entrepreneurs (Mwasalwiba, 2010; Haase and Lautenschläger, 2011). Education through/in entrepreneurship involves teaching entrepreneurial skills and acquiring entrepreneurial thinking which aims at preparing entrepreneurial individuals (Mwasalwiba, 2010; Haase and Lautenschläger, 2011).

There is a growing interest among various stakeholders such as donors, educators and policy-makers in the assessment of the impact of entrepreneurship education (Mwasalwiba, 2010). The scientific research on the impact of entrepreneurship education is complicated significantly by the large heterogeneity of entrepreneurship education programs at university level, the challenges related to the choice of adequate measurement indicators, and the appropriate timing of the measurement (Fayolle and Gailly, 2009). In addition, various factors such as the institutional context, the nature of the audience, the local culture, etc. might have a moderating effects on the impact of entrepreneurship education (Fayolle and Gailly, 2009). Drawing upon a review of 17 articles, Mwasalwiba (2010) list 27 indicators for impact assessment of entrepreneurship education. The indicators rated with the highest scores include:

- start-ups by graduates;
- students' academic standards;
- attitudes and intentions to act;
- contribution to society;
- resulting innovations;
- student/alumni satisfaction;
- business performance;
- general awareness/interest in entrepreneurship.

Falkäng and Alberti (2000) argue that the evaluations of entrepreneurship education should be concerned not only with the economist viewpoint of business start-up and business growth, but also with the development of students and their own identities in the light of their learning experiences. They identified several positive effects for participants in entrepreneurship education:

- 1 self-employment and ability to act as an independent operator of a venture;
- 2 personal and career satisfaction;
- 3 knowledge and understanding acquisition;
- 4 skills acquisition;
- 5 identification of individual potential;
- 6 changed attitudes;
- 7 economic objectives.

Several meta-analytical studies and reviews investigate the impact of entrepreneurship education on various indicators. Martin et al. (2013) undertake a quantitative review of the literature and find a significant positive relationship between entrepreneurship education and training and entrepreneurship-related human capital assets such as entrepreneurship-related knowledge and skills, positive perceptions of entrepreneurship, and intentions to become an entrepreneur. Their meta-analysis also demonstrates that entrepreneurship education and training is positively associated with entrepreneurship outcomes in general; start-up and entrepreneurial performance. Academic-focused entrepreneurship education and training interventions have stronger relationship with entrepreneurship outcomes than training-focused entrepreneurship education and training interventions. Rideout and Gray (2013) review the empirical research on the outcomes of university-based entrepreneurship education taking explicitly into account the methodological rigor and confirm the association between entrepreneurship education and psychological outcomes such as learning, attitudes and intentions.

3 RESEARCH METHODOLOGY

Science and engineering students are selected for the empirical analysis because they exhibit the potential to start technology ventures (Souitaris et al., 2007). A survey was administrated to students in science or engineering majors in 15 Bulgarian universities in 2015 and 2016. The selected universities are located in Sofia and several other major Bulgarian cities. Rectors, deans and department heads in all Bulgarian universities providing accredited by the National Evaluation and Accreditation Agency bachelor and master programs in science and engineering study fields were contacted and invited to participate in the survey. A quota sampling technique was adopted for data collection. The collected database includes 1061 students and has the same proportions of science and engineering students from the different universities as the entire population of science and engineering students enrolled in the selected 15 universities in the respective year, in which the survey was conducted. Information about the percentage of science and engineering students in each university was obtained from the Bulgarian University Ranking System Web Portal¹.

The sample for this study is composed of 879 science and engineering students, who are not nascent entrepreneurs (in a process of starting a business) or established business owners (have already started a business). More than 76% of the respondents are undergraduate students. Female students represent less than 37% of the sample. The great majority of the respondents are full-time students. Only

¹ The Bulgarian University Ranking System Web Portal was implemented in 2010 by the Higher Education Directorate at the Ministry of Education and Science (MES) with the financial support of the Human Resource Development Operational Program 2007-2013, co-financed by the European Social Fund of the European Union.

23.5% of the sample consists of part-time students. Less than 29% of the respondents report that they have been / are enrolled in an entrepreneurship course within their university. Only 6.3% of the respondents participate(ed) in entrepreneurship course outside their current academic program, but within the university, while 27.1% of the respondents participate(ed) in entrepreneurship course within their bachelor or master program. About 9% of the respondents participate(ed) in entrepreneurship education or training outside the university.

The variable Perceived_feasibility_TE is measured with an index composed by 5 items measured on a 7-point Likert scale (Drennan et al., 2005; Krueger, 1993; Krueger et al, 2000). The Cronbach's alpha of the scale is 0.728, which exceeds significantly the minimum acceptable level of 0.6 (Hair et al., 1998). The variable Perceived_feasibility_TE indicates the perceived level of feasibility of technology entrepreneurship reported by the respondent and may take values between 7 and 35. In the analyses of empirical results we refer to two groups of respondents:

- respondents with high perceived feasibility of technology entrepreneurship: if the variable Perceived_feasibility_TE takes values greater than 21;
- respondents with low perceived feasibility of technology entrepreneurship: if the variable Perceived_feasibility_TE takes values between 7 and 21.

The variable Perceived_desirability_TE reveals how desirable technology entrepreneurship is for respondents. It is measured with an index composed by 4 items measured on a 7-point Likert scale (Drennan et al., 2005; Krueger, 1993; Krueger et al, 2000) and takes values between 4 and 28. The scale exhibits high reliability. The Cronbach's alpha of the scale is 0.739, which exceeds significantly the minimum acceptable level of 0.6 (Hair et al., 1998). Respondents, who report that the variable Perceived_desirability_TE takes values greater than 16, exhibit high perceived desirability of technology entrepreneurship. The rest of the respondents exhibit low perceived desirability of technology entrepreneurship.

The variable Entr_edu_uni takes value 1 if the respondent participated/participates in an elective or compulsory entrepreneurship course within the university and value 0 if not.

The Person chi-square test is employed to examine if there is a relationship between two categorical variables in the study. The Cramer's V test is used to estimate the strength of association between the variables.

4 EMPIRICAL FINDINGS

❖ Descriptive analysis

Table 1 presents the level of technopreneurial attitudes among the science and engineering students included in the sample. More than 65% of the students in the present study exhibit high desirability of technology entrepreneurship, which is in sharp contrast with the low level of desirability of entrepreneurship (34%) among the general population in Bulgaria (Amway Global Entrepreneurship Report, 2016). The share of respondents reporting high perceived feasibility is 21.6%, which is similar to the share of the general population exhibiting feasibility of entrepreneurship in Bulgaria as indicated in the Amway Global Entrepreneurship Report (2016). Table 1 reveals that there is a gap of 43.5% between perceptions of high desirability and high feasibility of technology entrepreneurship among the surveyed science and engineering students. Although the majority of the respondents (65.1%) exhibit high perceived desirability of technology entrepreneurship, only 21.6% report high perceived feasibility of technology entrepreneurship. The gap between desirability and feasibility of entrepreneurship identified within the general population in Bulgaria is much lower (Amway Global Entrepreneurship Report, 2016). Fayolle and Gailly (2009) argue that various factors such as the institutional context, the nature of the audience, the local culture, etc. might have a moderating effects on the impact of entrepreneurship education. The factors related to the gap between perceptions of high desirability and high feasibility of technology entrepreneurship among the surveyed science and engineering students may be classified in two groups:

- individual factors: lack of knowledge and skills in entrepreneurship, willingness to take risk, lack of finance, lack of intangible resources, ability to create/discover entrepreneurial opportunities; lack of suitable partners, etc.;
- environmental factors: institutional environment including laws and regulations for registering a new company, access to finance, availability of qualified employees, availability of governmental support for entrepreneurship and new and small businesses, access to latest technologies, etc.

Table 1: Descriptive statistics of technopreneurial intentions and attitudes (N=879).

| Variables | N | % |
|---------------------------|-----|------|
| Perceived_desirability_TE | | |
| High | 572 | 65.1 |
| Low | 307 | 34.9 |
| Perceived_feasibility_TE | | |
| High | 190 | 21.6 |
| Low | 689 | 78.4 |

Correlation analysis

The empirical analysis in this section investigates the effects of the participation in entrepreneurship education within the university on technopreneurial attitudes and intentions of science and engineering students using Pearson chi-square test for independence. The number of respondents who were/are enrolled in an entrepreneurship course within their present university is 254.

The results presented in Table 2 show a weak relationship between the participation in an entrepreneurship course within the university and perceived desirability of technology entrepreneurship (Pearson Chi-square $\chi^2 = 3.4$, $p < 0.1$, Cramer's $V = 0.062$ $p < 0.1$). Most students, who were/are enrolled in an entrepreneurship course within their university tend to report high perceived desirability of technology entrepreneurship. Among students enrolled in entrepreneurship education almost 69.7% exhibit high desirability for technology entrepreneurship, while among the rest of the students only 63.2% exhibit high desirability for technology entrepreneurship. It seems that the participation in entrepreneurship education has only a weak positive effect on students' perceptions of desirability, which may be explained that students acquire knowledge not only about the advantages and benefits to start and manage an own business, but also about the diverse risks as well as various difficulties involved in starting and running a new venture in comparison with being employed by an existing organization. These findings support previous empirical evidence about the positive effect of entrepreneurship education on perceived desirability of entrepreneurship among students (Peterman and Kennedy, 2003).

Table 2: Relationship between Entr_edu_uni and Perceived_desirability_TE.

| Entr_edu_uni | Perceived_desirability_TE | |
|---|---------------------------|-----|
| | High | Low |
| Yes | 177 | 77 |
| No | 395 | 230 |
| <i>Pearson Chi-square $\chi^2 = 3.4$ $p < 0.1$</i> | | |
| <i>Cramer's $V = 0.062$ $p < 0.1$</i> | | |

According to Table 3 there is a strong association between the participation in an entrepreneurship course within the university and perceived feasibility of technology entrepreneurship (Pearson Chi-square $\chi^2 = 14.54$ $p < 0.001$, Cramer's $V = 0.129$ $p < 0.001$). The great majority of students, who were/are not enrolled in an entrepreneurship course within their university exhibit low perceived feasibility of technology entrepreneurship. Among students enrolled in entrepreneurship education 29.9% exhibit high feasibility for technology entrepreneurship, while among the rest of the students only 18.2% exhibit high desirability for

technology entrepreneurship. Acquired knowledge and skills in starting and running a new venture seems to affect positively the students' perception of feasibility of starting a technology business. These findings are in line with previous empirical findings about the positive effect of entrepreneurship education on perceived feasibility of entrepreneurship among students (Peterman and Kennedy, 2003).

Table 3: Relationship between Entr_edu_uni and Perceived_feasibility_TE.

| Entr_edu_uni | Perceived_feasibility_TE | |
|--------------|--------------------------|-----|
| | High | Low |
| Yes | 76 | 178 |
| No | 114 | 511 |

Pearson Chi-square $\chi^2 = 14.54$ $p < 0.001$
Cramer's V = 0.129 $p < 0.001$

CONCLUSIONS

This study examines the role of entrepreneurship education for the development of technopreneurial attitudes and intentions among science and engineering students in 15 Bulgarian universities. The results of the present study demonstrate that the students in science and engineering majors included in the sample are an important source of potential entrepreneurs. They are more likely to exhibit high desirability of technology entrepreneurship and technopreneurial intentions than the general population as indicated in the Amway Global Entrepreneurship Report (2016) and the Global Entrepreneurship Monitor. Although technology entrepreneurship is perceived as a desirable career option by the majority of the studied Bulgarian science and engineering students, only approximately one fifth of the respondents perceive it as highly feasible. Interestingly, the significant gap between perceptions of high desirability and high feasibility of technology entrepreneurship among the surveyed science and engineering students seems to be much higher than the gap between desirability and feasibility of entrepreneurship identified within the general population in Bulgaria (Amway Global Entrepreneurship Report, 2016). Both individual factors such as lack of entrepreneurial knowledge and skills, reluctance to take risks and lack of start-up capital and environmental factors such as lack of infrastructure may contribute to the gap between perceptions of desirability and feasibility of technology entrepreneurship among the surveyed science and engineering students. These findings reveal the need for specific support measures for technology entrepreneurship within the university oriented particularly to students who perceive technology entrepreneurship as highly desirable, but not very feasible. Such support measures may include not only the provision of entrepreneurship education, but also the exposure to positive entrepreneurial role models in the classroom in different academic courses, provision of mentoring to students to develop a business idea, provision of networking support, etc.

Only about 29% of the surveyed science and engineering students have been / are enrolled in an entrepreneurship course at their university, but the present study does not provide insight if the low participation in entrepreneurship education is due to low demand of entrepreneurship education by students or low supply of entrepreneurship courses by the universities. The participation in entrepreneurship education seems to decrease the gap between perceived desirability and feasibility for technology entrepreneurship. The participation in entrepreneurship education is positively associated with technopreneurial intentions and these results may be at least partly explained by the positive relationship between the participation in entrepreneurship education and perceived feasibility and desirability for technology entrepreneurship.

The main limitation of the study is related to the sample selection. It was hampered because universities do not provide information about their alumnae. Therefore, the sample is not random and was structured taking into account only the distribution of science and engineering students in the entire population of science and engineering students in the selected 15 universities. Future research should examine what factors lead to positive entrepreneurial attitudes toward technology entrepreneurship among Bulgarian science and engineering students.

Universities may provide entrepreneurship education to science and engineering students in order to stimulate their interest in technology entrepreneurship, entrepreneurial attitudes, intentions and behaviour.

Acknowledgements

The research was supported by the Scientific Research Fund of Sofia University “St. Kliment Ohridski”, contract N 74/03.04.2015.

REFERENCES

- Antoncic, B., Prodan, I. (2008). Alliances, corporate technological entrepreneurship and firm performance: testing a model on manufacturing firms, *Technovation*, Vol. 28, pp. 257-65.
- Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2014). The relationship between entrepreneurship education and entrepreneurial intentions: A meta- analytic review. *Entrepreneurship theory and practice*, 38(2), 217-254.
- Bailetti, T. (2012). Technology entrepreneurship: overview, definition, and distinctive aspects. *Technology Innovation Management Review*, 2(2), pp. 5-12.
- Barr, S. H., Baker, T. E. D., Markham, S. K., & Kingon, A. I. (2009). Bridging the valley of death: Lessons learned from 14 years of commercialization of technology education. *Academy of Management Learning & Education*, 8(3), 370-388.
- Bechard, J. P., & Toulouse, J. M. (1998). Validation of a didactic model for the analysis of training objectives in entrepreneurship. *Journal of business venturing*, 13(4), 317-332.
- Beckman, C. M., Eisenhardt, K., Kotha, S., Meyer, A., & Rajagopalan, N. (2012a). The role of the entrepreneur in technology entrepreneurship. *Strategic Entrepreneurship Journal*, 6(3), 203–206.
- Burgelman, R. A., Christensen, C. M., & Wheelwright, S. C. (2004). Strategic management of technology and innovation.
- Busenitz, L. and Barney, J. (1997). Differences between entrepreneurs and managers in large organizations: biases and heuristics in strategic decision making. *Journal of Business Venturing*, 12, 9–30.
- Colovic, A., Lamotte, O. (2015). Technological Environment and Technology Entrepreneurship: A Cross-Country Analysis. *Creativity and Innovation Management*.
- Davidsson, P (1995). Detereminants of Entrepreneurial Intentions. Paper presented at the RENT IX Conference, Piacenza, Italy, November.
- De Carolis, D. M., & Saporito, P. (2006). Social capital, cognition, and entrepreneurial opportunities: A theoretical framework. *Entrepreneurship theory and practice*, 30(1), 41-56.
- Dickson, P. H., Solomon, G. T., & Weaver, K. M. (2008). Entrepreneurial selection and success: does education matter?. *Journal of small business and enterprise development*, 15(2), 239-258.
- Douglas E. and Shepherd D. (2002). “Self-employment as a career choice: attitudes, entrepreneurial intentions, and utility maximization”, *Entrepreneurship Theory and Practice*, Vol. 26 No. 3, pp. 81 – 90.
- Drennan, J., Kennedy, J., & Renfrow, P. (2005). Impact of childhood experiences on the development of entrepreneurial intentions. *The International Journal of Entrepreneurship and Innovation*, 6(4), 231-238.
- Drucker, P.F. (1985). *Innovation and entrepreneurship*. New York: Harper & Row.
- European Commission. (2004). Final Report of the Expert Group “Education for Entrepreneurship”—Making Progress in Promoting Entrepreneurial Attitudes and Skills through Primary and Secondary Education.
- Falkäng, J., & Alberti, F. (2000). The assessment of entrepreneurship education. *Industry and Higher Education*, 14(2), 101-108.
- Fayolle, A., & Gailly, B. (2009). Assessing the impact of entrepreneurship education: a methodology and three experiments from French engineering schools. In West, G. P., Gatewood, E. J., & Shaver, K. G. (Eds.). (2009). *Handbook of university-wide entrepreneurship education*. (p.203). Edward Elgar Publishing.
- Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75-93.
- Fayolle, A., & Liñán, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research*, 67(5), 663-666.

- Fogel, G (2001). An analysis of entrepreneurial environment and enterprise development in Hungary. *Journal of Small Business Management*, 39(1), 103–109.
- Gans, J.S., & Stern, S. (2003). The Product Market and the Market for Ideas: Commercialization Strategies for Technology Entrepreneurs, *Research Policy*, 32: 333-350.
- Gartner, W. B. 1989. Who is an Entrepreneur?" Is the Wrong Question.". *Entrepreneurship Theory and Practice*, 13(4), 47-68.
- Gorman, G., Hanlon, D., & King, W. (1997). Some research perspectives on entrepreneurship education, enterprise education, and education for small business management: A ten-year literature review. *International Small Business Journal*, 15, 56–77.
- Haase, H., & Lautenschläger, A. (2011). The ‘teachability dilemma’ of entrepreneurship. *International Entrepreneurship and Management Journal*, 7(2), 145-162.
- Hannon, P. D. (2006). Teaching pigeons to dance: sense and meaning in entrepreneurship education. *Education+ Training*, 48(5), 296-308.
- Hindle, K. (2007). Teaching entrepreneurship at university: from the wrong building to the right philosophy. *Handbook of research in entrepreneurship education*, 1, 104-126.
- Hsu, D. H. (2008). Technology-based entrepreneurship. *Handbook of Technology and Innovation Management*. Blackwell Publishers, Ltd: Oxford, 367-387.
- Ivy, R. L. (1997). Entrepreneurial strategies and problems in post-communist Europe: a survey of SMEs in Slovakia. *Journal of Small Business Management*, 35(3), 93.
- Jones, C., & English, J. (2004). A contemporary approach to entrepreneurship education. *Education+ training*, 46(8/9), 416-423.
- Katz, J. A. (2003). The chronology and intellectual trajectory of American entrepreneurship education: 1876–1999. *Journal of business venturing*, 18(2), 283-300.
- Kolvereid, L. (1997). Organizational employment versus self-employment: reasons for career choice intentions. *Entrepreneurship Theory and Practice*, 20, 23–31.
- Krueger Jr, N. F. (2007). The cognitive infrastructure of opportunity emergence. In *Entrepreneurship* (pp. 185-206). Springer Berlin Heidelberg.
- Krueger, N. F. (1993). The impact of prior entrepreneurship exposure on perception of new venture feasibility and desirability. *Entrepreneurship Theory and Practice*, 18, 5–21.
- Krueger, N. F., Jr., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, 5, 315–330.
- Krueger, N., Reilly, M., and Carsrud, A. (2000). “Competing models of entrepreneurial intentions”. *Journal of Business Venturing*, Vol. 15 No. 5-6, pp. 411-432.
- Kuznetsov, A, F McDonald and O Kuznetsova (2000). Entrepreneurial qualities: A case from Russia. *Journal of Small Business Management*, 38(1), 101–108.
- Li, W. (2007). Ethnic entrepreneurship: studying Chinese and Indian students in the United States. *Journal of Developmental Entrepreneurship*, 12(04), 449-466.
- Lindblom, A., Olkkonen, R., & Mitronen, L. (2008). Cognitive styles of contractually integrated retail entrepreneurs: A survey study. *International Journal of Retail & Distribution Management*, 36, 518–532.
- Lüthje, C. and Franke, N. (2003) “The making of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT”, *R&D Management*, Vol. 33, No. 2, pp.135–147.
- Martin, B. C., McNally, J. J., & Kay, M. J. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing*, 28(2), 211-224.
- Matlay, H. (2001). Entrepreneurial and vocational education and training in central and Eastern Europe. *Education+ Training*, 43(8/9), 395-404.
- Mirchev, A., Dicheva, V. (2013). Technological entrepreneurship of small and medium business in the Republic of Bulgaria as a factor for sustainable development. In *CBU International Conference Proceedings* (Vol. 1, pp. 91-96).

- Mitchell, R. K., Busenitz, L., Lant, T., McDougall, P. P., Morse, E. A., & Smith, J. B. (2002). Toward a theory of entrepreneurial cognition: Rethinking the people side of entrepreneurship research. *Entrepreneurship theory and practice*, 27(2), 93-104.
- Mosey, S., Guerrero, M., & Greenman, A. (2017). Technology entrepreneurship research opportunities: insights from across Europe. *The Journal of Technology Transfer*, 42(1), 1-9.
- Mwasalwiba, S.E. (2010). Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators. *Education+ Training*, 52(1), 20-47.
- Nacu, C. M., & Avasilcăi, S. (2014). Technological entrepreneurship: conceptual approaches. *Procedia-Social and Behavioral Sciences*, 124, 229-235.
- Pathak, S., Xavier-Oliveira, E., & Laplume, A. O. (2013). Influence of intellectual property, foreign investment, and technological adoption on technology entrepreneurship. *Journal of Business Research*, 66(10), 2090-2101.
- Petti, C. (2009). *Cases in technological entrepreneurship: Converting ideas into value*. Northampton, MA: Edward Elgar.
- Petti, C., Zhang, S. (2011). "Factors influencing technological entrepreneurship capabilities", *Journal of Technology Management in China*, Vol. 6 (1), pp. 7 – 25.
- Phan, P. H., & Der Foo, M. (2004). Technological entrepreneurship in emerging regions. *Journal of Business Venturing*, 19(1), 1-5.
- Pittaway, L., & Cope, J. (2007). Entrepreneurship Education: A Systematic Review of the Evidence. *International Small Business Journal*, 25(5), 479-510.
- Puffer, S. M., & McCarthy, D. J. (2001). Navigating the hostile maze: A framework for Russian entrepreneurship. *The Academy of Management Executive*, 15(4), 24-36.
- Rideout, E. C., & Gray, D. O. (2013). Does entrepreneurship education really work? A review and methodological critique of the empirical literature on the effects of university- based entrepreneurship education. *Journal of Small Business Management*, 51(3), 329-351.
- Robinson, P. B., Stimpson, D. V., Huefner, J. C., & Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship theory and practice*, 15(4), 13-31.
- Schwarz, E., Almer-Jarz, D., and Wdowiak, M. (2005) "A structural model of entrepreneurial intent among students: findings from Austria", *RENT XIX*, Naples, Italy, November 17-18, 2005.
- Smallbone, S and F Welter (2001). The distinctiveness of entrepreneurship in transition economies. *Small Business Economics*, 16(4), 249–262.
- Solomon, G. T., Weaver, K. M., & Fernald Jr, L. W. (1994). A historical examination of small business management and entrepreneurship pedagogy. *Simulation & Gaming*, 25(3), 338-352.
- Souitaris, V., Zerbinati, S., and Al-Laham, A. (2007). "Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources". *Journal of Business Venturing*, Vol. 22 No. 4, pp. 566-591.
- Spiegel, M., Marxt, C. (2011). Defining Technology Entrepreneurship. In *IEEM 2011, Proceedings of 2011 IEEE International Conference on Industrial Engineering and Engineering Management* (pp. 1623-1627). IEEE.
- Svetličič, M., Jaklič, A., & Burger, A. (2007). Internationalization of small and medium-size enterprises from selected central European economies. *Eastern European Economics*, 45(4), 36-65.
- Tegtmeier, S. (2006). "Entrepreneurship and the „Theory of Planned Behavior“ - empirical implications for promoting students' entrepreneurial activity", *RENT XX*, Brussels (Belgium), November, 2006.
- Tkachev A. and Kolvereid L., (1999). "Self-employment intentions among Russian students", *Entrepreneurship and Regional Development*, Vol. 11 No. 3, pp. 269 – 280.
- Veciana, J. 1999. Creacion de Empresas como Programa de Investigacion Cientifica. *Revista Europea de Direccion y Economia de la Empresa*, 8(3): 11–36.

Gueorgui STOEV

International Law and Economics Graduate
Aspiring digital entrepreneur
Sofia, Bulgaria
E-mail: Gueorgui.Stoev@gmail.com

**ENTREPRENEURSHIP AND ICT:
NEW TRENDS AND OPPORTUNITES FOR (SELF-) EMPLOYMENT IN BULGARIA**

ABSTRACT

Entrepreneurship is one of the ten set priorities in the National Strategy for Small and Medium-sized Enterprises 2014-2020 adopted in 2013 by the Bulgarian Ministry of Economy and Energy. The National Strategy is in line with the Small Business Act for Europe and reflects the policies on SMEs on the EU level. Combined with the ambition of the European Commission to complete the Digital Single Market until 2019, with the growing impact of digitalisation in the everyday life and economic activity, and with the shaped instruments at European level to tackle unemployment (especially youth unemployment), entrepreneurship is turning into an alternative and into a gateway, thanks to the new technologies.

Therefore, entrepreneurship represents an opportunity for Europe and its citizens. The barriers and challenges to its wider promotion, such as the lack of entrepreneurial education to some extent and the scarcity of low-risk financing options and of second chance options (in case of insolvency) should be addressed at European level.

A growing number of people in working age, especially young graduates and professionals are seeking opportunities to engage themselves in a profitable business of their own, which is caused by various factors but most commonly is a result of a personal and yet massive dissatisfaction with the economic and employment reality. The gap between education and the business environment is continuing to grow.

Furthermore, the young graduates of today are often in the quest of new types of employability and of different employment relations – predominantly conditioned by horizontal, rather than vertical working dependencies.

The current article aims to outline concisely the most recent trends in the area of entrepreneurship, the growing role of digitalisation and ICT in its wider development and the links they have to employment.

Keywords: Entrepreneurship, ICT, Self-employment, Start Up

JEL Classification: J23, L26, M13, M15

1. THE “DIGITISED” (UN)EMPLOYMENT

“Digitised” (un)employment, for the purposes of this article, is not about a progressive reduction of work places because of industrial robotisation or digitisation of the processes. It is mainly about the growing importance of digital skills at work, about youth unemployment - sometimes despite these skills - and about how digitalisation could pave the way to an optimistic entrepreneurial future.

1.1. THE GROWING IMPORTANCE OF DIGITAL SKILLS

In the context of the ever-growing digitalisation, not only in our everyday lives but broadly penetrating in various economic and industrial sectors, digital skills are more and more required in order to hold off the challenge from digitally-dependent tasks, work-related targets and even entrepreneurial ambitions. In other words, practically all jobs and/or all our professional activities require digital skills at some extent. This has been confirmed by a recent European Commission factsheet about the Digital Skills Gap in Europe (2017), according to which in the future 9 out of 10 jobs will require digital competences. At the same time 14% of the EU population have never used the internet (Eurostat findings, 2016) and 44% of the European population, representing 169 million Europeans between 16 and 74 years, does not have any basic digital skills (Digital Skills Gap in Europe Factsheet, 2017).

These figures are alarming in the context of the EU Digital Single Market strategy and its three pillars: better access to digital goods and services across Europe; creating the right conditions and a level playing field for digital networks and innovative services; and maximising the growth potential of the European digital economy. The EU has put in place several policy instruments to achieve these objectives and to tackle the lack or the insufficiency of digital skills, such as the New Skills Agenda for Europe, the Digital Skills and Jobs Coalition, the Digital Opportunity Trainees' Programme to help young people to enter the labour market, etc. The importance of the ICT sector in the European and global market is doubtless, as well as is its impact for the economic competitiveness. This is where companies could intervene, by providing their employees with the right tools, by empowering them with crucial results-oriented skills, thanks to targeted trainings on digital skills. There are plenty of opportunities to finance digital education and entrepreneurial skills under various programmes (Horizon 2020, Erasmus+, Erasmus for Young Entrepreneurs, etc.).

However, beyond the played part by digitalisation at work and despite the higher level of digital literacy among young people, Europe experiences high rates of youth unemployment, which are much higher than the unemployment rates for the general population.

1.2. YOUTH UNEMPLOYMENT CONCERNS

According to Eurostat data, in 2016 the EU-28 labour market amounted to nearly 380 million persons (aged between 15 and 74 years). Nearly 245 million of them were economically active (i.e. employed or unemployed but searching for employment) and the remaining 135 million were economically inactive (neither employed nor unemployed, the causes varying from enrolment in education to maternity leave, long-term sickness or unwillingness/lack of necessity to work).

The respective figures for Bulgaria outlined a labour market of around 5.510 million persons, 3.261 of which were economically active and 2.249 of which were economically inactive (a rate of 40.8%, the EU average being 35.6%). This is the general picture.

What about youth (un)employment (the 15-24 age group)? And what about the 25-34 age group?

Even though the effects of the 2008-2011 economic crisis are slowly fading out and youth unemployment is decreasing, the latter is still an issue in Europe. 2014 was a year with a very high youth unemployment rate (EU-28 average rate: 22.2%). Bulgaria was slightly above the average with a rate of 23.8%. The highest youth unemployment rates were experienced in Spain and in Greece – respectively 53.2% and 52.4%. Since then, as of 2016, the EU-28 average youth unemployment rate fell to 18.7%, to 17.2% in Bulgaria, Greece and Spain remaining in the top of list.

The European Commission has introduced measures and has launched various initiatives to be implemented in the Member States in order to tackle this issue. Among them, under the Youth Employment Initiative, introduced in 2013, the EU aimed at supporting regions and countries experiencing a youth unemployment rate above 25%. Furthermore, under the Youth Guarantee initiative, Member States have to

ensure that all young people under the age of 25 years receive a good quality offer of employment within four months after leaving education or becoming unemployed.

As regards the 25-34 age group, this one is not taken into consideration in the examination of youth unemployment across Europe, according to the Eurostat definition of “youth” in the (un)employment context, which aligns with the definition of the International Labour’s Organization (ILO) – youth unemployment studies being limited to persons under 25 years old. The next age group is however crucial. It is crucial because, according to many studies and surveys, it is a group characterized by a high economic activity and potential, by similar habits and to some extent by similar interests to those of the previous age group (many respondents to various surveys considering themselves as part of the youth group, as part of the young economic actors), it is a border age group between youth actors and adults. Furthermore, today’s students study longer, take more courses, enrol in more educational programmes than before, education is available for a larger pool of people, and for that reason they to work and they enter the active economic life at a later stage.

Education is no longer the privilege of a few and the concept of “youth” is/should be shifted in time. There is no surprise in the fact that the 25-34 elders are the typical early-stage entrepreneurs in Bulgaria, for instance (see 3.2. below).

2. DIGITALISATION AND ICT IN SUPPORT OF ENTREPRENEURSHIP

2.1. “PROLOGUE”: THE ROLE OF PERSONAL INVOLVEMENT

A growing number of young graduates and young professionals are seeking opportunities to engage themselves in a profitable business of their own, which is caused by various factors but most commonly is a result of a personal and yet massive dissatisfaction with the economic and employment reality. The latter is driven, for the most part, by two main circumstances:

On the one hand, as implied above, in many sectors employers deplore the lack of sufficiently qualified workforce, as a result of the inadequacy between education and the needs of business. The growing role and impact of innovation in business, the advent of new professions, required skills and the slow extinction of other professions, among other factors, have all surpassed the respective institutions in adjusting the educational content to the new economic and social reality, thus making business to be ahead of the possible reforms.

On the other hand, the pursuit of greater and faster growth, materialised in the companies’ turnover and combined with the crisis-provoked willingness to cut unwanted costs, has made some companies reluctant to hire unexperienced employees and invest time in the development of their additionally required skills for an optimal execution of their tasks and assignments at work. Even though the above is not an absolute trend all along the line, it is valid for a non-negligible part of European industries. The long-established practice of offering unpaid internships at the end of the studies or immediately after graduation is another reality contributing to the vicious circle.

Furthermore, the young graduates of today are often in the quest of new types of employability and of different employment relations – predominantly conditioned by horizontal, rather than vertical working dependencies. In the latter lies the main difference between conventional employment and the new forms of (self-)employment (freelancers, young entrepreneurs, etc.)

Unlike freelancers, who have to complete occasional assignments, entrepreneurs take risks in view of achieving financial results and by establishing a particular business. Inevitably, such endeavours require to take risks, to invest time and money (risk capital), without being completely sure about the outcome. Fortunately, entrepreneurs can benefit from enough funding tools across the European Union that are not limited solely to bank loans.

Compared to other European countries, Bulgaria is also witnessing the rise of the “start-ups”, which are being offered different funding opportunities and business coaching thanks to various incubators and accelerators. Some of the biggest newly established and globally growing companies of today have started their path thereby.

The recent years have showed a tendency that entrepreneurship is a preferred method for doing business, because it involves independence, pro-activity and it is a tool for combatting youth unemployment and for nurturing an entrepreneurial flair among young people as an alternative to conventional employment.

Encouraging entrepreneurial interest and talent, particularly among young people, is and should be a part of the country’s economic agenda. At least this is stated in the National Strategy for Small and Medium-sized Enterprises 2014-2020 adopted by the Bulgarian Ministry of Economy and Energy, in line with the Small Business Act for Europe.

In 2012, at least half of the people (nearly 2.5 million people) in Bulgaria had expressed a preference to be self-employed, according to the SBA Factsheet for Bulgaria for that year. Of course, expressing a preference, does not necessarily imply intention, but it shows nevertheless a trend in people’s perception towards employment in Bulgaria.

Today, according to the 2016/17 GEM National Report on Entrepreneurship in Bulgaria (see 3.1. below), 68% of early-stage entrepreneurs in the country are driven by opportunity motives rather than by necessity in view of starting their own business, which confirms that people are more and more inclined to engage in a different working environment and to find an alternative to conventional employment. Digitalisation and the ICTs are providing them concrete options for that.

2.2. THE PLATFORM ECONOMY

Back in the early 2000s, before the advent of Facebook, of other social and business network platforms, of smart phones and mobile applications - it was unthinkable to achieve such a strong connectivity between people around the world. This connectivity, combined with entrepreneurial spirit, is the main origin of today’s “platform economy”.

From car sharing services, through accommodation in private apartments to ordering freshly cooked food from private persons, the shared economy has gotten more and more in our everyday lives. The business models have shifted, have seen the multiplication of online services and this has given birth to innovative web-based platforms. The recent years have also seen a multiplication of the digital summits and events’ stages across Europe, exhibiting successful Start Up companies, which in Bulgaria are contributing to a high added value in the IT sector, providing insights and advice towards the IT entrepreneurship, etc.

This entirely new business concept, which undoubtedly offers great opportunities, does not go without criticism. The main criticism lies in the fact that the Start Ups, which have established these businesses make big profit on the back of the providers of the respective service, out of the intermediary taxes for maintaining and keeping the respective platforms available and working. The other criticism comes mainly from trade unions, who condemn the precariousness of work, because of the users’ rating systems, which are often put in place and which might exclude a “service provider” from being chosen by customers because of bad rating. Furthermore, it is deplored that the platform’s founders deny any responsibility regarding the quality of the provided service and regarding the service providers themselves, inviting users to refer to the ratings and comments and to make their own decisions.

In order to respond to this criticism, the following observations should be made:

Surely, the platforms’ owners make profit out of their management and this profit comes often from intermediary maintenance taxes. It is also true that before making these platforms available, there was an initial idea behind them and a lot of time, efforts and initial investment have been procured in order to make those

platforms available and in order to make them work. Return on investment is among the first groups of goals that every (young) entrepreneur has in mind, while starting and developing a particular business. Moreover, the inclusion of regular people in the process, in the context of a shared economy, brings choice and new opportunities on the table. Everyone is free to engage in such an entrepreneurial endeavour based on his own interests, knowledge and skills, or just to make use of the already established business-to-customer (B2C) opportunities, as a participant in the shared economy.

Furthermore, the status of the platform's users, customers and providers of service, especially the second group, is sometimes wrongly interpreted as a working status, typical for a regular employee. In the platform economy there are no employees, as the choice to provide a particular service is not driven (most of the time) by necessity, it is not a way of subsistence, the relations between the customer and the service provider are horizontal and there is no subordination link, just as how the conventional relations between a customer and a provider of service, outside the web, are regulated. This topic is, however, extremely wide and merits a detailed legal and economic analysis in another article in order to be studied from all possible angles.

Whatever the criticism is, the so-called platform economy complies with the EU's Digital Single Market policy and its three pillars (see 1.1. above). It could contribute to its implementation and most importantly it could create opportunities for inclusion and for additional wages thanks to the provision of these services. It also could generate growth and revenues for the general economy, bearing in mind that SMEs fulfil their corporate and revenue tax obligations. The platform economy (even though not exclusive as a tool for a successful Digital Single Market) is a win-win concept, as all involved participants manage to obtain what they are aspiring for.

Bulgaria's Start Up scene has seen the establishment of successful new Start Up SMEs in various sectors: entertainment, agriculture, healthcare, retail, etc. Despite that and due to some reasons, that will be outlined below, the level of entrepreneurship in Bulgaria remains low.

3. YOUNG ENTREPRENEURS IN BULGARIA

3.1. THE GENERAL PICTURE REGARDING ENTREPRENEURSHIP

Despite all possible benefits and opportunities, Bulgaria is characterized by low levels of entrepreneurial activity, according to the authors of the 2016/17 GEM National Report on Entrepreneurship in Bulgaria (hereinafter referred to as "the GEM Report"), elaborated by Global Entrepreneurship Monitor (GEM) Bulgaria. Currently, according to the experts, based on GEM Bulgaria National Expert Survey 2016, *"the dominant sentiment in Bulgaria is that little can be accomplished through personal efforts and personal initiative"* (GEM Report, p. 69). The GEM Report makes a conclusion that *"while individual intentions showed an increase and give early signs for optimism, especially in the case of **youth entrepreneurs, who seem to show more interest in self-employment than before**, factor conditions have remained very stable and without significant improvements."*

According to the report, the total Early-stage Entrepreneurial activity (TEA) rate for Bulgaria has slightly increased in 2016, reaching 4.8% (3.5% a year before). The number of potential entrepreneurs in 2016 is low (7.1%). It also has experienced a slight improvement comparing to the previous year (5.3%). However, more than half of Bulgarian adults' population still consider entrepreneurship as a good career choice. All these figures are a sign for an untapped potential but they are also a sign of the enormous gap between people's expectations and aspirations and the reality in the country, consisting of some bad practices related to bureaucracy, to poor regulation of the digital economy and even to corruption. Nevertheless, despite the very low rate of early-stage entrepreneurship in Bulgaria, a relatively high percentage of these manage to survive long enough and become established businesses, according to the authors of the GEM Report.

As regards innovativeness, Bulgaria falls in the group of economies with low innovation activity of its early-stage ventures (see 3.2. below). In the global GEM ranking of innovativeness of early-stage entrepreneurship, Bulgaria ranks 52nd out of 65 world economies, which is a sign that entrepreneurship is not a government priority yet. Generally speaking, the main encountered issues by entrepreneurs are related to the

access to finance, to the access to business infrastructure, among other issues and, as mentioned, to bureaucracy and inconsistent regulation. Entrepreneurship, mainly IT entrepreneurship, offers nevertheless many benefits, such as the access to the EU single market, independence and the gain and cultivation of additional skills, which are being refined in the process and contribute to the discovery of innovative solutions.

Bulgaria has a rather small but vibrant group of innovation-oriented businesses which undertake innovation with a remarkable efficiency. In fact, this pattern of “elite” innovation suggests that there might be a two-tier population of both early-stage and established businesses: one small group of innovation-active businesses and a much larger group of companies that do not engage in innovation (GEM Report, p. 51).

3.2. EARLY STAGE ENTREPRENEURS IN BULGARIA

According to the 2016/17 GEM National Report on Entrepreneurship in Bulgaria, the most entrepreneurially active individuals are the 25-44-year-olds. The group of 18-24-year-olds shows a participation rate almost as high as the subgroup of 35-44-year-olds. 54% of early stage entrepreneurs in Bulgaria are male, which shows that there is no gender gap in Bulgaria regarding early stage entrepreneurs, female entrepreneurs being almost as active as male ones. The biggest age group share of entrepreneurs is 35.7% and represents entrepreneurs aged between 25 and 34 years. Regarding the main activity location, one third of all early stage entrepreneurs are based in the capital city of Sofia. Those with secondary education are among the most active early-stage entrepreneurs, accounting for more than half of all early-stage ventures. Furthermore, most of the start-up companies in Bulgaria (nearly 60%) work in the field of trade (retail/wholesale).

The two lists below are from two different sources and showcase the top 10 sectors by number of start-up SMEs in 2011 (first list) and the distribution of TEA (in %) by sector in Bulgaria in 2016 (second list):

TOP 10 sectors by number of start-up SMEs in 2011 (source: Ministry of Economy, 2013)

1. Retail - 10,608
2. Wholesale – 3,540
3. Restaurants – 3,070
4. Real Estate – 2,537
5. Land Transport – 1,893
6. Wholesale and retail of motor vehicles, motorcycles etc. – 1,228
7. Specialised construction activities – 1,073
8. Other professional activities (design, photography, translations) – 1,007
9. Legal and accounting activities - 818
10. Construction of buildings – 792

Distribution of TEA (in %) by sector in Bulgaria (source: GEM Adult Population Survey, 2016)

1. Wholesale/Retail - 57.1
2. Manufacturing – 9.8
3. Professional services – 7.8
4. Health, educational, governmental and social services – 7.7
5. Agriculture – 5.5
6. Transportation - 4.4
7. Admin. Services – 3.3
8. Finance – 2.2
9. Mining – 1.1
10. Information/Communications

Despite being from two different sources, the above figures confirm the high predominance of retail/wholesale trade in the Bulgarian economy, when it comes to start ups, as well as their positioning on the top of the list along the years. The big majority of early-stage entrepreneurship (57.1%) was still belonging to the wholesale/retail sector in 2016, five years later.

Bulgaria has a smaller share of early-stage start-ups belonging to knowledge-intensive industry sectors than it is the case in innovation-driven economies. Perhaps, this has been preconditioned somehow by the level of education of most early-stage entrepreneurs, as mentioned above. However, this is not valid only for Bulgaria. According to the GEM Report, *“the industry sector distribution of TEA for Bulgaria is similar to the distribution in factor- and efficiency-driven economies, probably reflecting the scarcity of skills that are required by knowledge-intensive industries.”* (GEM Report, p. 48)

3.3. IMPORTANT PREREQUISITES

Entrepreneurship is not an easy endeavour. Depending on the sphere of activity, on the degree of innovativeness and on the goals to be achieved, it requires a certain level of education. Entrepreneurship goes, however, way beyond education. Starting entrepreneurs require specific skills, training and financial tools as an initial push-up in order to achieve the desired results. This is where public and/or private initiatives come to the scene through incubators, business angels, accelerators, opportunities deriving from established public-private partnerships, funding programmes at national and EU level, such as the SME Instrument under HORIZON 2020 and last but not least – support from the state and the governmental administration.

According to the SBA Fact Sheet for 2012, Bulgaria had occupied the last 27th place in the priority area “skills and innovation”. The share of SMEs selling online was just 3%. Additionally, the employment participation (in micro) courses and training was only 2.5% in Bulgaria, the EU average being four times bigger (10.5%). The leader in 2012 was Denmark with 35.9%.

Still, in 2013, Bulgarian SMEs made very little use of IT infrastructure either to sell or to purchase online (SBA Factsheet for Bulgaria, 2013) – outlining the untapped potential of a country with one of the fastest internet in Europe.

The evaluation of the SBA’s Entrepreneurship priority is being evaluated under five criteria, namely: entrepreneurial activity; entrepreneurship as an opportunity; preference to be self-employed; feasibility of self-employment; and school training in entrepreneurship. Digital education and literacy happens and is encouraged initially at school (for example the Code week initiative in the European schools, the Digital Skills Awards, etc.) but is being further developed during the entire working process.

4. CONCLUSION AND THE WAY FORWARD

Entrepreneurship is a way to tackle youth and young people’s unemployment. It is even more than that. It is a way to reduce economic inactivity, which per definition differs from unemployment and presents even higher figures, according to Eurostat.

Today’s world is characterised by a change in young people’s mind-set towards conventional employment and conventional employment relations, which is not monitored effectively. Developing EU SMEs policies and new support instruments should therefore go beyond the principle “one size fits all”. But today’s world is also characterised by a widespread digitalisation in the business processes, which at first might seem intangible, but at the end it is a powerful tool and a major opportunity in the hands of entrepreneurial minds.

New Information and Communication Technologies are utilized to facilitate our tasks, to open doors and to cross borders without having to cross them physically, to serve as a useful business arsenal. They are however often ahead of the educational context and most importantly they are very often ahead of the established regulations. Clouds and Internet of Things (IoT) represent a new dimension for SMEs in Bulgaria

and in the EU and are an example for the new regulatory challenges ahead and a compromise should be found between them and the free economic initiative empowered by ICT.

The unpreparedness of the public administration due to the sometimes-scattered rules in the field of cyber security, data management, due to the exponential increase of data, intellectual and industrial property rights, among others, and even in the field of taxes and duties – all lead to more bureaucracy than to smart solutions and smooth administration. The latter slows down not only businesses but mainly the efficiency of the administration itself.

The bureaucratic approach and complexity of administrative rules should therefore be avoided. The Digital Single Market's motto "Bringing down barriers to unlock online opportunities" raises hope that this is exactly what the public authorities, at least on the European level, are aiming to prevent. The communication gap that sometimes exists between EU support mechanisms and the SMEs themselves should also be addressed.

As of 25th May 2018, the general data protection regulation will start to apply in the entire European Union. It has entered into force on the 24th May 2016. All this requires more efforts in informing start-up SMEs on available support and training opportunities for the purposes of the compliance with this new regulation. The digital future of the Bulgarian SMEs requires a strong multi-stakeholder partnership with social partners and public and private participants, engaged with the problems of SMEs.

The new technologies are however not sufficient in order to be a successful entrepreneur. The figures have showed that innovative entrepreneurship requires (beyond retail and wholesale trade) higher education and the acquisition of specific skills, which should be encouraged.

Notwithstanding, entrepreneurship fosters youth inclusion in the active economy (broadly speaking) and, thanks to targeted digital trainings, it is a powerful tool that is worth to be promoted not only among young people but in general. Young people should be supported and should benefit from varied employment opportunities and not just from the conventional ones. Entrepreneurship is surely one of them. We often talk about the 4th Industrial revolution (commonly referred to as the Industry 4.0). It is time to make use of it.

REFERENCES

- [1] European Commission, *Digital Skills Gap in Europe*, 2017 Factsheet
- [2] Eurostat, *Internet access and use statistics – households and individuals*, 2016
- [3] Eurostat, *EU Labour Force Survey*, 2016
- [4] European Commission website, Digital Single Market: <https://ec.europa.eu/digital-single-market/>
- [5] Veneta Andonova, Mira Krusteff, 2016/17, *GEM national report on entrepreneurship in Bulgaria. Global Entrepreneurship Monitor Bulgaria*, 2017. <http://www.GEMorg.bg>
- [6] Federico Guerrini, *Is Sofia The Real Digital Capital of the New Markets?* 14th April 2016, FORBES website
- [7] Ministry of Economy and Energy of the Republic of Bulgaria, *National Strategy for SMEs Promotion – Small Business Act – 2014-2020*, 2013
- [8] 2013 SBA Fact Sheet Bulgaria
- [9] 2012 SBA Fact Sheet Bulgaria

Katarina JAGIĆ, ECQA Certified EU Project Manager
EU Independent Consultant Entrepreneurial Learning Initiative - ELI
Global Entrepreneurship Network – GEN Member
Mentor Branson Centre of Entrepreneurship Caribbean
Mentor Alumni Cherie Blair Foundation for Mentoring Women in Business
Initiator GoGlobal236-Global Network of Women Mentors to Start-ups
Co-founder Croatian Small Business Union - GEW Croatia Host from 2008
Owner Education Locally & Internationally
Zagreb, Croatia
E-mail: katarinaj8@gmail.com

ENTREPRENEURIAL MINDSET – NEW WAYS OF EDUCATION

ABSTRACT

New world requires new thinking, new methods of teaching, requires all to re-examine deeply held taken for granted assumptions - things we have been doing for so long, we don't ever stop to ask why are we doing it this way?

Our systems of education were designed for industrial revolution - to create employees (The evidence that we continue to prepare students to be employees is abundantly clear).

According to one estimate, two-thirds of students now entering primary school will work in jobs that do not exist, using technologies that have not yet been invented, to solve problems that we are not yet aware of.

So, how do we educate young people to thrive in a world we can barely comprehend?

The Entrepreneurial Learning Initiative (ELI) is a global thought leader dedicated to expanding human potential through entrepreneurial mindset education. ELI serves academic, government, profit and non-profit organizations around the world to empower their constituents with an entrepreneurial mindset through keynotes, professional development, facilitator training, and curriculum content. ELI is the creator of the Ice House Entrepreneurship Programs.

The Ice House Entrepreneurship Program is an experiential, problem-based program designed to inspire and engage learners in the fundamental aspects of an entrepreneurial mindset while immersing them in entrepreneurial experiences that will enable them to develop creativity and critical thinking, effective problem solving, teamwork, and other entrepreneurial skills - skills that will enable them to succeed regardless of their chosen path.

It develops an entrepreneurial mindset with entrepreneurial learning experiences at: Corporate, Higher education, High school, Government, Nonprofit.

In today's rapidly changing world, we need less employees who will do what they are told - we need more innovators and entrepreneurs - those who can identify and solve problems, bring new ideas to life.

Keywords: mindset, entrepreneurship, start-ups, mentor, employment

JEL Classification: L26

1 NEW WAYS OF EDUCATION

The Entrepreneurial Learning Initiative (ELI) is a global thought leader dedicated to expanding human potential through entrepreneurial mindset education. ELI serves academic, government, profit and non-profit organizations around the world to empower their constituents with an entrepreneurial mindset

through keynotes, professional development, facilitator training, and curriculum content. ELI is the creator of the Ice House Entrepreneurship Programs.

The Ice House Entrepreneurship Program is an experiential, problem-based program designed to inspire and engage learners in the fundamental aspects of an entrepreneurial mindset while immersing them in entrepreneurial experiences that will enable them to develop creativity and critical thinking, effective problem solving, teamwork, and other entrepreneurial skills - skills that will enable them to succeed regardless of their chosen path.

It develops an entrepreneurial mindset with entrepreneurial learning experiences at: Corporate, Higher education, High school, Government, Nonprofit.

1.1 WHAT IS MINDSET

A mindset is a cognitive belief system consisting of interrelated beliefs, assumptions, and knowledge that we use to process information, inform our decisions, and guide our behavior.



Picture 1: Mindset: New world, new thinking, new methods of teaching

1.1.1 An entrepreneurial mindset can be developed

An entrepreneurial mindset can be developed and enhanced through entrepreneurial experiences. And to cultivate the entrepreneurial mindset, we must create entrepreneurial learning experiences within our classrooms, organizations, and communities.

A key priority of the EU and the Member States is to deliver on the Jobs, Growth & Innovation agenda. **European Commission Vice-President, Jyrki Katainen**, expressed his support for entrepreneurship education as a driver of economic growth and job creation and that entrepreneurial skills support young people's employability innovative capacities, resilience and adaptability.

Research shows entrepreneurship education has a very positive impact on young people's self-efficacy and entrepreneurial intentions. More of them start businesses later on and they are less likely to be unemployed.

But how to go about deliberately creating an entrepreneurial mind-set?

Are there deliberate ways and methods that you can be implemented such a winning attitude in one's life?

An entrepreneurial mindset is a specific set of beliefs, knowledge, and thought processes that drives entrepreneurial behavior. Those with an entrepreneurial mindset tend to: believe in their ability to succeed and

influence their own outcomes, empowering them to take ownership of their lives; have compelling goals that keep them future-focused and intrinsically motivated, driving them to be self-directed, action-oriented, and highly engaged; have an optimistic interpretation of adverse events and see problems as potential opportunities, becoming highly resilient, resourceful, and solution-oriented even within highly uncertain, resource constrained environments; be lifelong knowledge seekers with a focus on micro-experiments as learning opportunities to test ideas, cultivating curiosity, creativity, and critical thinking; display a high-level of reliability, understanding that following through on simple solutions can lead to unforeseen opportunity; have a humanistic outlook, being other-focused and understanding that one creates value by looking to solve problems for others; and surround themselves with an intentional community of positive influence and critical guidance.

2. WORLD HAS CHANGED - THE FUTURE IS UPON US

According to one estimate, **two-thirds of students now entering primary school will work in jobs that do not exist**, using technologies that have not yet been invented, to solve problems that we are not yet aware of.

2.1 How do we educate young people to thrive in a world we can barely comprehend?

New world requires new thinking, new methods of teaching, requires all to re-examine deeply held taken for granted assumptions - things we have been doing for so long, we don't ever stop to ask why are we doing it this way?

Our systems of education were designed for industrial revolution - to create employees (The evidence that we continue to prepare students to be employees is abundantly clear).

In today's rapidly changing world, we need less employees who will do what they are told - we need more innovators and entrepreneurs - those who can identify and solve problems, bring new ideas to life.

After all, entrepreneurship is the lifeblood of our economy and entrepreneurs are vital to the overall health and wellness of our society. They are at the forefront of discovery, challenging the status quo and driving progress. And they possess the skills that enable them to adapt and thrive in a rapidly changing highly complex world.

They are highly resilient and resourceful, creative and critical thinkers who can identify and solve problems, mobilize resources, and make things happen when the rules are not clear, and the path is not well defined.

Not only do they possess the attitudes and skills that enable them to adapt and thrive, but also to make a greater contribution to their businesses, their organizations, their communities, and the world at large. Indeed, entrepreneurs are best equipped to solve some of the broader challenges of our time.

2.2 We need young people who can think like entrepreneurs

More specifically, **we need young people who can think like entrepreneurs** -after all entrepreneurial skills are the very skills employers demand – no matter they work for themselves or even in local community administration.

People with an entrepreneurial mindset and attitude have a winning nature despite their fears and thinking in terms of success.

When we teach entrepreneurship, the emphasis is on developing skills, not starting businesses. The goal is about developing the inter-disciplinary skills that lead to the development of an “entrepreneurial mindset.”

The entrepreneurial mindset can be applied in many contexts. It applies to employees in large, hierarchical entities, and it applies to community organizers, academics, inventors, doctors, lawyers, politicians, musicians and public servants. In no way is it unique to startup companies, and the skills that are developed are relevant to everyone.

3 BIG THINKERS

Big thinkers such as the **World Economic Forum** have begun to recognize this need - recognizing the need **to as to shift entrepreneurship from the perimeter to the core of the way education operates**. Yet our systems of education have scarcely begun **to recognize entrepreneurship as an essential to the curriculum** and that is why it is:

- 3.1 Virtually absent (or not sufficient) from primary and secondary education
- 3.2 Postsecondary efforts are narrowly defined, stuck on perimeter, attempt to emulate Silicon Valley
- 3.3 Government sponsored initiatives are ineffective (or not effective enough) and out of touch with the needs of aspiring entrepreneurs

There is now the need to look beyond the narrow definition of entrepreneurship as high tech billionaire or small business owner.

„An entrepreneurial mindset can empower ordinary people to accomplish extraordinary things. It can empower people from all walks of life, from every background, culture and discipline. And the implications of entrepreneurial mindset education reach far beyond enterprise creation“, said the creator of the „Mindset program“, Gary Schoeniger.

4 NEED TO RECOGNIZE THE ENTREPRENEURIAL MINDSET AS A SET OF ESSENTIAL LIFE SKILLS

The need to recognize the entrepreneurial mindset as a set of essential life skills that every student will need in order to adapt and thrive in today's rapidly changing highly complex world.

We can't solve our problems with the same thinking we used to create them, we must re-examine deeply held assumptions, taken-for-granted beliefs.

As humans we are naturally inclined to be innovative and entrepreneurial, curious and inquisitive problem solvers. Our very survival depends on it.

Humanism is the philosophical stance that emphasizes the ability of ordinary people - individually and collectively - to rely on their own creativity, ingenuity, and hard work rather than blindly following authority or adhering to the status quo.

Thus far our systems of education are creating innovators and entrepreneurs by accident rather than by design.

The American Theologian Richard Shaull once wrote that education either functions as an instrument which is used to facilitate integration of the younger generation into the logic of the present system and bring about conformity or it becomes the practice of freedom, the means by which men and women **deal critically and creatively with reality and discover how to participate in the transformation of their world**.

Entrepreneurial thinking is essential for creating the societies of the future. It exposes new opportunities, shifts perspectives, and changes our attitudes and behaviors in ways that can profoundly effect the outcome of our lives. It can also **have a tremendous impact on our society as a whole**.



Picture 2: Entrepreneurial Mindset - critically valuable the 21st century skill for success in careers

If we are to survive and thrive as a nation/community we must embrace the entrepreneurial mindset education in order to prepare the next generation to adapt and thrive.

We must also examine the ways in which our systems of education discourage (or not sufficient enough) the development of entrepreneurial attitudes, behaviors, and skills.

5 EDUCATION - HOW IT WORKS

We must **embrace experiential problem based learning as the key to unlocking the entrepreneurial mindset.**

By doing so, our societies will flourish, unleash ideas, creativity and a wave of untapped human capital - human capital that is hiding in plain sight.

The Mindset education is:

- experiential,
- problem-based,
- designed to inspire and engage learners in the fundamental aspects of an entrepreneurial mindset while immersing them in entrepreneurial experiences that will enable them to develop creativity and critical thinking, effective problem solving, teamwork, and other entrepreneurial skills - skills that will enable them to succeed regardless of their chosen path.

5.1 Part 1: 'The Entrepreneurial process'

The processes and methods that can enable anyone to identify, evaluate, and transform ideas into mutually beneficial, sustainable endeavors.

5.2 Part 2: 'The Entrepreneurial Person'

The underlying motivation and the mindset - the beliefs, assumptions, and psychological factors that drive entrepreneurial behavior.

5.3 Part 3: 'The Entrepreneurial Situation'

The social, environmental, and situational factors that either encourage or inhibit the development of entrepreneurial attitudes, behaviors, and skills.

5.4 Part 4: 'Entrepreneurial Learning'

Four key learning models that foster that encourage the development of entrepreneurial attitudes and skills.

6 BENEFITS

Unique benefits of ELI 'Mindset' program are: Empathy - Prepare the next generation - Reducing Poverty - Human Flourishing.

6.1 Reducing Poverty

Entrepreneurial thinking can also lift people from poverty. The ability to identify and solve problems provides agency and apathy that help those who have been marginalized, providing a path to join and make a meaningful contribution to society.

6.2 Human Flourishing

An entrepreneurial mindset contributes to human flourishing- when an individual has the opportunity to combine their interests and abilities to somethings greater than themselves, they tend to flourish. They learn to develop an optimistic explanatory style, the develop a sense of self-efficacy that strengthens the mind, body, and spirit. There is a great deal of evidence that demonstrates that those with strong self- efficacy are less prone to depression and other mental and physical illness. The Greeks use the term Eudaimonia which refers to a state of having a good indwelling spirit or being in a contented state of being healthy, happy and prosperous.

7 CONCLUSIONS

To finish I want to point out the great **Mindset example Sir Richard Branson**, founder Virgin company.

Sir Richard Branson is an iconic and legendary figure within business circles. His Virgin companies span the globe, while his thirst for brand domination and sense of adventure tell a story of an intriguing and thought provoking life sprinkled with danger, high risk tactics — pushing the boundaries of the possible — and an all encompassing purpose that is built upon fairness and change. Add to this mix a charismatic persona and an extraordinary business acumen, and you have one of the most well-known and iconic figures of today's business world.

Richard Branson is who he is, and does what he does because of who he has become as a result of a culmination of experiences, setbacks and triumphs. These circumstances have shaped his mind in profound ways, enabling him to achieve incredible feats that have progressively built his fortune and empire.

To unlock entrepreneurial mindset, one must look no further then the patterns of Richard's behaviors, decisions, language and actions. The primary purpose that drives and directs all of Richard Branson's choices, decisions, behavior and actions is the act of making a difference in this world.

Key mindset shift may explain why Richard Branson and other top CEOs are so successful.



Picture 5. GEN Network with Sir Richard Branson - We all are different, Each idea counts: Entrepreneurial thinking is essential for creating the societies of the future

Persons with an entrepreneurial mindset believe to succeed. They are: future-focused, self-directed, action-oriented, highly engaged, see problems as potential opportunities, solution-oriented, lifelong knowledge seekers, cultivating curiosity, creativity, and critical thinking. They: focus on micro-experiments as learning opportunities to test ideas, have a humanistic outlook looking to solve problems for others surround themselves with an intentional community of positive influence and critical guidance.

Teaching Entrepreneurship defines the entrepreneurial mindset as the set of attitudes, skills and behaviors that students need to succeed academically, personally and professionally. These include: initiative and self-direction, risk-taking, flexibility and adaptability, creativity and innovation, critical thinking and problem solving. Other definitions include the ability to see opportunities, marshal resources and create value.

There is no better way to prepare students for the world of the 21st century, whether they aspire to work for a large company, start their own business, go into academia or devote themselves to public service than through cultivating their skills in entrepreneurship.

To excel as an entrepreneur, having a “growth mindset” is vital, explains Richard Branson in a recent blog post. That means being willing to learn, make mistakes and experiment.

In every community, there are “Ice House Entrepreneurs”— ordinary people who have no particular advantage over others, yet somehow they manage to succeed.



Marija ZAREZANKOVA-POTEVSKA

Ph. D, Associate professor

FON University-Skopje

MACEDONIA

E-mail: mzarpot@hotmail.com

MOST FAVORABLE FINANCIAL INSTRUMENTS for ENTREPRENEURSHIP DEVELOPMENT

ABSTRACT

Entrepreneurship development as a dynamic factor for economic development throughout the centuries, nowadays in high priority a industrial policies in the countries where the authorities find that is it very important tool for create innovative society and raising the new economy. Entrepreneurs generally have business ideas and difficulties and obstacles to realized them because of lack of financial means for it. The business ideas and question of finance them are most important issues in creation of entrepreneurial society. Developed countries have different sources for financing business ideas of entrepreneurs, which is quite good example for less developed counties how to create favorable financial sources for support small and medium sized enterprises and entrepreneurs. Different sizes of enterprises need different kinds of financial support as micro loans, grants, specialized bank for small business, favorable credits and credit guarantees schemes. Big banks provide commercial credits to large enterprises, because of their financial power to return them under commercial condition. With entrepreneurship and SMEs the situation is rather different and difficult. For that reason, financing of small business development ask wider lists of financial instruments. Lack of tradition and background in running business stop the banks to provide the adequate loans to entrepreneurs and small and medium sized enterprises.

Keywords: *entrepreneurship, SMEs, financial instruments, micro crediting, economic development*

JEL Classification: L26, G23

INTRODUCTION

Concerning the entrepreneurship development very often is posed the question and doubt at the same time, what is primary in running business activities: to have an idea or to have finance mean. It seems to be a unique action of idea and money for common impact that result in new business activity. However, it can say without doubt that the ideas are primary in this process, but without financial sources they cannot be realized. In contrary, if someone has money, but not idea for business activities, he is not entrepreneur because hasn't creativities. Therefore, entrepreneurship has a driving function in economic growth and development, characterized by creativity and innovation, taking risks which lead society to prosperity.

Ideas and visions for new business activities, for innovation and creation of new values, should be supported by all kinds of help in providing better technical and economic solutions in purpose for development of entrepreneurial society. To provide the adequate sources for financing the entrepreneurial activities in each society is very significant question because of lack of resources for realization of the ideas and innovation at entrepreneurs.

They are very well known the economic functions of small business entities on the market and economic life at all. Entrepreneurship means step forward to create new jobs, new production, more competition and

raise the competitiveness that is aim to achieve for each organization. But in these processes the most important issue is the question of funding.

Large companies have tradition in business, history in business operations, guarantees for getting credits under the commercial conditions. The small enterprises, specially start up ones, are very risky and usually are financing from various sources, mainly non banking institutions or specialized banks for this purpose. Commercial banks, finance big capital i.e. corporations, but small enterprises, are new ones on the market without any resources for guarantees in the banks. For that reason, entrepreneurship development and SMEs need different funding for their needs for investment and working capital. Small enterprises have very high risk in their work and investment because of their short existence and work tradition.

In developed countries are present various sources for financing entrepreneurship activities as well as developing countries which follow the economic tendencies on the global market.

1. THE MOST FREQUENT FINANCIAL SUPPORT FOR ENTREPRENEURS

Each entrepreneur usually starts to work with his own money like savings, with borrowed funds from family and close friends or from the banking assets with credit cards.

Many analysis and studies show that about 30% of new enterprises are faced with the question of availability of sources for funding, as the biggest obstacle in realizing the business ideas. It is a question of lack of sources for guarantees at the banks for receive the loan and return them in the future. Also, about 15% of the entrepreneurs can't find investors, partners or financiers. For that reason, financing of entrepreneurship is a specific model. Existence of high risk of start up businesses especially, are faced with big obstacle for finance their investment and operations. For them the most important is provision of seed capital regardless of the interest rate. Most important for them is to receive funds for their work and operations under favorable, non-commercial conditions. Because they do not have easy access to financial resources, it is essential to get them for working and with their business activities they could be provide the money for repayment of the loans.

In many countries, entrepreneurs and small and medium sized enterprises (SMEs) pay higher nominal and real interest rate (1-2%) than large ones². Even is considered that to SMEs have discrimination from the banks in relations with large companies and corporations that is not far from the truth. But the banks have private ownership and they sell money, they don't like to have bad placement of their loans.

The authorities of the countries are responsible for find adequate solution for funding small business especially start up businesses with various programs and measures for support their businesses and directly supporting economic growth and development.

It is obviously that it different groups of SMEs need different funding related to their needs. Micro enterprises and start up business need seed capital; medium sized enterprises need capital for stabilization and export activities. So, government programs and industrial policy should have in consideration specific needs for every group of this sector.

The main sources for SMEs sector and entrepreneurship in theory and practice could be listed:

- Micro financing
- Seed Capital Funds
- Micro and Small Loans Funds
- Small Business Banks

² EIM Small Business Research and Consulting: "The State of Small Business in the Netherlands 1993", December 1993, p. 55, and : "Small Business Advisor, The Entrepreneur Magazine", John Wiley and Sons, New York, 1995, r. 27.

- Risk Capital Funds
- Credit Guarantee Funds
- Investment Funds
- Business Angels
- Leasing
- franchising
- Factoring
- Credit Saving Unions
- Programs for different social groups of people

1.1 Micro Financing

UN declared 2005 as International Year for Microfinance as an important tool for reducing the poverty, raising the creativity of the people through the small loans and strengthening the trust between the people and expectations in social benefits as Millennium goals of UN.

The modern term "**microfinance**" has its roots in the 1983, when organizations such as Grameen Bank in Bangladesh with pioneer of microfinance Professor Muhammad Yunus, launched and financed million people (approximately 7 million women), with small loans . In 2006, Bank and professor Yunus received the Nobel Prize for economics, especially for this important Project. The Bank offers to the people opportunity to take initiatives in business in agriculture, which provide earnings and enable them to pay off the debt. Grameen bank is called women bank because a lot of women from the rural areas are clients

The history of microfinance shows that for it there was interest from the beginning of the 19th century, when theorist Lisander Spooner wrote about the benefits of small loans to entrepreneurs and farmers, as a way of getting out of the cycle of poverty. Friedrich Wilhelm Raiffeisen³ has founded the first union for lending money of the banks for their support of farmers in rural Germany.

Usually these small loans are given to the individuals or groups- citizens-group loans, where each other guarantee to return the credit. Thus, is developing mutual trust of entrepreneurs. Microfinance is a way to come over the poverty in marginalized social group, but also for entrepreneurs who need small amounts of money to start the business activities.

Microfinance analyst David Rudman argues that, in mature markets, the average interest rate on microfinance institutions tend to fall over time. However, the overall average interest rates on loans for microfinance are still well above 30%.⁴

Examples of microfinance

a) **USA**, start to develop the institutions of microfinance in 2007. Nowadays have about 500. They are primary intended for disadvantaged groups of people, immigrants, people with low incomes in order to increase employment, improve the living standards of the population.

b) .In **Canada** providing microfinance through the development of credit unions, where citizens receive various financial services that cannot get from traditional sources of funds (banks).

³ Helms, Brigit (2006). *Access for All: Building Inclusive Financial Systems*. Washington, D.C.: The World Bank

⁴ Roodman, David. "Due Diligence: An Impertinent Inquiry Into Microfinance." Center for Global Development, 2011

c) Microfinance in **India** is particularly important because is given to the large number of population, which is mostly in the poverty and access to traditional sources of funds is limited and the role of the informal sector is large. NABARD also advocates for microfinance along with self-help groups (SHGs) and NGOs create Inn India.

d) **European Microfinance Platform** (MFP) was founded in 2006 as a network of over 140 organizations and individuals active in the field of microfinance.

e) In **Macedonia** actively is working *Microcredit Foundation Horizons* that such Program began operating in 2000, and since 2005 has this form of organization with 8 branch offices.

Opportunities Savings House is actively working for 18 years in the country and has 10 branches offices outside Skopje. It is part of a global network of microfinance International Opportunities and has received a series of awards for success at home and abroad.⁵

FULM Savings House (Financial services for people in Macedonia) is established in 1999, first as a Program of the World Savings and Credit Cooperatives / unions and nowadays as a savings house with six branches outside Skopje.

Unfortunately, in Macedonia where is still high rate of unemployment (24%), the authorities haven't established any micro crediting institution, governmental or private-public partnership that shows lack of awareness for benefits of it in reducing unemployment, poverty and leaving a lot of young people the country. The serious question of Macedonian entrepreneurs is lack of micro credit institution which could be useful for much new, start up businesses. Lack of seed capital for entrepreneurship development is main problem in Macedonian entrepreneurship growth and economic development. Young and educated people, skilled people without capital are out of economic flows because of shortage of money for initial activities.

1.2. Seed Capital Funds

These funds provide start-up capital or initial financing to entrepreneurs. Investors are actually friends, business angels or more funds, government programs and funds, with investor invests in the company or buy a share of it (such as equity). The financing involves higher risk than normal capital funding because it is the new company and there is not anything guarantees of success. Therefore, investment is small in volume. Typically, these funds are financing 50% of the investment, as their own share.

Government funds can be directed towards youth self-employment, for summer seasonal jobs, saving energy, subsidies in a clean environment, to treat certain diseases and in general in all activities.

The EU has adopted a Program for Competitiveness of Enterprises and SMEs (COSME) 2014-2020. It outlined the main directions of the planned economic growth and development of the EU, including various measures for financial support of enterprises specially start up ones. In the Republic of Macedonia do not exist any of it. For that reason is still very difficult to start up new business.

1.3. Micro and Small Loans Funds

These funds and other funds established by various investors, government bodies and others bodies, have a duty to provide small loans to entrepreneurs .These funds have the same purpose and way of approving loans, as well as foundations and other forms of non-bank microfinance.

1.4 Small Business Banks

⁵ In 2006 in EEC/UN is declared as a "best practice" for micro crediting in Macedonia.

Banks for small enterprises are specialized banks for small business entities (SMEs) with the task to finance the growth and development of SMEs. They are established from various sources including government financial support. For most start up businesses commercial banks have no interest for financing their projects, but small businesses are target for financing of specialized banks.

Good example of this type of banks is Bank for development of SMEs in Paris, founded in 1996 as holding company consisting of two companies: Bank for financing the equipment for SMEs from 1981 which co-finance by take over the risk of investment with other banks and Company for guarantees (up to 70%) for SMEs, established 1982. The Bank is unique in EU with this manner of supporting of entrepreneurs and SMEs. It is in ownership of the government. Annual average interest rate is 5.5 - 6%.

In Macedonia was established in 1998 Macedonian Bank for Support and the Development as a bank for promotion, not as a special bank for directly financing SMEs. The Bank is founded like German Fund KFW. Concerning SMEs and credit for them, the Bank is only mediator between the creditors from abroad and commercial bank. Bank has financial products as loans, insurance of domestic and export debts, as well as factoring in debts, as a unique service to the financial market in the country. Unfortunately, it is not financial institution that directly support entrepreneurs and SMEs, which is very important in the country where is a lot unemployed people, where there is no easy access to the loans and credits for entrepreneurship development., but only for most developed companies.

1.5. Risk Capital Funds

Risk capital funds are funds for venture capital investment in certain areas, which are considered particularly as a risky investment because it can reliably plan and forecast to return the invested capital. Namely, it is for projects in high technology, biotechnology, mining and energy, primarily research, without any clear vision that would be successful. These investments can be fruitful and with high profit, but may be have not any success. Therefore, it is considered that these funds have speculative character. The risk capital can be equity of the new enterprise it means the lenders invest and then they have received the shares.

Venture capital funds are companies founded by professional investment managers and institutional investors, such as pension funds, insurance companies, investment banks and others. And "business angels" often can act as investors in risky activities and projects. Because of very high cost for production and using the high technology, these funds are private enterprises, development banks, with their own funds they finance though the buying shares and directly manage in the enterprises.

Financing the entrepreneurs and SMEs, with buying the shares has stimulated the mechanisms for incentive the entrepreneurship and support it. This kind of financing is relives from paying taxis in USA, Great Britain and other countries that have very high technology development. In our country these funds are not present.

1. In the **UK** in 2001 was established "Risk Capital Partners" as an independent organization. They work with a series of partners, and invest in the projects that they consider viable in the long term or innovative projects. At the same time, the organization whose founders are also entrepreneurs, helping management teams to build valuable companies.
2. In **Switzerland** was founded venture capital fund for SMEs (SVC-ltd.) including start-up businesses with a maximum amount of investment to CHF 100 million.
3. **Silicon Valley** in the USA is characterized by its innovative enterprises, helped by such funds.
4. In Great Britain exist a lot of local funds hat finance more than 1.000 new enterprises with high potential for growth.
5. In **Germany** exist regional funds/ banks (Landes Kredit bank) for such purpose, which finance between 30-50% of seed capital of new enterprises.

1.6. Credit Guarantee Funds

Credit guarantee loan funds or Guarantee Funds are usually institutions which are established to guarantee repayment of the taken loans that cannot be returned to the banks for many reasons. Usually they guarantee from 60-80% of total amount of the loans, in cases where borrower is unable to return the credit taken from the banks. These Credit Guarantee Funds give guarantee to commercial banks that loans will be returned up to 80%. It is very significant instrument for support entrepreneurs without any collateral for receive the loans from the banks.

In developed countries, this system of guarantees exists and is particularly developed, and it gets more important in less developed countries like Balkans and other at South –East Europe. Even in Africa exists Africa Guarantee Fund.

In Macedonia does not exist any Guarantees Fund as state own property, except some small ones in the banks established in framework of some EU projects for SMEs. It is very unfavorable situation for entrepreneurship development. The authorities should take more care about this serious obstacle on the path for entrepreneurship growth and economic development. Lack of knowledge, lack of awareness for importance of entrepreneurship development as a dynamic economic factor and generator for new jobs and creation of innovation society should be overcome as soon as possible for the better future.

The small overview of some of them is:

1. The Credit-Guarantee System in **Japan** consists of 52 credit guarantee associations, behind them is stated government's Corporation for insurance of loans for the small business. Financing of SMEs in Japan is realized through three government institutions as follows:
 - a). *Japan Finance Corporation for Small Business*, founded in 1953, with the government's capital for favorable finance the entrepreneurs, who are unable to obtain loans in the commercial banks. In 1949 is established *Corporation for financing the Persons* with the same task.
 - b) Even from 1936 is active *Shoko Chukin Bank* for support public-private institutions.
 - c) In 1980 is founded *System of Financial Aid* for strengthening the small businesses.
2. In **USA**, *Small Business Administration* has various programs for the development of small businesses and the three main types of financial support are:
 - a) Direct loans, are intended to special groups of entrepreneurs - handicapped people, the disabled, military veterans etc. They are provided from state own funds indicated by US Congress.
 - b). *Guarantees Funds*, which is guaranteed to commercial banks return of the loans from 75-90% of the amount of the loans.
 - c). *Programs of Micro Crediting* for start up businesses.
3. In **Turkey**, *Credit-Guarantee Fund* is founded in 1993, like German funds. It guarantees 80% of the credit.
4. **Czechs-** *Moravian Bank for Guarantees and development* from 1992 has 33 commercial banks in scope of interest for SMEs support and collateral for them.
5. **Slovak** *Bank for guarantees*, from 1992, assists the start up the businesses.
6. **Hungarian** *credit-guarantee Company* has the same purpose as other ones in different countries.

1.7. Investment Funds

Company for management of investment funds with head office in Macedonia, according to the Macedonian Law ⁶ which was licensed by the Commission for Value Securities, carries on the establishment and management of investment funds or investment funds in its own behalf and on behalf of stakeholders of shares in the open investment funds in the name and on behalf of shareholders of closed-end investment funds. They usually are established as a public-private partnership.

Usually, these funds provide SMEs and entrepreneurs with fixed assets (property) and for that favor receive shares. Investment fund provides a wider choice of investment opportunities and management of professionals. There are several types of investment funds, mutual funds, money market etc.

Here are some examples of successful SME Funds:

a) *European Investment Fund*, established in 1994 in Luxembourg, is an agency for the provision of finance for SMEs. The Fund does not borrow money directly to entrepreneurs and SMEs, but indirectly through private commercial banks and funds. Its main activities are investment capital and guarantees for loans. Main shareholders are: EU, EIB and private financial institutions.

2. *SEAF (Small Enterprise Assistance Funds)* is fund for assistance of small enterprise. It was established in 1989 in Washington. Today there are 27 branches throughout the world and in Macedonia. SEAF provides assistance to emerging SMEs, which are not supported by traditional sources (banks).

1.8. Business Angels

The existence of the concept of business angels has newer roots. In 1978 it used for art single investor in theater on Broadway, by William Wetzel. Then, they are appeared in other activities.

Business angels or angels investor are investors who invest in an initial enterprise or start-up business and provide capital and then get shares in it. They arise as a form of financing that fill out the gap between the initial capital requirement obtained from family, savings, credit cards and funds and bank loans. Mostly business angels are linked together in associations to network in order to be better used resources. Active in Europe is the European network for business angels as well as USA business angels' network.

However, they cannot be rich sources of money for entrepreneurs.

1.9. Leasing, Franchising and Licensing

Leasing, franchising and licensing systems are very helpful instruments for financial support of entrepreneurs and SMEs, but in the same time they are very important for transferring the new technology.

Leasing especially of equipment, has a very great importance to encouraging the development of entrepreneurship because of its advantages: the user of the leasing does not need for the new equipment that engaged assets in cash, then, the rent can be paid later. But negative side is that it is quite expensive, more expensive than bank credits.

At *licensing* as the main obstacle of this form of financing in entrepreneurship and as a form of transfer of technology is obsolescence of equipment, especially in underdeveloped countries, some territorial restrictions and domestic obstacles like protection of rights of industrial poverty, absence of control etc.

Franchising in fact is business model. It is agreement between the two enterprises for take over the same methods of work. Franchising agreement shows a high regulatory system of distribution of goods and services under protected mark of franchisor, its marketing plan and system, which is useful for franchisee too.

⁶ Law for Investment funds: Official Gazette 12/2009

. In 1863 in the USA the famous Singer, Coca Cola (1882) and General Motors (1896) first started with such agreement and franchise system is spread over the world, as a system for financing and meantime as a system for transfer of technology very important for entrepreneurship system development. In Europe exist Franchising Federation as well as British Association for Franchising. In Far East counties franchising system is well known as a system of social and economic policy.

1.10. Credit Saving Unions

Credit Saving Unions provides an opportunity for development of small busines through the mobilization of resources at the local level and their reinvestment through productive loans to farmers and to businessmen in rural areas, to strengthening the savings, for residential and loans for scholarship and so on.

World Council on Credit Unions (WOCCU) was established in 1971, as International Trading Association and Development Agency for credit unions based in Madison, USA. Members at WOCCU are regional and national credit union, associations, in 97 countries around the world. They are over 54,000 credit unions / cooperatives / savings banks with 186 million members all over the world

In the Republic of Macedonia, saving house FULM was established such an union, due to legal restrictions, which actively works on the principle of these unions, with branch offices.

1.11. Programs for Support the Different Social Groups

For to help different social groups of people, who like to work their self, especially in the developed, but also in underdeveloped countries, through specific projects the authorities support them. Usually there are the projects for young people, for handicapped people, for people of rural environment, women, single parent or other marginalized group. The support is usually in the form of grants or loans with small interest rates, which are particularly acceptable.

1.12. Tax incentives and relieves

In economic policy and practice for support entrepreneurship growth and development are very well known some of the financial support together with tax incentives and relieves .The results is higher and more positive. In Macedonia, for example, from 2008 ⁷, according to the Law for profit tax is only 10%, handicraft do not pay profit tax, the same is for foreign companies in TIDZs, and small business with income earned in the year for which the tax is concerning , from any source, not to exceed the amount of 3,000,000 denars annually.

2. SITUATION IN MACEDONIA

In last 25 years of new socio-economic and political system, Macedonian authorities accept quite a lot of document for development of economy and private sector through the sector of entrepreneurs and SMEs, but the serious question is financial aspect of their implementation and final good results.

In the Republic of Macedonia the situation with financing entrepreneurship development is still on low level in spite the fact that commercial banks from abroad, EU and from other countries and institutions are present through distribution of their commercial credits in Macedonian commercial banks with Macedonian Bank for Development as a bank for promotion only.

All these credit lines are under commercial conditions and intended for medium sized and large companies which have capacities for taking credits under commercial conditions. Small and micro enterprises

⁷ Law for profit tax Official Gazette No; 80/93,135/11

are out of these actions because of their lack of collateral for receive the commercial credits including initial own capital for participation in credits.

Macedonia all these years did not established any micro finance institution or specialized bank for small business financial support as a public-private partnership for the purpose of thousand unemployed people and start up businesses of young and creative people. It exist only some private institutions that were some projects in the past. They operate quite well but the market needs more sustainable ones under the oversight of the Macedonian authorities and save sources of financing them.

Agency for Employment of Macedonia gives some grants for startup businesses, which is important but marginalized sources for financing SMEs development and financing.

In order to obtain financial resources to encourage innovation activity, according to the Law ⁸, is established the *Fund for innovation and development of technology*. This Fund is financed most of the Horizons 20 EU Program. It gives some grants for start-up enterprises and spin-off ones, including enterprises for transfer of technology and provides assistance through business-technology accelerators. The focuses of financing are small and medium sized enterprises (SMEs) that is very good opportunity to support them as a key dynamic factor in economies all around the world.

All these facts point out some dilemmas related to the financing by grants in intention to multiplied effects of finance for future business activities. There is a question of sustainability of this *Fund* on long term.

These questions are imposed by International Monetary Fund and World Bank in the past with their opinions and attitude that the government should not be obliged to create such institutions but only favorable business climate. Private sector should make efforts to find financial support its self which is quite inadequate in country with a lot of unemployed, poor population weak and small enterprises.

CONCLUSION

World practice shows a quite long list of financial kind of support especially for entrepreneurs and start up businesses. Less developed countries like Macedonia with low budget expenditure for SMEs development should take example of experiences in the world that only with common action of private and public sector in the society may have strong and sustainable funds for financing SMEs in order to create innovation community on long term. In the past Macedonian government modest and prudent accepted some suitable projects for financing SMEs and start up businesses but not clearly and determined.

Macedonian authorities have to find more solutions for financial support of entrepreneurship development as a key economic factor of growth and development.

REFERENCES

1. Armendaris B. and Mordach J.: "The Economics of Microfinance" Massachusetts Institute of Technology, 2010
2. Deakins, D.; Freel, M. S. (2009). "Entrepreneurial activity, the economy and the importance of small firms". *Entrepreneurship and small firms*. McGraw-Hill Education. ISBN 978-0-07-712162-4
3. EIM Small Business Research and Consulting: "The State of Small Business in the Netherlands 1993", December 1993
4. Helms, Brigit (2006). *Access for All: Building Inclusive Financial Systems*. Washington, D.C.: The World Bank
5. Isaacson W.: "Steve Jobs", Tri, Skopje, 2012

⁸ Law for Innovation Activities , Official Gazette No:79/2013; 137/2013; 41/2014; 44/2015; 6/2016; 19/2016; 53/2016;

6. Roodman, David. "Due Diligence: An Impertinent Inquiry Into Microfinance." Center for Global Development, 2011
7. "Small Business Advisor, The Entrepreneur Magazine", John Wiley and Sons, New York, 1995
8. Ten Successful Companies That Started by Bootstrapping, *Richtopia*. Retrieved 21 May 2016
9. Fiti T & Hadji Vasileva Markovska V.: "Entrepreneurship and Entrepreneurship Management", Faculty of Economics, Skopje 2006
10. Zarezankova-Potevska M. and Solymossy E.: "Entrepreneurship", 2 August 2013, Skopje,
11. Law for Innovation Activities, Official Gazette No: 79/2013; 137/2013; 41/2014; 44/2015; 6/2016; 19/2016; 53/2016
12. Law for profit tax Official Gazette No; 80/93,135/11
13. Law for Investment funds: Official Gazette No: 12/2009



Illustration: Castle of Branches
Castle of branches © by Szilvia Nagy

Prof. Dr. Miroljub HADZIC

Professor, Singidunum University, Belgrade, Serbia, Faculty of Business,

E-mail: mhadzic@singidunun

Petar Pavlovic

Head of Unit for Assurance of Strategic Documents and RIA, Public Policy Secretariat,

Government of the Republic of Serbia

E-mail: petarpavlebgd@gmail.com

SERBIA: ENTREPRENEURS RECOGNIZED IMPROVED ENVIRONMENT FOR BUSINESS

ABSTRACT

Economic recovery of Serbia is now secured, after three years of increase in GDP and promising higher rate of growth in the next several years. Important sectors, like industry, traffic, trade, construction are in a good shape, only stagnant one was the electricity production and a decrease was recorded in agriculture, due to unfavorable weather conditions. This growth was based on the increase in personal and investment demand, together with stable foreign demand. The national economy became stable one, considering the inflation rate on the level comparable to European one, which gave the chance to the Central bank to push down its interest rate to the lowest ever. This achievement is a result of very painful measures of fiscal consolidation introduced in order to cut the budget deficit and the share of public debt in GDP, which was realized faster and more than expected. Market reforms got momentum during the last several years, especially regarding construction permit, business registry, cadaster registry and start business. It was recognized by international authorities, as Serbia improved its position on different global lists which envisaged business environment. Also, international credit rating agencies assessed Serbian position as better, with promising expectations. All those positive signals changed readiness of domestic potential entrepreneurs to start business or existed one to develop it. Last several years one can see that the main trend in business demography is as follows: the increasing number of newly established companies and shops and at the same time decreasing number of closed companies and shops. Of course there is enough space for further improvement of business environment and entrepreneurial eco system, especially in easing tax and related duties and better access to finance.

Keywords: entrepreneurs, environment for business, trend in Serbian business demography, Serbia

JEL Classification:L26, M21, F63

INTRODUCTION

Serbia successfully finished three years stand - by arrangement with IMF worthy USD1.2 billion, which fortunately was not used. The main achievement is related to cut of budget deficit earlier and more than expected, thus putting down the share of public debt in GDP. Market reforms continued in some important areas. International trade became stable in spite in external shocks with downsizing trade deficit. After six years of zero rate of growth GDP increased three years, due to recovery of personal and investment demand. All those positive movements produce a positive reaction of entrepreneurs, who express more willingness to start, continue and development their activities.

THE STABLE ECONOMIC RECOVERY

The third sequencing year Serbia achieved economic growth combined with considerable improvement in the overcoming of the major bottlenecks, namely public debt and foreign debt, and additionally better environment for business.

The most important evidence for an entrepreneur is GDP growth. In normal conditions it could not be so important, but after six years of zero rate it is obviously an important sign that the national economy is on the right track. One can say that the GDP growth of 1.9% is modest (0.8 and 2.8% in previous years, respectively), especially in comparison to other countries within the Region and other countries in transition (Statistical office, 2017). The projection of growth for 2017 was corrected several times up and down, and finally was the result of a recovery in industry and services, investments and personal consumption, but limited due to bad agricultural year and electricity production (a drop at the beginning of the year).

| | 2013 | 2014 | 2015 | 2016 | 2017 |
|------------------|------|------|------|------|------|
| GDP | 2.6 | -1.8 | 0.8 | 2.8 | 2.0 |
| Industry | 5.5 | -6.5 | 8.3 | 4.7 | 3.9 |
| Trade | -5.1 | 2.4 | 1.6 | 7. | 4.0 |
| Traffic | 4.0 | 22.1 | 5.9 | 11.1 | 5.9 |
| Export | 25.8 | 1.5 | 7.9 | 11.6 | 13.0 |
| Import | 5.1 | 0.1 | 5.8 | 4.2 | 14.2 |
| Inflation | 7.8 | 2.9 | 1.9 | 1.2 | 3.0 |

Source: Statistical Office of RS

Table 1 Serbia - Key Macroeconomic Indicators (Increase %)

The economic recovery was led by industrial production, with steady increase from the last quart of 2014. In 2017 industrial production was 3.9% higher than year before (8.3% and 4.7% in previous years, respectively). The industrial recovery is due to manufacturing, out of which chemistry and rubber industry, pharmacy, production of equipment and metal industry. One can see also that mining recovered during the last year, but electricity production was stagnant.

For an entrepreneur a very important sign was an increase in domestic demand, pushed by personal and investments consumption. Real wages and employment increased, especially in private sector, new credit lines to citizens also, and turnover in retail trade and construction as well. Real wages increased by 1.1% mainly due to increase in private sector while in public sector wages were stagnant. Unemployment rate decreased (to 12.9%) and somewhat an informal employment as well. Retail trade increased by 4% and, according to an assessment, also construction 2.8%.

During the crisis external sector improved its competitiveness, export became stable in spite of negative external influences. In the last year export volume increased 13%, import by 14% (13 and 16 bill € respectively in the first ten months of 2017) with higher trade deficit in comparison to the year before. At the same time a covering import value by export is pretty high (79%). Balance of payment position was improved as a result of high level of remittances of Serbian citizens living abroad (€ 2.6 billion), increased Foreign direct Investments, FDI (€ 1.7 billion). Domestic currency was stable and volume of foreign currency reserves as well (€ 10 billion). Foreign debt somewhat decreased for € 1 billion and became 73% of GDP (the pick was 82% of GDP in 2013). The credit line from stand - by arrangement with IMF was not used at all.

During last several years inflation rate became comparable to European one, which is very important for an entrepreneur and its ability to plan his future activities. Although it was somewhat higher 3%, than previous years (1.9 and 1.2%) it was within acceptable corridor defined by the Central bank ($2 \pm 1.5\%$) and gave a chance to the Central bank to put down its referent interest rate to the lowest level (3.5% p.y.) (NBS, 2018).

The main achievement was related to put public consumption and public debt under control. A fiscal consolidation was very painful (cut in pensions and wages in public sector by 10%), but successful to put public consumption under control. The Budget deficit was put down from its maximal level (6.6% of GDP) to 3.7, 1.4% and finally 1.3% of GDP in the last year. As a result the public debt was cut from 75% of GDP (in 2015) to 65% in 2017 (Ministry of Finance RS, 2017).

THE BUSINESS ENVIRONMENT IS IMPROVING

USUALLY ENTREPRENEURS AND DOMESTIC CITIZENS CAN OBJECTIVELY to conclude about business environment, but it is not the rule. Namely, their perception could and usually do overemphasized some factors and at the same time underestimate others. Somebody else from abroad can do it without prejudice.

According to world-wide credit rating houses Serbia did improved business environment in recent years. Standard and Poor's stated that Serbian credit rating is BB- with no changing during the last year, but with positive expectation. Their opinion is that Serbian GDP will continue to grow during the next several years, on the basis of the growth of FDI and private consumption, wages, employment and remittances from abroad as well. For countries within the Region the credit rating was changed for Hungary only, from BBB- to BB+.

Fitch Rating changed Serbian credit rating from BB- to B+ in meantime. Their opinion was based on the fact that the Government was successful in fiscal consolidation and structural changing, with modest budget deficit, as the main achievement. Further expectations are positive. According to the Agency Hungary also improved its credit rating status (from BBB- to BB+), while FIROM credit rating became worse.

Moody's stated that Serbian credit rating was improved from B1 to Ba3 with stable and positive expectation. The main reasons for the improvement was related to the fiscal consolidation, which resulted in decrease in the share of public debt in GDP, continuation of market reform and especially to better ability of Serbian economy to answer to external shocks and perpetuate economic recovery (Ministry of Finance RS, 2017).



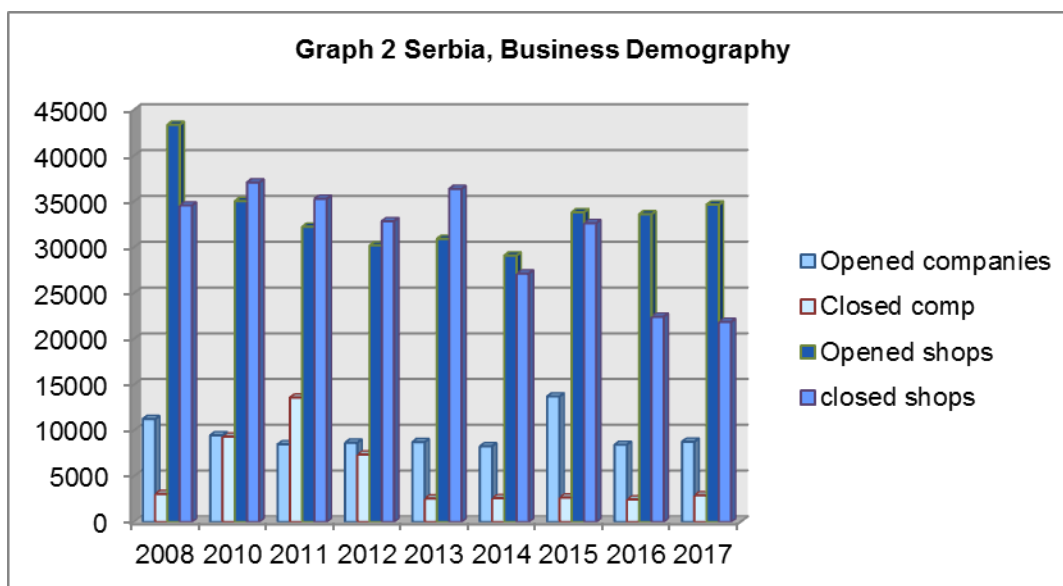
Serbia also improved its position to the 43rd out of 190 countries on the Doing Business List created by World Bank. It was result of improved the process of getting construction permit on municipal level, which is now in electronic form and cannot be longer than one month (the rank now is 10th). There were improvement in Cadaster registry, credit procedure within banks and rule of law in the field of contracting, as well (World Bank, 2017).

World Economic Forum created Global Index of Competitiveness by which Serbia improved its position for 12 places to 78th out of 138 countries covered in the investigation. According to the assessment Serbian economy improved 7 out of 11 indices (technological readiness and infrastructure were not improved), mainly in macro-economic environment (better position for 31 places). If one compare Serbian position to the South East average than can conclude that Serbia is inferior according to medical care, primary education and its market volume (World Economic Forum, 2017).

BUSINESS DEMOGRAPHY

Business demography is very important information about general conditions for starting and continue business, especially for entrepreneurs. Usually, entrepreneur or potential entrepreneur start their business or realize idea on the basis of a positive filling about business climate and not on the basis of complex investigation of project proposed. During the global economic crisis trends in business demography were as follows: a number of new established companies and shops was decreasing, while a number of closed companies and shops was increasing. For the first time during the transition period in 2011 as the worst year ever, business demography was negative, which means that number of closed companies and shops was higher than number of new opened.

During the last three years business demography proved the fact elaborated earlier, namely that conditions to start and continue business in Serbia are better. From year to year a number of new small and medium enterprises and shops (SME) established is increasing while number of closed SME is decreasing. Especially interesting is the figure of closed SME in the period under consideration, as in 2015 was slightly less than new open, while in two recent years net effect was higher and higher.



Source: Business Registry of RS

If we look at net effect (the ratio between newly established and closed entities) overall net effect is improving, as for all companies an shops was 1.3 is 1.7 and 1.8 in the last three years, respectively. Considering net effect for all companies (large, micro, small, medium) one can be satisfied 5.1 then 3.4 and 3, but cannot be satisfied with a decreasing trend. At the same time net effect for shops is low 1.3, then 1.7 and 1.8 respectively, but an increasing trend is an encouraging fact.

Better insight into trends of business demography is possible to get if one look at birth and death rate of enterprises and shops (number of newly established/closed companies or shops compared to total number of companies or shops). Not surprisingly sole entrepreneurs (shops) had stable birth and death rate with slight

decrease in birth rate, but death rate was shrinking very much. Birth rate for companies is decreasing but death rate is low and rather stable.

| | Companies | | Shops | | Total | |
|------|------------|------------|------------|------------|------------|------------|
| | Birth rate | Death rate | Birth rate | Death rate | Birth rate | Death rate |
| 2015 | 6.7 | 1.3 | 13.9 | 13.4 | 10,6 | 7.9 |
| 2016 | 4 | 1.2 | 13.2 | 8.8 | 9 | 5.9 |
| 2017 | 4.1 | 1.4 | 12.9 | 8.1 | 9 | 5.1 |

Source: Statistical Office of RS, processed by MRDLSG - research

Table 2 Serbia - Birth and death rate of enterprises and sole traders

CONCLUSION

After six years of zero rate of growth Serbian economy is in a good shape with modest but encouraging increase for the third consecutive year, mainly based on the increase in personal and investment demand and stable export demand. For entrepreneurs this recovery is promising sign. The main achievement of macroeconomic policy was fiscal consolidation, with cut in Budget deficit and the share of public debt in GDP as well. For employers it is a good information, but more important for them could be willingness of the Government to cut their fiscal duties considering that now is wider space for it. Market reforms got momentum last several years, which is recognized by international authorities including rating agencies. The fact that Serbian business environment is improving in real sense by economic trends and also by friendlier entrepreneurial eco system, was proved by figures of business demography, in which a trend of increasing number of new established companies and shops, on one side, and decreasing number of closed one, on the other side, is clear and stable.

REFERENCES

- Statistical Office of RS, Economic trends in 2017, An Assessment, 2017
- Ministry of Finance of RS, Current Macro Economic Trends, December 2017
- National bank of Serbia, The Report on Inflation, February 2018
- World Bank, Doing Business List, 2017
- World Economic Forum, The Global Competitiveness Report 2017-2018,



Illustration: Dancing evening lights
© by Szilvia Nagy

Meltem INCE-YENILMEZ

Associate Professor

Department of Economics

Yasar University, Izmir/Turkey

E-mail: meltem.ince@yasar.edu.tr

SMES' TECHNOLOGICAL INNOVATIONS IN TURKEY**ABSTRACT**

The political, legal and economic condition of an environment directly affects the success of business in that environment. When these conditions are favorable, it benefits the business. When they are not, it affects the business negatively. Government legislation and laws determines the fate of a business. In this study, the effects of wrong government laws and legislations on the progress of R&D, technology and firms, and how these laws are to affect small and medium scale industries in the nearest future are evaluated. The aim of this paper is to discuss ways of strengthening the technological capabilities of SMEs in the country, and how this will help develop the country's economy. To fulfill the gap in SMEs' technological innovations and activities, innovative efforts to increase the innovative decisions as well as improvement in clustering should be enhanced by the government. It is important to note that the level of improvement attained by the firm in terms of technological advancement will foster its collaboration with other innovators, and this will be a positive influence on the success of the company. This paper, therefore seeks to shed light on the effects of clustering on the technological advancement capabilities of firms in different parts of Turkey. We will also make suggestions on how legislation can enact new policies that will help firms improve in technological innovations. Thereby, this study examines the small and medium sized firms operating in Turkey. The performance in technology and innovation, the challenges in creating employment opportunities, unfavorable economic conditions, low investments and lack of entrepreneurial competence are also discussed.

Keywords: SMEs, Turkey, Technological Innovation, Clustering in Turkey, Innovation Performance

JEL Classification: L26, O32, C38

1. INTRODUCTION

Stakeholders from different industries have pointed out that technology plays a dominant role in the economic growth of a company. However, people wonder if technology and economic growth should be treated as related factors or as different factors. In a study of the economic performances of different countries, performed by scholars from Harvard, and the World Economic Forum, it was found that countries that have made the most progress economically are those who have also made giant strides in technology. This is a pointer to the fact that improvement in technology can positively affect the development of a country's economy. Empirical studies and theorists focus their attention on the role technology plays in these developments, but the processes and the experts involved in bringing these technologies into place have not been given the necessary attention they deserve as determinants of national economic progress.

Technology is a catalyst that creates wealth. It also lowers the barriers of market entry and levels the competitive playing field for businesses, from technical products to medical and financial services to transportation and retailing. Technology creates an enabling environment for business growth. It reduces the market entry barriers and helps business owners to reach a larger audience. It has also made positive impacts in transportation, housing, medicine and retailing. Business owners have realized how much technology can help them achieve a wider reach, bigger profit, faster result and cheaper customer service, so they are under pressure to outdo their competitions by using the wealth of opportunities that technology presents (Thamhain, 2005). The ability of business leaders and managers to make decisions that will enable their company to adjust to changing trends in a competitive environment goes a long way to determine the success

or failure of their organization. Many SMEs understand that technology offers a whole lot of benefits that will increase profit for them, but implementation of such technologies is one point where some SMEs hit a roadblock because of the incompetency of their managers. This always ends up badly for the companies because their competitors often take advantage of the available technology to run them out of the market (Applegate & Elam, 1992; Mingay, 2004). As the size of the organization, market structure and geographic location affect the technological development of SMEs. Tiawri et al. (2010) states their paper that the low budgets, inadequate employees, bureaucracy, insufficient corporation and lack of leadership as the most important barriers in Germany for the development of SMEs. Demirbas (2011) describes barriers to technological innovation of SMEs in Turkey as the lack of government policies to support technology and R&D activities, the unstable economic situation on investment, the high cost of technology, the lack of finance and qualified employees.

Inadequate use of technology by SME results mainly from bad leadership, poor communication and inadequate knowledge. This research is necessitated by the poor performance of Small and Medium Scale Entrepreneurs in Turkey in the last thirty years. For almost thirty years, the government has made some reforms in the economic environment in Turkey. Some of these reforms have SMEs as their major targets, but up till date, the SMEs in the country have not made very good improvement in technology and innovation when compared to their counterparts in other parts of the world. Innovation plays a critical role in the survival of a company be it large scale or small scale. The application of new and trending technologies creates a room for companies to record more success, which in return rubs off on the economy of the nation (Budworth, 1996). This is a problem facing many developing economies like Turkey. Our aim is to analyze the performance of SMEs in the countries, the administrative faults they are facing and avenues that both SMEs and the government can explore to foster technological innovation.

Available data proves that improvement in technology plays a positive role in the growth of entrepreneurs in the country. Some relevant literature will be reviewed, the performance of SMEs in the changing business environment will be analyzed and their effect in the nation's economy will be highlighted. Furthermore, some bad rules and regulations will be evaluated which guide the economic environment, and how the performance of SMEs and the development of the economy are limited.

2. ROLE OF SMES IN THE DEVELOPMENT OF TURKEY'S ECONOMY

SMEs play a vital role in the development of every country. They create jobs for the citizens, and impact hugely on the economy of the nation. They bring new products into the market and help in introducing new technologies to the environment. They can adapt easily in any environment, hence they are agents of unity, which counter the economical imbalance amongst different regions of the country. The easy entrance and exit of SMEs in the market gives room for competition, and makes the market more flexible. SMEs help in poverty eradication in a country, as they provide jobs for poor people in rural areas and in areas where there are no good jobs.

SMEs also affect the organizational structure of the market to enable employees having more flexibility in production process while using the technology that makes life easier for both. Technology allows people and SMEs to capture economic opportunities and to improve managerial decision-making by increasing the productivity. It also leads to poverty reduction. Global movements of the SMEs show that the use of technology is an important factor to increase the growth of SMEs both in global competition and regional markets (Kaibori, 2001). As the world becoming a global village, businesses deals are now done across borders. People can now easily hook up and do business with clients all over the globe. Many SMEs have realized the wealth of opportunities available in the global market, and are taking advantage of it to improve their businesses. The Turkish economy has taken advantage of the changes in the global economic environment, and it helped the country to weather the storms of the 2008-2009 global economic crises. The structural reforms in Turkish economy and the strategic policies put in place at that time also played

significant roles in the country's survival during the meltdown. These strategies have made it possible for more SMEs in the country to come up with new market strategies and means of networking across borders to do businesses aimed at making maximum profit and staying afloat in the global market. They have also come up with new strategies; ideas, products and policies that will help them compete favorably with their counterparts locally and in the global market.

2.1 SMEs' and Employment

In today's world, SMEs are playing a vital role in the economic development of all countries. Just like in other countries of the world, SMEs are very strong stakeholders in Turkish economy, and they are contributing to the growth of the economy in several ways. SMEs are providing jobs for the teeming number of unemployed persons in Turkey. Turkish Statistical Institute reports that SMEs employ over 75% of the Turkish workforce, and that they make up over 99% of all the enterprises in the country (TUIK, 2016). In 2016, SMEs held total export shares of 60% and total turnover share of over 75%. The impact of SMEs in Turkey is also felt in value added export and capital investment. It is reported that SMEs employ 78% male workers and an estimated 22% female staff (OECD, 2016; TUIK, 2016). Many programs have been put in place to discuss the major role SMEs are playing in the Turkish market, and deliberations are being made on ways to increase competitiveness amongst them and, and to increase the number of employments they create.

In as much as they help build a country's economy and provide job opportunities, SMEs also have their own problems and limitations. Their inability to obtain loans and credit facilities, and the fact that some of them do not easily catch up with technological trends are some of the factors that limit them. Other limitations are, lack of adequate funding and capital, backwardness in the use of modern marketing techniques, inability to meet up with global standards, inability to afford high-tech facilities, insufficient education, and many others. Due to the size of their business, SMEs do not always have a good level of cooperation. They are not harmonized and institutionalized enough to share ideas and know the areas they are lacking. This inability to know their weakness becomes a limitation on its own. To help counter these challenges, the government of Turkey has established several agencies, which are bringing up strategies and programs to improve the performance of SMEs in the country. The country recognizes that SMEs are important for the development of the economy, so they are doing everything possible to help them grow (Jutla, Bodorik & Dhaliwal, 2002)

| | Number of enterprises | | | | | Total employment | | | | | Value-added | | |
|--------|-----------------------|------|-----------|------|-------|------------------|------|-------------|------|-------|-------------|----------|----------|
| | Industry | | Services | | Total | Industry | | Services | | Total | % | | |
| | No. firms | % | No. firms | % | | No. engaged | % | No. engaged | % | | % | Industry | Services |
| Micro | 383,577 | 93.8 | 1,889,647 | 99.1 | 98.1 | 1,113,081 | 32.5 | 3,512,942 | 75.9 | 57.4 | 12.2 | 44.4 | 28.2 |
| Small | 16,149 | 3.9 | 12,190 | 0.6 | 1.2 | 521,934 | 15.2 | 314,797 | 6.8 | 10.4 | 11.1 | 11.5 | 11.3 |
| Medium | 7,795 | 1.9 | 4,362 | 0.2 | 0.5 | 799,763 | 23.3 | 286,359 | 6.2 | 13.5 | 21.7 | 13.2 | 17.5 |
| SME | 407,521 | 99.6 | 1,906,199 | 100 | 99.9 | 2,434,778 | 71.1 | 4,114,098 | 88.9 | 81.3 | 45 | 69.1 | 57 |
| Large | 1,537 | 0.4 | 938 | 0 | 0.1 | 991,465 | 28.9 | 514,680 | 11.1 | 18.7 | 55 | 30.9 | 43 |

Table 1: Structural indicators on enterprises population
Source: OECD, Structural and Demographic Business Statistics, 2015.

2.2. SMEs' Innovation Performance

In many Small and Medium-Sized Enterprises, all basic functions and organizational needs are carried out by

the owner or manager of the company instead of the innovative entrepreneur which provides a lack of implementation of technological innovations within SME's. Moreover, economic and global changes, changing technological capabilities, production, consumer requirements and competition will increase the challenges they face with (Demirtas, 2011). Therefore, for an economy to blossom and be competitive there must be a high level of innovation. R&D activities provide technological knowledge that contributes to innovation. The R&D carries out their studies and research mainly in universities and research institutes in Turkey where they are mostly based. Recently, new government policies have been put in place, and they are gaining ground in the country's economic and business climate. There have been suggestions that protectionism; direct investment subsidies, speculative risk and inward-orientedness are the direct causes of the backwardness in the performance of SMEs and they are as a result of the intervention of the government in the economy (Katz, 1995). In Turkey, SMEs do not spend much on innovations (OECD, 2013). According to statistics, the resources large firms spend on innovative investments are over 300% greater than that spent by SMEs.

On the other hand, numbers of internet users, patent applications and researchers as a percentage of the labour force are drastically low compared to all EU member countries. When it comes to SME's innovation performance, Turkey's gross expenditure as a percentage of GDP is lower than in most EU member countries and the other candidate countries (OECD, 2016).

3. GOVERNMENT POLICY AND PROBLEMS

To stabilize the market and help SMEs grow in innovation, Turkish government needs to come up with new strategies and policy. The must come up with a holistic approach will be stable over a certain period of time so that firms can adjust and come up with strategies that will help them stay effective. This strategy needs to have financing, industrial policy, legal licensing, and education, incorporated into it.

There is disharmony between and within government agencies and departments, and this has hampered the effectiveness of some of the policies brought by these agencies. Because of this, there is a disagreement between the political class and the scientific or technology cycle, which needs more time to start making profits. The government of Turkey has not made enough efforts to counter the time spent and risks involved in the innovative process, especially with SMEs that are recently beginning to embrace technology. Though over time, Turkish government has tried to launch many policies aimed at overcoming these challenges. But, despite its increased efforts and significant progress on providing investment opportunities and ICT, Turkey's increasing political and macroeconomic instability as well as the building blocks to enabling innovations and development, much work is still ahead for her.

4. TECHNOLOGY POLICIES IN TURKEY

According to Diaconu's (2011) technological innovation research; social networking, online marketing as well as recording on computers are based on the technological process and therefore these steps influence the development of the new or improved products of SME's. The technological innovations are mostly dealt with investments on research and development, education level of the employees, outsourcing, marketing strategies, knowledge flows and trade strategies as important determinants of technological innovative efforts. The innovation decision, capability and spillover are also correlated with technological improvement of SME's (Bascavusoglu-Moreau and Çolakoglu, 2011).

The economic climax in Turkey has undergone several changes since 1990. Transformational policies have brought about trade liberalization, deregulation of the financial market and the privatization of many government enterprises, and this has shaped the economic system of the country. These new policies were necessitated by the debt crisis which the country faced earlier, which made them realize the need for more competition for an increased productivity. The crisis made the government realize that it was high time they

stopped being the determining factor in all spheres of the county’s economy, so they decided to remove the trade barriers and make the market accessible to all, to foster local and international competition. This has been an acceptable development amongst SMEs, but their main challenges, amidst bureaucratic and administrative procedures have been lack of well skilled or educated labor and inability to embrace, outsourcing, trade strategies and practice new technologies. Let’s emphasize on some of the ways technological advancement can make a difference both locally and globally.

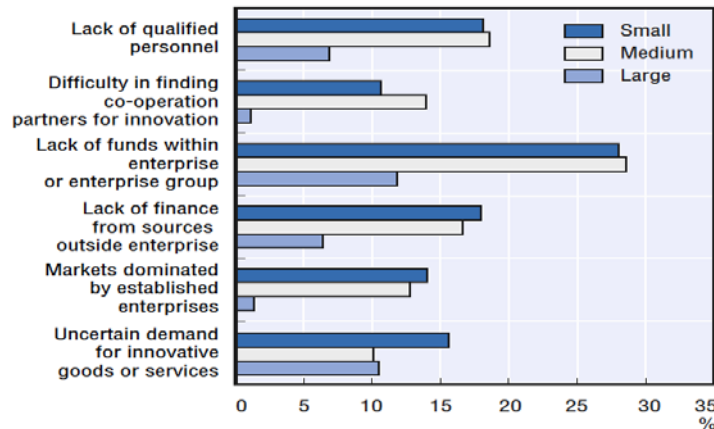


Figure 1: Factors hampering innovation, 2012-14 ⁹
 Source: OECD Structural and Demographic Business Statistics (2015).

SMEs in Turkey see the promotion of technology and innovation as a sole responsibility of the government. However, this is largely true according to findings from surveyed firms, which shows that the federal government has been very instrumental in promoting the development of technology in the country.

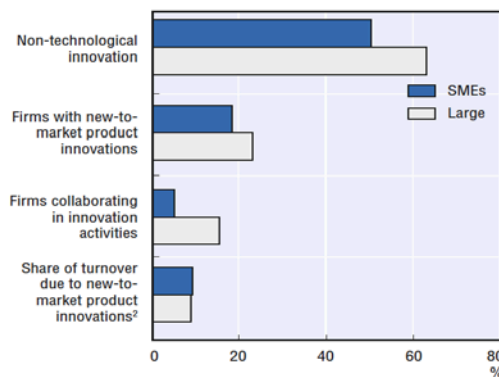


Figure 2: Innovation performance of SMEs & large firms, 2012-14¹⁰
 Source: OECD Structural and Demographic Business Statistics (2015).

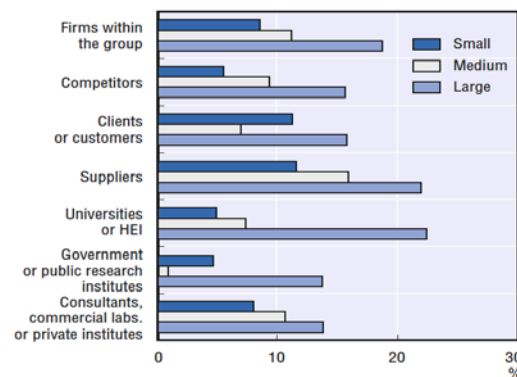


Figure 3: Types of innovation cooperation, 2012-14 ¹¹

Despite the role of public policies, the top managers and CEO are the main determinants of the type of structural transformation that goes on in their industry. Government policies can positively influence the

⁹ As % of innovating firms

^{10 and 11} As % of all firms within size class and as % of total turnover

technological capabilities of SMEs and R&D Institutions in the country. It can create an enabling environment where firms can invest in the activities of R&D Institutions, which will in turn improve innovation and adoption of new technologies by these firms (Rothwell, 1986). Below are some of the policies proposed by the Turkish government to improve innovation and R&D activities.

4.1 Stability/instability of the bureaucracy

For government to create strong relationship with consumer communities that will lead to greater economic development, it has to make laws and policies that are clear, steady and beneficial to the consumers and industries involved. Current statistics by the World Economic Forum suggest that the political and legal climates of Turkey will most likely to undergo a dramatic change in the next few years. On an Institution stability range of 1-7, Turkey is currently rated 3.9, and 64th out of 144. (World Economic Forum, 2014)

According to the World Economic forum, the Global Competitive Reports also ranks Turkey 59th out of 144 countries where entrepreneurs are faced with government bureaucracy. To rise to the desired higher height, Turkey has to shift her focus to making better rules and legislations that will make the economy stable. Increasing education and enlightenment for both skilled and unskilled labor; eradicating bribery and corruption, educating the masses about the ethics involved in the labor market and creating an effective legal and political framework that will encourage competition between the local entrepreneurs and their international counterparts.

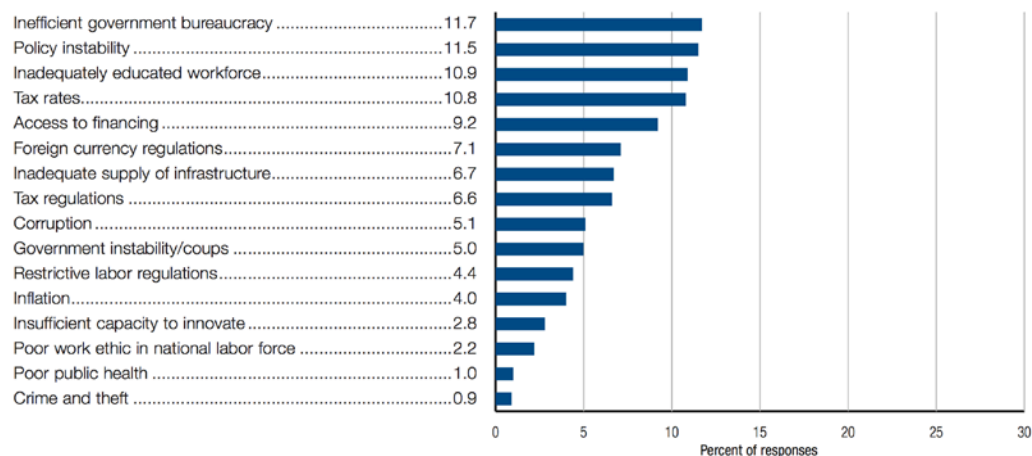


Figure 4: The most problematic factors for doing business in Turkey
Source: The Global Competitiveness Report 2013–2014, World Economic Forum.

4.2 Size of firms and technology development

The economic sectors in Turkey, which have embraced technology, are always more protected than those in their days of technological infancy. The ones with the least technology pay the highest tariffs. Some other factors, which affect technology related activities in the country, include;

- ❖ Quality of work done by research institutes (of which Turkey ranks 64th)
- ❖ Level of competition and size of the market (95th)
- ❖ Policies enacted by the government, which seeks to enhance innovative capacity (77th)
- ❖ Availability of the newest technologies (Turkey is ranked 45th)
- ❖ Investments made by government which support technological infrastructure, research and training (57th)

For the Turkish Government to encourage the advancement of technology and innovation in the country, it has to be willing to make investment towards that sector and also make policies that will make it easy for the private sector to embrace latest technology. Firms, on their own, have to build a good relationship between them and the institutions that can help them build the platform for technological advances. Some firms, however have advanced in their use of technology, and are already competing in the international market. SMEs do not always have what it takes to deal with the government, but an open economy makes it easy for SMEs and larger firms to compete globally with their international and local counterparts. There has been increased awareness of the importance of adoption of technology in Turkey, but the challenge has been the inability of firms and businesses to produce enough to serve the local and international markets. For this to be settled, government policies have to be made to favor the adoption of the technological culture.

5. CLUSTER DEVELOPMENT

In the literature, many studies have analyzed the SME clusters and its important role. Keeble and Nachum (2002) look at the results of a survey of 300 SMEs in London and southern England. The role of demand-side influences, learning processes, and the vital role of increasing globalization in clustering have been analyzed. Chen and Cao (2006) examine the character of Chinese SME clusters by industrial sector and they conclude that to increase the technological innovation capabilities of SMEs, innovation environment and learning capabilities are crucial. Shapira (2008) compares the situation of manufacturing SMEs in Japan and the United States while considering the challenges they face at the rapid technological changes.

It is not that much different in Turkey. Clustering began in 1999 with the Competitive Advantage of Turkey platform that was formed through the contributions of the Middle East Strategy Center and the Turkish private sector. It was later transformed into the National Competitiveness Research Institute and institutionalized. The aim was thereby providing information by creating collaboration opportunities and following technological innovations to maintain export volume in global markets (Çelik et. al, 2013).

Turkish economy is spread through automotive, construction, textile, and tourism traditionally. Most of these economic activities are concentrated in Marmara region because it is advanced in technology, education and logistical infrastructure. Because these strengths are more obtainable in the Western part of the country, there is a high rise of immigration in that region, and this has put much pressure on the health, education, transportation and other infrastructure in the western cities. This concentration has also decrease the level of competition between the west and other regions. To balance this, the government has introduced many incentive programs geared towards increasing the level of investment and development in the east.

In the 1990s, Technology Development Centers were established in the universities in the country under the auspices of the Small and Medium Enterprises Development Organization (KOSGEB). The centers played significant roles in formulation of cluster related policies or development of R&D, but not until the early part of 2000s did Turkey come up with defined strategies aimed at encouraging and promoting industrial clusters (KOSGEB, 2012). Grants for research and development and policies to create an enabling environment for technology to blossom were all postponed till later and were never worked on till 2000s. Turkish government seeks to use cluster approach to foster competition amongst regions in the country. The Competitive Advantage of Turkey was the first project the government brought up, and it later was changed to International Competitive Research Institute. URAK strengthened the sectors where Turkey can compete favorably with other economies in the world (Porter 1990), with textile being one of such sectors.

5.1 Statistical Maps of Turkish Clusters

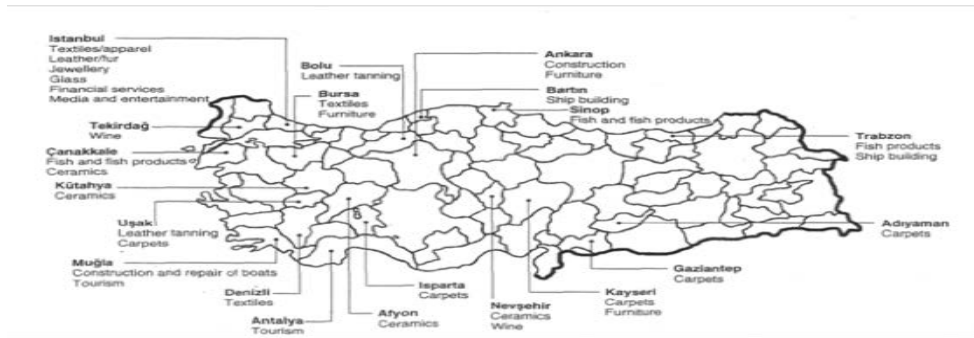
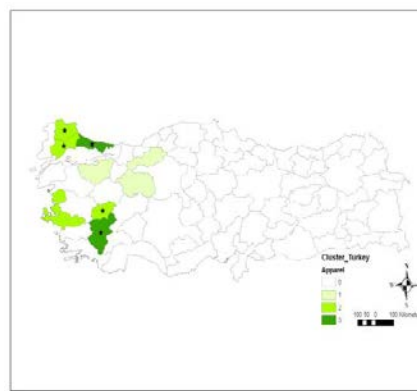
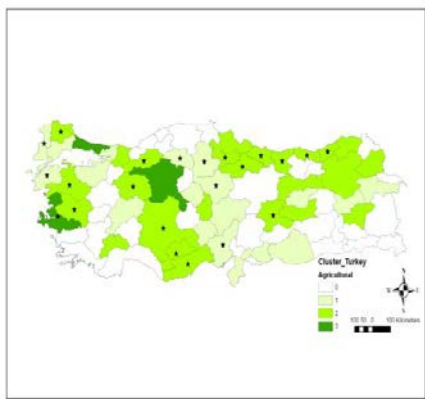


Figure 5: Clusters of Turkey according to cities
 Source: Özkanlı, Erdil and Akdeve, 2008; Erdil 2009.

Agricultural products & processed food

Apparel



Engine and Defense

Automotive and driven products

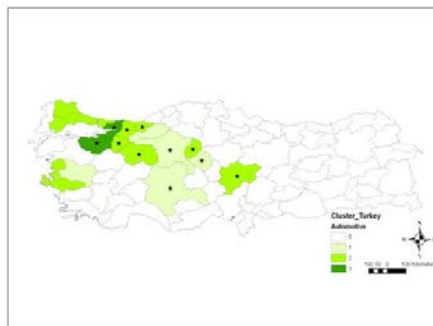
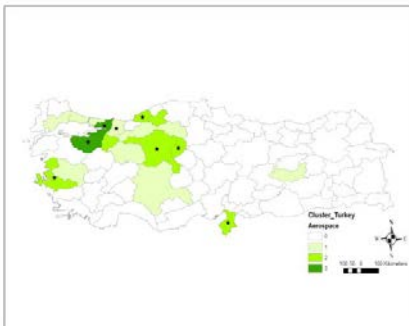


Figure 6: Statistical maps of clusters in Turkey
 Source: <http://europa.eu/rapid/press-releaseIP-17-385en.htm>

Social and economic structures greatly affect the activities of SMEs in Turkey. This is obtainable when Different firms from different sectors got involved in the regional industrialization system of Turkey; the firms fraternized amongst themselves to share knowledge for mutual growth. In terms of business sophistication pillar, Turkey ranked 42nd in the Global Competitiveness Index because of the level of cooperation that exist between industries in the country. Although the agricultural sector in Turkey is not yet blossoming in terms of production, the industrial and service sectors are growing in production efficiency.

The sectors have adopted advanced technologies, and are gaining competitive advantage over their counterparts in other parts of Europe, especially in Eastern and Central Europe. With respect to this, an increase in the scale of exploitation is proportional to the impact that social structure makes amongst firms and individuals

6. CONCLUSION

Technology plays a major role in the development of a country's economy. This paper has stressed that technology directly affects the level of productivity and economic growth in the country. Because of this and more, every country strives to develop their R&D and Technological operations. Firms and businesses in these countries, Turkey inclusive, also are making efforts to advance in this same vein in order to compete with others all over the world. For SMEs in Turkey, it is not an easy task to establish a business and create networks with other firms and clients both locally and internationally, bearing their own context in mind. This makes it necessary for government to develop legal frameworks that will support the right of having international standard technological development. Lack of functional network within private and public organizations, time intensiveness of R&D and technological development, stringent bureaucracy and certain unfavorable policies are the problems that must be tackled.

To have a better view of the problems of SMEs in Turkey, apart from an environment which does not favor technological innovation, the high cost and quality of the factors required need to be considered also. The textile and automobile sectors already are blossoming over the years, so the development of high quality facilities for retailing and brand creation will give these industries a competitive edge. Also, to strengthen the existing and emerging industrial clusters, efforts have to be made to establish new engineering schools for the education and training of engineers and designers; to support and improve the growth of technology and innovation, and provide affordable raw materials and sustainable energy and other factors necessary for increased production. These will help make Turkey rise in the ladder amongst other countries in terms of technology and economic development.

SMEs and firms within a locality or industrial cluster need to form strong networks amongst them to ensure technological development through a collaborative effort. This will involve the training of their workforce to be up to speed in their skills so as to compete with other manufacturers globally. On the other hand, government has the vital role in providing good connections with domestically or internationally to significant business success of SMEs. Unexpected changes or long-term instability in the economy as well as the slow bureaucracy and the corruptions will cause problems in collaborations and corporations. Therefore, from this research, it can be drawn that there is a need to improve the textile industry and increase their capacity to produce enough income that will positively affect the economy of the country. There is also a need to make government economic policies flexible and favorable to this cause. Further researches into this topic can help come up with other strategies that will foster the actualization of this cause.

REFERENCES

- Applegate, L. M. ve Elam, J. J. (1992). New Information Systems Leaders: A Changing Role in a Changing World. *MIS Quarterly*, 16 (4): 469-490.
- Bascavusoglu-Moreau, E. and Colakoglu, M. (2011). Impact of SME policies on innovation capabilities: The Turkish case. Science and Technology Policies Research Center TEKPOL Working Paper Series, STPS-WP-11/05:1-26.
- Budworth D. (1996). *Finance and Innovation*, International Thomson Business Press.
- Chen, X. and Cao, L. (2006). SME clusters in China-One way to build up innovation capabilities. United Nations ESCAP, July-August 2006.

- Çelik, A.K.; Talaş , E. and Akbaba, A.I. (2013). A Sectoral Hierarchical Clustering of SMEs in Turkey with Respect to General Support Programs, *Review of European Studies*, 5(5): 84-96.
- Demirbas, D. (2011). How do Entrepreneurs Perceive Barriers to Innovation? Empirical Evidence from Turkish SMEs. In: *Proceedings of 14th International Business Research Conference*. World Business Institute Australia, Melbourne, Victoria, Australia. ISBN 978-0980455762
- Diaconu, M. (2011). Technological Innovation: Concept, Process, Typology and Implications in the Economy, *Theoretical and Applied Economics*, Volume XVIII, No. 10(563): 127-144.
- Jutla, D., Bodorik, P. & Dhaliwal, J. (2002). Supporting the e-business Readiness of Small and Medium Enterprises: Approaches and Metrics. *Internet Research*, 12(2): 139-164.
- Kaibori, S. (2001). Development of Small and Medium Sized Enterprises and Policy Support-Action: Guidelines for tomorrow for policy makers in transition countries, *Economic and Social Research Institute*.
- Katz, J.M. (1995). Market Failure and Technological Policy. In J. Molero (Eds.) *Technological Innovation, Multinational Corporations and New International Competitiveness: The Case of Intermediate Countries*, Singapore: Harwood Academic Publishers.
- Keeble, D. and Nachum, L. (2002). Why do business service firms cluster? Small consultancies, clustering and decentralization in London and southern England. *Transactions of the Institute of British Geographers*, 27(1): 67-90.
- KOSGEB (2012). Enhancing the Competitiveness of SMEs in Turkey - submitted to the 28th Session of the COMCEC- Small and Medium Enterprises Development Organization.
- Mingay S. (2004). Redefining the Rules of IT Leadership, Article Top View, Gartner.
- OECD (2004). *Small and Medium Sized Enterprises in Turkey: Issues and Policies*, Paris: OECD Publications.
- OECD (2013). *Science, Technology and Industry Scoreboard: Innovation for Growth*, Paris: OECD Publications.
- OECD (2015), *Structural and Demographic Business Statistics: Community Innovation Survey*, Paris: OECD Publications.
- OECD (2016), *Structural and Demographic Business Statistics: Community Innovation Survey*, Paris: OECD Publications.
- OECD (2016), *G20 Innovation Report 2016*, Report prepared for the G20 Science, Technology and Innovation Ministers Meeting-4 November 2016s, Paris.
- Porter, M. (1990). Competitive Advantage of Nations, *Harvard Business Review*, 68 (2):73-93.
- Rothwell, R. (1986). Reindustrialization, Innovation and Public Policy. In P. Hall (Eds.) *Technology, Innovation and Economic Policy*, Oxford: Philip Allan Publishers Ltd.
- Shapira, P. (2008). Putting innovation in place: Policy strategies for industrial services, regional Clusters, and manufacturing SMEs in Japan and the United States. *Prometheus: Critical Studies in Innovation* , 26(1): 69-87.
- Thamhain, H.J. (2005). *Management of Technology: Managing Effectively in Technology-Intensive Organizations*, USA: John &Wiley.
- TUIK (2016). *Annual Industry and Service Statistics*, Ankara: Turkish Statistical Institute.
- Tiwari, R., Buse, S. and Herstatt, C., (2010). Global innovation: An answer to mitigate barriers to innovation in small and medium sized enterprise. *International Journal of Innovation and Technology Management*, 7(3): 215-227.
- World Economic Forum (2014). *The Global Competitiveness Report 2013-14*. New York: Oxford University Press.

INSTITUTIONAL PROFILE



ENTREPRENEURSHIP & BUSINESS DEVELOPMENT MASTER OF BUSINESS ADMINISTRATION – MBA

Source:

<https://www.frankfurt-university.de/en/faculties/fb3/degree-programs/master-programs/entrepreneurship-business-development.html>

A part-time program for postgraduates with advanced work experience Frankfurt University of Applied Sciences offers a part-time MBA program for those who want to establish or to develop their own business, or are in charge of business development processes, e.g. as intrapreneurs, leaders of profit centers, future managers of strategic business segments and units, founders of non-profit organisations, or consultants.

Our aim is to support our students to become an entrepreneur or innovative corporate manager. They learn to identify business opportunities, manage complex business development projects based on a thorough analysis of markets and available resources, and develop business plans, change and growth strategies.

The program has been accredited by **FIBAA** (Foundation for International Business Administration Accreditation).

Target groups

The MBA fits the needs of post-graduates of all disciplines (e.g. engineers, project managers, lawyers) and also owner-managers, future entrepreneurs, consultants and junior corporate managers from all industries who want to develop their careers or their businesses. Managers and founders of non-profit organisations are also welcome. A focus of the cases presented in the courses is on B2B services like IT, logistics, finance, staff development, etc.

What is Entrepreneurship?

Entrepreneurship is the art of founding one's own business, strengthening and growing it. Corporate entrepreneurship also deals with the innovative restructuring of corporations. Core functions of the entrepreneur are opportunity detection and creation of new business models. The modern entrepreneur does not need to provide all the resources needed for his business. Many of these resources are available on markets. Thus the art of entrepreneurship is knowing how to combine existing resources.

What is Business Development?

Every business development process is a unique and creative process of designing business models that can be supported by creativity techniques. It includes the exploration of new business fields and building adequate marketing, sales and service activities.

Modules of the program

The content of modules 1 to 18 with 5 ECTS each can be studied in four semester terms. The master thesis can be accomplished in another one or two semesters, depending on the amount of time candidates can spare for preparing the thesis.

1st semester term

General Management I: Basics
General Management II: Strategic Management
Innovation Management
Marketing & Sales
Management Skills I

2nd semester term

Initializing Growth and Development
Corporate Development and Strategic Business Unit Development
Entrepreneurship and Entrepreneurial Business Planning
Legal Aspects of Business Development, Sustainable Development

3rd semester term

International and Intercultural Market entry, Mergers & Acquisitions
Finance and Controlling of Change and Growth
Information Management
Implementation of Business Plans
Management Skills II

4th semester term

Service Business Specifics for Corporations and Start-Ups
Business Development of SME and Non-Profit Organizations
Financial Management: Cases Studies
Development of Competences and Knowledge Resources

5th/6th semester term

master thesis (30 ECTS)

Staff, location, schedule, costs

Most of the teaching staff members are full professors with exceptional practical experience. Courses are supported by online learning facilities.

The courses will take place on Friday and Saturday appointments at the Frankfurt University of Applied Sciences. Each semester is expected about 10 days of attendance.

The course starts on November every year.

The cost for the five term study will be charged at the rate of 2.030 EUR plus mandatory university term fees.

Address:

Frankfurt University of Applied Sciences
Nibelungenplatz 1
D-60318 Frankfurt am Main, Germany
Telefon: (+4969) 1533-0 Fax: (+4969) 1533-2400
E-mail: kattouf@fb3.fra-uas.de

NEW COMING EVENTS AND CALL FOR PAPER



CALL FOR PAPERS

MEB 2018- 16TH INTERNATIONAL CONFERENCE ON MANAGEMENT, ENTERPRISE AND BENCHMARKING

27-28 APRIL 2018 AT ÓBUDA UNIVERSITY, BUDAPEST, HUNGARY

Honorary Chair

Mihály Réger

Honorary Committee

András Medve
Kornélia Lazányi
Ágnes Szeghegyi
András Keszthelyi
Anna Francsovsics
György Kadocsa
Antal Szabó, ERENET
Florin Duma, UBB Cluj

General Chair

Péter Szikora

Plenary Speakers

Coming soon

Steering Committee

Ágnes Csizsárik-Kocsir
Mónika Fodor
Jolán Velencei
Viktor Nagy
István Takács
Katalin Takács-György
Pál Michelberger

Organizing Committee

János Varga
Anikó Kelemen-Erdős
Anita Kolnhofer-Derecskei
Réka Saáry
Bianka Parragh
Regina Zsuzsanna Reicher
János Tibor Karlovitz
Judit Kárpáti-Daróczy
Ferenc Katona

Secretary General

Kata Hanna Tóth-Bálfó
balfokata@kgk.uni-obuda.hu

MEB 2018, „Organisations in the age of the Industry 4.0” - is an international conference aiming to provide a forum for presenting and discussing novel aspects of and data about relevant fields of research and practice. We strive to provide an opportunity for exchanging knowledge and premonitions regarding the topics to be addressed throughout the event.

TOPICS

- within the scope of the conference will include:
- Clusters and Networks
 - Industrialisation
 - Social and Economic Sustainability
 - Regional Development and Politics
 - Small and Medium Sized Enterprises
 - Applied Marketing
 - Financial Affairs
 - Human Resources Management
 - Informatics

REGISTRATION

Prospective participants are kindly requested to fill in the online registration form on the website: kgk.uni-obuda.hu/meb.

Registration fee: 80 EUR/ 25 000 Ft

Registration fee for ERENET members and students: 40 EUR/ 12 500 Ft

PAPER SUBMISSION

The submission deadline is 30 March 2018. Papers go through double blind review. Revised papers of 6-10 pages shall arrive not later than 15 April 2018 and must follow the paper guidelines. English, as well as Hungarian papers (and their presentations) are also welcome. Accepted papers will be published in electronic conference proceedings with ISBN number.

IMPORTANT DEADLINES

Registration..... 28 February 2018
Deadline of paper submission..... 30 March 2018
Submission of revised, camera-ready manuscripts..... 15 April 2018



Organized and sponsored by
Keleti Faculty of Business
and Management
Óbuda University, Hungary

In cooperation with
ERENET Network



kgk.uni-obuda.hu/MEB



Bilbao
Annual Conference 2018



We are pleased to announce that MFC and EMN will hold its joint conference on the 3-5 October 2018 in Bilbao, Spain



Pre-conference events will be held on the 3rd October, and post-conference events (only addressed to MFC members) will take place on the 5-6 October.

This year we will be working closely with our official conference partner, **Seed Capital Bizkaia**, to bring you a top-notch conference experience.

Put the date in your diaries, we hope to see you all then!

Stay tuned for more news on the conference topics and sessions!



See at <https://www.facebook.com/EuropeanMicrofinanceNetwork/>

NECROLOGY

*Man sieht die Sonne langsam untergehen und erschrickt doch, wenn es plötzlich dunkel ist.
Franz Kafka*

Ein erlebnisreiches, privates Dasein und ein erfülltes Berufsleben sind beendet

Wir trauern um

Dipl.-Kfm. Dieter Ibielski

* 19.4.1935 † 14.9.2017

Träger des Verdienstkreuzes am Bande
des Verdienstordens der Bundesrepublik Deutschland
und
des Großen Ehrenzeichens für die Verdienste um die Republik Österreich

Beate Ibielski, geb. Thomas
Jeannette Baumann, geb. Ibielski mit Familie
Oliver Ibielski mit Familie
Gisela Gürtler, geb. Ibielski mit Familien

Hohenwaldstraße 50 · 61449 Steinbach/Taunus

Die Trauerfeier findet am Freitag, dem 6. Oktober 2017, um 13.30 Uhr,
auf dem Hauptfriedhof Eckenheimer Landstraße 194, in Frankfurt/Main, statt.
Die Urnenbeisetzung erfolgt anschließend im engsten Familienkreis.

We deeply grieved to hear that my old friend and Honorary Member of the ERENET Dipl.-Kfm. Dieter Ibielski passed away in his age of 83 on 14.09.2017. Since this time I missed his Christmas greeting, I had misgiving and contacted his charming wife Beate and received the unexpected news. Dieter as a brother advised me more than 30 years, joined our meetings in Budapest, Geneva and KAS workshops round the BSEC. As for memory attached please find an official memory by CDU Steinbacher.



„Wir sind tief traurig über den Verlust von Dieter Ibielski“, erklärte der CDU-Vorsitzende Jonny Kumar zum Tod des dienstältesten CDU-Mitglieds Dieter Ibielski, der der CDU 58 Jahre angehörte.

„Dieter Ibielski hat ein eindrucksvolles politisches, ökonomisches und wissenschaftliches Lebenswerk hinterlassen. Sein Wirkungs- und Bekanntheitsgrad ist in der

Geschichte der Steinbacher CDU unerreicht. Mit Herrn Ibielski verlieren wir einen herausragend verdienstvollen Ökonomen, der in prominentesten Funktionen mit nationaler und internationaler Reichweite gewirkt hat. Er war nicht nur Gründungsvorsitzender der European Democrat Students (EDS), der offiziellen Studentenorganisation der Europäischen Volkspartei (der auch die CDU angehört), sondern auch Bundesvorsitzender des Rings Christlich-Demokratischer Studenten (RCDS). Gespräche mit großen Staatsmännern wie Konrad Adenauer und Ludwig Erhard gehörten für ihn daher zum politischen Tagesgeschäft.

Existenzgründung, starke wirtschaftliche Entwicklung und internationale Wirtschaftsbeziehungen waren seine Schwerpunktthemen, die er zudem in herausgehobenen Stellungen in Wirtschaft und Wissenschaft immer wieder bearbeiten konnte. Zuletzt wirkte er als Senior Präsidialbeirat der Union Mittelständischer Unternehmen (UMU) in München sowie als Vizepräsident der European Small Business Alliance (ESBA) in Brüssel.

Legendär sind vor allem seine zahlreichen Fachpublikationen zu wirtschaftlichen Themen – das wohl bekannteste ist das Handbuch der Unternehmensberatung, welches für Ökonomen und Nicht-Ökonomen in der Branche einen wichtigen Bezugspunkt bildet. Sein Weitblick und seine internationalen Erfahrungen haben Herrn Ibielski, Träger des Bundesverdienstkreuzes, für mich immer zu einem interessanten Gesprächspartner gemacht. Er ist mit seinen besonderen Verdiensten vielen Menschen ein eindrucksvolles Vorbild! Es ist mir eine Ehre, ihn kennengelernt zu haben, wobei ich bei diversen Gelegenheiten mit ihm den Gedankenaustausch pflegen konnte“, würdigte Kumar Dieter Ibielski.

18.09.2017

File: <http://www.cdu-steinbach.de/aktuelles/steinbacher-cdu-trauert-um-dieter-ibielski-1/>
Dear Dieter, we miss you very much. Rest in Peace!

Dr. Antal Szabó



The address of the ERENET Secretary sees below:

Dr. Antal Szabó, Scientific Director

Helga Matusek, Secretary

HUNGARIAN YOUTH ENTERPRISE SUPPORT SOCIETY

ERENET

H-1141 Budapest, Szugló u. 134., Hungary

Phone: (+3630) 399 7067

E-mail: helga.matusek@gmail.com and erenetszabo@gmail.com

<http://www.erenet.org>

ERENET Secretary for South-Eastern Europe is the following:

INSTITUTE OF ECONOMIC SCIENCES

Ms. Vesna Pejovic, SEE Secretary

11000 Belgrade, Zmaj Jovina 12, Republic of Serbia

Phone: (+381 11) 2623-055, Fax: (+381 11) 2181-471

E-mail: office@ien.bg.ac.rs

<http://www.ien.bg.ac.rs>

ERENET PROFILE

ISSN 1789-624X

