

Evaluation of knowledge-based high-growth enterprises in Serbia's economic development

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Abstract

This paper will address issues within the thematic component of knowledge-based dynamic entrepreneurship. Many governments pay particular attention to the current and potential needs of their fastest growing workforce segment consisting of knowledge-based SMEs operating in the internationally traded goods and services sectors (i.e. enterprises that produce products and services that can be exported, and operate specific programs of support including access to business financial and non-financial support, international trade, innovation and other sector and non-sector-specific measures). The justification for this focus is the potential and disproportionately significant contribution that knowledge-based enterprises can make to overall economic development through, for example; exports, innovation, employment and sub-contracting facilities for foreign direct investment (FDI). This research looks at the specific situation regarding high-growth knowledge-based SMEs (HGSMES) in Serbia and sets out proposals to encourage and facilitate their further development. In the first part of the discussion several definitions of high growth knowledge-based enterprises are considered while in the second part the role of government is discussed. The third part of the discussion provides a summary of empirical research results on dynamic entrepreneurship in Serbia. The fourth and fifth sections of the paper criticize the local environment and offer recommendations for improvements in a country context. Finally, key issues are also highlighted for further discussion.

Keywords: Knowledge-based high-growth enterprises, dynamic knowledge-intensive entrepreneurship, knowledge-based industries, gazelle, innovation

Introduction

Although definitions may vary significantly, in the resources based view (RBV) knowledge-based high-growth enterprises comprise a distinctive bundle of assets (Bhide, 2000) with a track record of clear and above average performance in sales and profits and/or employment growth when compared with competitors. Other selection criteria may include contribution to innovation, exports and FDI.

Knowledge-based high-growth firms are typically represented in nearly all sectors of business. There is evidence that high-growth firms have a significant presence in technology sectors but the high-growth phenomenon is not confined to these sectors alone. Data from European Innovation Surveys like the European TrendChart report 'Innovation Policy in Europe' and EuroStat show that enterprise growth distributions are quite similar in many sectors. In fact, high-growth companies are also present in low-tech sectors such as textiles and chemicals. The

Organisation for Economic Cooperation and Development (OECD) defines a high-growth enterprise as a firm with an “average annualized growth in employees (or in turnover) greater than 20% a year, over a three-year period, and with ten or more employees at the beginning of the observation period” (2008, p.10). According to this organization the term “knowledge-based industries” usually refers to those industries that require high inputs of technology (OECD, 1999) and/or human capital.

Background

Europe's 500 founded 1996, is a European non-profit membership and networking organization dedicated to promoting entrepreneurship and growth in Europe. It represents more than 3000 growth entrepreneurs in Europe who have been selected and awarded at least once on the list of the Top 500 Growth Entrepreneurs in Europe. Each year, ‘Europe's 500’ publishes its list of the 500 top growth companies in Europe and organizes an annual conference titled “The European Growth Summit” for European growth entrepreneurs. To be considered for inclusion, a candidate company must match the following criteria (Europes 500, 2013):

- Independence: not a part or a subsidiary of another group that owns an equity share of more than 50% of the company;
- Growth in turnover and employment: at least 30% growth in both turnover and employment for the reference period, usually in 3 preceding accounting years;
- Size: minimum of 50 employees at the beginning of the reference period;
- Age: founded prior to commencement of reference period.

In 2008 the Republic Development Bureau undertook the first major research on dynamic entrepreneurship in Serbia for the period 2003 - 2007. The selection criteria took account of Serbia's status as a transition country and the methodologies of ‘Europe's 500’ and EUROPE INNOVA, the European network for the support of innovation (Europe INNOVA, 2008). The resulting criteria for defining knowledge-based high-growth enterprises in Serbia were:

- The company was a small or medium-sized enterprise in 2003, the base year;
- In 2003, the company had a minimum of twenty, and not more than 250 employees;
- Growth in the number of employees in 2007, compared to 2003, was at least 30%;
- Growth of total turnover in 2007, compared to 2003, was at least 30%;
- Constant profitability;
- The company was not part of a holding group.

Public and state owned enterprises in Serbia were excluded from the analysis because their reform is still not underway. Modeled after the "Observatory of European SMEs" and research ‘Europe` s 500’ SME Policy has enabled additional criteria to be defined for determining the contribution to employment of dynamic companies. These dynamic companies are referred to as “Gazelles”, a term which was coined by Birch (1981) and based on his well-known indicator

from 1987 (Vemić, 2010). The formula of this indicator multiplies absolute job growth by relative job growth, which reveals the employment-creation power of differently sized enterprises. For example, comparing the years 2003 and 2007 would be performed in the following manner:

Formula 1. The Birch indicator

$$m = (X_{i,t} - X_{i,t0}) * (X_{i,t} / X_{i,t0}), \text{ where } X_{i,t} \text{ and } X_{i,t0}$$
$$m = (\text{no. employees 2007} - \text{no. employees 2003}) * (\text{no. employees 2007} / \text{no. employees 2003})$$

Some international organizations and institutions place the top 10% of knowledge-based high-growth enterprises in a separate sub-category called “gazelles” and the Republic Development Bureau of Serbia has done likewise. Serbia, therefore, has defined knowledge-based high-growth enterprises in a way that is consistent with generally accepted international definitions.

The Role of Government Policies and Programs in Support of Knowledge-based High-growth Enterprises

Many governments and policy makers actively support knowledge-based high-growth enterprises, at least in the internationally traded goods and services sectors, in recognition of their above-average or disproportionate contribution to economic growth, employment, competitiveness, exports and balance of trade, and innovation. According to Finnish studies published (MTI Finland, 2007), the results of empirical surveys in advanced economies almost invariably suggest that only a small minority of all new firms matter for economic growth. This study states that only a small proportion of all entrepreneurial firms grow rapidly and this small minority delivers a disproportionate economic impact relative to their numbers. Between 3% and 10% of any new cohort of firms will end up delivering from 50% to up to 80% of the aggregate economic impact of the cohort over its lifetime. Therefore, knowledge-based high-growth entrepreneurs and enterprises have a high economic impact. They are an important economic and development phenomenon but are few in number.

Although research into knowledge-based high-growth enterprises tends to focus on entrepreneurship and new enterprises, older established companies can also fall into the high-growth category. This can be as a result of innovation, consistently sound management practices or due to other practical reasons such as innovative changes introduced by new owners. In fact, it can take a considerable amount of time for an enterprise to achieve high-growth status.

The design of state supported financial and non-financial instruments to assist knowledge-based high-growth enterprises with further development is relatively straightforward and manageable to ensure they do not cause undue strain on resources, whether budgetary or administrative. Hence, economic policy decision makers should attach more significance to support for knowledge-based high-growth enterprises. Elaborating on the promotion of HGSMEs, OECD Deputy Head for Private Sector Development Division, specified policy components in support of high-growth enterprises as follows (OECD, 2008):

- Improved financing: equity funds, business angels, credit guarantees, venture capital, Research and Development (R&D) grants;
- Innovation policy to raise the quantity and efficiency of innovation activities through incubators, innovation centers, clusters, linkages with R&D, universities;
- Linkages with FDI;
- Export promotion schemes;
- Skills development programs.

These ideas for leveraging knowledge to create value have also been observed in knowledge-based high growth enterprises in Serbia and are further discussed.

Research Findings

The main findings from research conducted on dynamic entrepreneurship in Serbia (2003 – 2007), undertaken by the Republic Development Bureau in 2008, were:

- As of 2007, there were 532 dynamic or knowledge-based high-growth enterprises operating in Serbia, including 53 gazelles (the top 10%);
- Knowledge-based high-growth enterprises in Serbia accounted for only 0.6% of companies but they doubled their number of employees to 22,000 in the period 2003 – 2007;
- These enterprises accounted for 4.5% of turnover in the economy for 2007 compared with 3.2% for 2003, which equated to a 40% increase in ‘market share’;
- All performance indicators more than doubled between 2003 and 2007 with the exception of profits, which actually trippled;
- Total turnover during the 2003 – 2007 reference period increased by 116.8% whereas the number of employees increased by 104.8%, indicating low productivity growth.

The lack of productivity growth may be explained by the fact that the majority of these enterprises are located in services sectors, which are relatively labor intensive, e.g. construction and hotels and restaurants. The 532 knowledge-based high-growth enterprises were spread across multiple sectors including manufacturing, agriculture, mining and quarrying, construction, trade, hotels and restaurants and real estate. The “gazelle” (top 10%) sub-category consisted of 53 of the most dynamic enterprises and the reasons attributed for their successful performance were as follows:

- Permanent investment in technology and technical resources, accompanied by monitoring and implementing modern European standards and methods;
- Participation in international seminars, lectures, and trade-fairs;
- Education and training for employees;
- Constant improvement in the quality of products and services, with the aim of maintaining a good reputation as well as winning larger positions in the marketplace.

Obviously the most dynamic enterprises in Serbia were relatively intensive in their inputs of technology and/or human capital, which is a characteristic of knowledge-based industries. An interesting feature in relation to the Serbian “gazelles” is that for the 2003 base year, all 53 enterprises consisted of SMEs, whereas by 2007, fifteen of the 53 companies were classified as “large” which is a result of their high growth in the rated period. Although a minority within

the overall grouping, 18 industrial sector enterprises represented the largest single grouping within the “gazelles” category. A survey of these 18 industrial enterprises showed that their perceptions of the primary reasons their development and growth were limited included: high tax rates, customs barriers, inadequate financial discipline (collection of payments), lack of financial resources for new investment, unfavorable conditions for bank credit, and the abolition of export incentives. Unfortunately the results of the Serbian Development Bureau research did not specifically reference knowledge-based high-growth enterprises in internationally traded services activities such as ICT, finance, retail and back-office activities which comprises 80% of Serbia’s GDP. Thus, it is evident that further research in this area is needed.

Other Possible Success Factors, Obstacles and Barriers to Growth of Knowledge-based High-growth Enterprises

Other key success factors to be validated in future research could include the following:

- Commitment and dedication and connection between the owner’s family and business;
- Awareness of competitive products;
- Fast adjustment to market demands;
- Ensuring high product quality and establishing quality management systems;
- Innovative approach in all segments of the business;
- Utilizing international best practice;
- Professional marketing and promotion approaches;
- Co-operative linkages and internationalization of business;
- Intensive market and supply research;
- Continuous training and education with HR management and incentives policy;
- Fair pricing;
- Compliance of the product properties to EU standards;
- Establishment of quality control systems;
- E-business presence;
- Maintaining best traditions in the production of products and services;
- Introduction of new manufacturing and management information systems.

Other obstacles and barriers recommended for future research could include the following:

- Lack of financial support (long term credits, loans) and high interest rates;
- Lack of credits for start-up and unfavorable tax policies;
- Lack of government support for development of new products;
- Slow economy;
- Problems with local government in obtaining building permits;
- Lack of government support for new employees;
- Uncontrolled imports;
- Time and money consuming procedures in obtaining working, sanitary/other permits;
- Problems with patents;

- Lack of cooperation with R&D organizations.

Discussion

A clear and conducive business-enabling environment is universally recognized as a major factor for the encouragement of SME growth and this applies just as much for knowledge-based high-growth enterprises, particularly where competitiveness is concerned. However, comparative progress in improving Serbia's business enabling environment has stalled, even reversed, as shown by reports of several major rating agencies. The World Bank's 2013 annual 'Doing Business' series of reports presented quantitative data on the impact of business regulations, which can be compared across 183 economies. Specifically, a set of regulations affecting the 10 stages of a business's life were measured including starting a business, dealing with construction permits, employing workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and closing a business. Serbia's ranking for 2010 was 86 out of 183 economies, an improvement of two places compared with the previous year but still a very unsatisfactory ranking, especially when compared to other European countries.

Additionally the Global Competitiveness Report's ranking for 138 countries (World Economic Forum, 2012), which is based on the Global Competitiveness Index (GCI consisting of the 12 pillars of competitiveness, directly correlated with the knowledge-based industry concept: Institutions, Infrastructure, Macroeconomic Stability, Health and Primary Education, Higher Education and Training, Goods Market Efficiency, Labor Market Efficiency, Financial Market Sophistication, Technological Readiness, Market Size, Business Sophistication, and Innovation. Serbia's GCI ranking fell to 96 for 2011 – 2012 compared with 85 for 2008 – 2009. The only European country that had lower rankings compared to Serbia for 2011 – 2012 was Bosnia and Herzegovina. Croatia's ranking for 2011-2012 was 76 compared with 61 for 2008 – 2009 but Croatia still ranked 19 places higher than Serbia. Additionally, Macedonia was in 79th place for 2011 – 2012 compared with 84th for the 2008 – 2009. On the basis of the Global Competitiveness Report ranking, Serbia's international competitiveness is actually in quite a sharp decline. According to the 2012 Western Balkans and Turkey EU SME policy index report, Serbia still needs to improve its operational environment by designing and implementing targeted support measures for the most dynamic enterprises. For example, the report particularly emphasized that incubators should be more focused on innovation support for science-based companies (OECD, 2012).

Recommendations

The research work of the Republic Development Bureau has provided information on 207 high-growth manufacturing enterprises for the years 2003 – 2007. This information should now be updated to a 2007 – 2012 reference period. Essentially, new research should not be confined to manufacturing enterprises but should include all high growth services companies that undertake international tradable activities, e.g. Internet and software development. This would broaden the scope of the previous research and furnish policy makers with new findings and conclusions on the potential of knowledge-based high-growth enterprises

In the current Serbian social-economic conditions, characterized particularly by the limited number of enterprises that fit any definition of “high growth” and that are operating in internationally traded goods and services sectors, there really is no reason for segmenting these enterprises into “high growth” and “gazelles”. One recognized category of “high growth” should be sufficient. On this basis, the author recommends that the appropriate statistical information be collected to generate high quality information to permit effective policy making for HGSMEs. Additionally the criteria for selection should be based mainly on performance and also the potential for growth. The emphasis on performance-based assessments should be focused on sales and profits rather than employment, as some smaller high-performance enterprises in areas such as ICT might be able to achieve substantial increases in turnover without a corresponding increase in the number of employees. In fact, with regards to the small number of Serbian enterprises that could be regarded as “high-growth”, it would be better if the OECD reference year base of ten employees was accepted rather than the current base of twenty as applied in the previous Republic Development Bureau research. Productivity should also be taken into account, as it would be a more accurate indicator for the purpose of assessing competitiveness. The criteria proposed is similar to how the Republic Development Bureau already operates, with some modifications as discussed above and summarized below:

- The company was a small or medium-size in the base year;
- The company had a minimum of ten, and not more than 250 employees;
- Employment growth is at least 30% higher than the norm for the sector;
- Employee productivity for the reference period grew at a rate of at least 10% higher than the norm for the sector in which the company operates;
- Growth of total turnover in 2012, compared to 2007, is at least 30%;
- Achievement of constant profitability;
- The company was not part of a holding group/is not in public sector ownership or control.

Serbian Government programs and policies could have a significant impact on the level of entrepreneurship within the country. While the government professes support for entrepreneurial businesses, it often lacks specific policies and coordinated programs designed to support entrepreneurial activity. More precisely, in the case of Serbia, HGSMEs offer the potential for reducing the very wide trade deficit and for offsetting to some extent, the uncertain outlook for foreign direct investment in the years ahead. Serbia has a chronic and substantial trade deficit, with imports consistently exceeding exports by a ratio of more than two-to-one. This deficit has persisted in spite of the export promotion measures undertaken since the adoption of Serbia’s first SME strategy in 2002. According to the Statistical Office of the Republic of Serbia there has been constant improvement since then. The value of exports equalled 58.5% of imports in 2011 and 59.7% in 2012 but the deficit is still substantial (Statistical Office of the Republic of Serbia, 2013). Moreover, there has been a steep decline in foreign direct investment, a major pillar of Serbia’s economic policy. In view of the outlook for slow growth and recovery in the US and European economies, the prospects for an early recovery in FDI are not good. In these circumstances, Serbia will need to rely more on its own enterprises to make a greater contribution to economic performance, particularly exports. There is, therefore, a case for modifying measures that will encourage and support the growth and competitiveness of knowledge-based SMEs and show above average performance and potential for expansion. A

modified support programme to achieve greater economic contribution from knowledge-based high-growth enterprises would comprise measures designed to achieve improved competitiveness and export performance. Experience from knowledge based economies shows that measures should focus both on financial and non-financial support including the following:

- Management development;
- Profitability and access to financing;
- Employee qualifications and skills;
- Product and/or service development with support for innovation and research;
- Quality assurance and introduction of quality standards;
- Export promotion and support to broaden existing and new markets.

A majority of these measures are well defined and have been elaborated upon as part of Serbia's "Strategy for Development of Competitive and Innovative Small and Medium-sized Enterprises 2008 – 2013" for the overall group of SMEs in the internationally traded goods and services sectors. It would certainly help the effective implementation of that strategy to have a high-growth knowledge-based enterprise support package based on the above mentioned measures prepared and actively promoted by the government and SME community.

Although the enterprise resource based view and 'track-record' should constitute the main criteria for selection and assessment, there should also be consideration of future growth potential. In relation to future prospects, the criteria should include:

- Realistic prospect of significant further growth within three to five years;
- Realistic estimates of significant further investments;
- Export orientation and FDI attraction;
- An effective leadership/management team, with commercial/technical competence;
- A strong commitment to excellence and innovation in all activities of business enterprises including human resource management.

Conclusions

Considering the research objectives of this study, there are some conclusions to be drawn on the support for knowledge-based high growth enterprises in Serbia. There are high growth enterprises in all sectors of the economy, both in manufacture and services. Even within the categories of industry or manufacturing, there are high growth enterprises engaged in traditional activities such as textile industry and furniture manufacture. Support measures should be enterprise-based rather than sector-based but confined to internationally traded goods and services.

Although a company rather than a sector approach is strongly recommended, there may be scope for an increased emphasis on internationally traded services. For example, there is evidence in the "Scientific and technological development strategy of the republic of Serbia 2010 to 2015" that Serbia may have potential in the area of ICT (Ministry of Science and Technological Development of the Republic of Serbia, 2013). Unfortunately there is no coverage of international services in the Republic Development Bureau research into dynamic enterprises

and the potential for knowledge-based high-growth enterprises in the international services sector.

Innovation Policies and Measures for high growth SMEs are needed. As high-growth enterprises are quite broad-based in terms of sector distribution, innovation also includes organizational innovation, business model innovation, financial modeling, product and market diversification and internationalization. Measures to support knowledge-based high-growth enterprises should not be confined to technological innovation activities alone. Obviously, the human resource aspect of creating a culture of knowledge-based high-growth enterprises that foster an innovation culture need to be given a high priority. Mechanisms to support innovation in firms and with supporting research bodies needs to be developed. The lack of effective linkages between industry and research and development institutes as well as universities constitutes a significant weakness in the national innovation system in Serbia. In addition to that, in Serbia there is lack of financing for innovative SMEs. Businesses that face financing difficulties can access funding from the Development Fund or can obtain loans from banks backed by the Guarantee Fund. The venture capital market however is underdeveloped in Serbia. There are a number of investment funds in Serbia but they are generally focused on large companies. Existing laws supporting investment funds do not impact substantially innovative SMEs nor the venture capital companies investing in them. The Innovation Fund in Serbia does offer appropriate limited financing mechanisms for enterprises involved in technology and product development. The Ministry of Science (MoS) also provides grants for innovation projects in Serbia. Based on Serbian law on Innovation Activity, individuals willing to be financially supported by the MoS grants have to be registered as innovator in the Register of Innovation Activity within MoS. Two types of projects are eligible: (1) development of a new product, technology, process and/or service and; (2) building infrastructure for the successful implementation of an innovation project. However, grants covering not more than 50% of the total project budget are limited to the amount of 50,000 EUR for the firms and 10,000 to 80,000 EUR for individual projects. Other levels of innovation support such as R&D centers, innovation centers, business incubators, and science and technology parks will also need to increase the available support for innovative SMEs. In short, according to the INNO Policy Trendchart (2012) there are five key thematic trends that can be identified arising from recent policy documents in the EU and that Serbia needs to focus on:

1. A significant effort must be made to increase the availability and the breadth of competencies of skilled people contributing to innovation as well as strengthening linkages and knowledge flows both nationally and internationally;
2. Creating a strong regional role in the implementation of many recent initiatives that are fuelled by the Structural Funds in the new Member States, and the corresponding need for coordination with national targets and initiatives;
3. A push to increase the overall intensity of innovation activity through stimulating private enterprises to invest more in specific R&D and other forms of innovation.
4. An accent on the role of regulations, public procurement and other business environmental factors influencing the performance of the innovation systems of the Member States.

5. The formation of partnership-based initiatives to create linkages aimed at improving the functioning of innovation systems through increased stakeholder cooperation intended to break down barriers and provide increased momentum to innovation.

Further recommendations on strategic priorities for increasing competitiveness and innovation for HGSMEs includes:

- Stimulation of entrepreneurial initiative in HGSMEs;
- Promotion and facilitation of innovations in emerging and traditional industrial sectors;
- Increased competitive performance of HGSMEs in Serbia;
- Increased access to other USA and EU Programmes oriented to HGSMEs;
- Improved adoption of IT by HGSMEs;
- Attracting risk capital for further business development of HGSMEs.

Regulative barriers can appear to be failures of public administrations (governments, municipalities), which prevent competition from functioning and in the end lead to market losses (Csaba, 1998). The Republic Development Bureau research into dynamic entrepreneurship included a survey of the 18 industrial enterprises classified as “gazelles” and their perceptions on barriers and disincentives to growth ranging from high rates of tax to the abolition of export incentives. The views expressed by these enterprises seem consistent with other research on obstacles to enterprise development in Serbia. In the beginning of 2013, in relation to the business enabling environment, Serbia is still falling behind in international league tables as shown by the World Bank where it ranks Serbia as 86th. As mentioned according to the 2012 Global Competitiveness Report, Serbia is characterized as an efficiency-driven rather than an innovation-driven economy and ranks 95th. This lack of progress will inevitably affect the innovation and competitiveness of Serbian enterprises, including those in the “high growth” category. Currently there are two top short-term economic policy priorities in Serbia stemming from our research:

- It is important that regular opinion polls are organized among knowledge-based HGSMEs in order to identify and address barriers to their development;
- In the interests of its overall economic development, including the HGSMEs, Serbia needs to work towards achieving substantially better rankings in the various World Bank reports.

Consequently, there should also be regular monitoring of measures for encouragement of “high-growth” enterprises in other countries, e.g. through participation in the EU Small Business Act for Europe review activities, in order to understand what has been done and what is to be done for Europe’s SMEs (SBA Review, 2011).

Additionally, better co-ordination of knowledge-based high-growth enterprise measures among the Ministries of Economy, Science and Education, and with other key stakeholders needs to be a high priority in the medium term with steps to improve communication taken in the short term. The issue of coordination is important in order to avoid overlapping policy measures and to

achieve efficiencies in budget spending. The National Agency for Regional Development (NARD), as the line government agency with responsibility for coordinating implementation of SME policy measures, should maintain a relational database of knowledge-based high-growth enterprises that meet the criteria for selection. There should be annual evaluation for granting “high-growth” status to new entrants and for delisting those enterprises that have underperformed. The NARD, in the capacity of a national coordinator, should effectively network and cooperate with other line ministries and institutions as follows:

- Ministry of Economy and Regional Development: Create appropriate policy measures;
- Regional Agencies for Development of Small and Medium-sized Enterprises and Entrepreneurship: Support measures for individual enterprises and identification and encouragement of potential knowledge-based HGSMEs;
- Serbian Investment and Export Promotion Agency: Export support measures;
- Association of Serbian Banks: Promotion of lending to knowledge-based HGSMEs as sound business for banks;
- SME Council and National Council for Science and Technology Development: (coordinate the activities of all public institutions, whose co-operation is required for for identification of knowledge-based HGSMEs);
- Serbian Chamber of Commerce system: Identification of knowledge-based HGSMEs;
- Republic Development Bureau and Republic Statistical Office: Research and surveys;

Further recommendations on possible support by government policymakers relevant to recommendations for HGSMEs is summarized as follows:

- Proceed to collect appropriate statistical information and establish systems to generate high quality information to permit effective policy making for HGSMEs;
- Proceed to stimulate the required debate on any policy issues affecting HGSMEs;
- Proceed to identify the priorities for any HGSMEs legislative/regulatory reform needed;
- Secure agreement from the business associations and proceed with actions intended to lead to a fundamental improvement in the system of business associations;
- Government to secure allocation of additional resources to undertake financial, legislative, and regulatory reform for viable HGSMEs;
- Government to secure its commitment to fully staff the relevant institutions charged with the responsibility of supporting the HGSMEs;
- A coherent and comprehensive strategy for the HGSMEs sector focusing on improving competitiveness and innovation is required. Government support for HGSMEs sector needs to be made more explicit through a 5 year rolling program aimed at transforming the environment for HGSMEs. A Government committee to coordinate policy and support for the HGSMEs sector needs to be established.

In conclusion, the focus of Serbia’s SMEs and development policy should be on a pro-active approach to encouraging support for knowledge-based high-growth enterprises, particularly those that can clearly adopt a resources based view by which human capital is a condition of

SME competitiveness (Sobczyk, 2006). These SMEs could then evolve from small into medium size enterprises, and likewise from medium size enterprises into large enterprises. In Serbia's SME environment there are other fundamental problems to be solved. Future research may also look at lack of coordination, weak connections between research institutions and business entities, and inadequate sources of financing such as venture capital which could support the further development of knowledge-based HGSMEs. This may require cooperation between scholars from business administration and economics, with the motive to access each other's SME knowledge.

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Biography

Milan Vemić has over 10 years of practical enterprise development and management teaching experience. From 2003 through 2010 Milan worked as an SME expert on all 3 main EU funded Enterprise Development Programs in Serbia, supporting 15 regional SME and development agencies and starting several business incubators for the Serbian National Investment Plan (2006). He supported SMEs with business development, identification of working capital, early stage financing, access to export markets and with other financial and non-financial products. Besides the Faculty for Management of SMEs (Serbia), where he teaches financial markets and institutions, he is also affiliated with other educational institutions such as the European University in Aktobe, Kazakhstan. His first PhD (2005) related to management of rural entrepreneurship while in 2010 he defended his second PhD in optimization of working capital for medium size enterprises. His recent accomplishments include the Annual Impact Study (2007) of the European Fund for South East Europe, downstream creation and capacity enhancement of the business clinic portal (2010) supporting SME planning and financing, and conducting the EBRD Banking Environment / Performance Survey (BEPS II) aimed at 31 countries, covering 872 banks for a detailed snapshot of the region's banking sectors before & after the global financial crisis (2012). His writings include: (1) technical paper for the UNCDF international year of microcredit 2005: "The Emerging Role of Microfinance in the Post-Disaster Context: Some Lessons from Bosnia"; (2) Fundamentals of financial management, a 2007

edition (3) *The Science of Economic System and Economic Policy in Transition* a 2008 edition of textbook for the Faculty for Management Studies in Novi Sad where he teaches (4) *Internal audit*, a 2008 manual for the Ministry of Labor of Serbia.