

SUSTAINABLE INNOVATIVENESS: ISSUES AND PUBLIC POLICY

Kristina Balkienė

Mykolas Romeris University, Valakpiu 5, LT-10101 Vilnius, Lithuania

Jan van Goyenstraat 132, 1816 EH, Alkmaar, The Netherlands

E-mail: kristinabalkiene@gmail.com

Abstract. A paper seeks to justify a need for the better development of sustainable innovative entrepreneurship by public policy initiatives. It takes into account two sides of this issue going from the main challenges of business innovation activity to the possible public policy actions necessary to improve the existing situation. The main focus of this paper is directed on the improvement of current Lithuania's innovation policy for the more effective business innovation promotion. Moreover, a concept of the innovative entrepreneurship is also discussed here as a foundation of the linkage between innovation and entrepreneurship policies. The research is based on the interpretative, systematic and comparable analysis of the quantitative and qualitative data. The paper provides the results of Lithuania's innovative enterprises survey performed by the author. The findings include the issues related to the innovative business needs and the role of innovation policy actions in the promotion of this kind of business.

Keywords: business innovation, sustainable entrepreneurship, public policy.

Reference to this paper should be made as follows: Balkienė, K. 2013. Sustainable innovativeness: issues and public policy, *Journal of Security and Sustainability Issues* 3(2): 53–76. [http://dx.doi.org/10.9770/jssi.2013.3.2\(5\)](http://dx.doi.org/10.9770/jssi.2013.3.2(5))

JEL Classifications: M21, M29

1. Introduction

It is stated, that the innovation process of the 21st century is radically different to that of the preceding one. The change can be resumed as a shift from the “Managed Economy” to the “Entrepreneurial Economy.” In the former, science and systematic large firm research and development (R&D) was the key. Currently, entrepreneurship is one of the foundations of innovation (OECD 2010).

In recent time a growing number of researchers tend to underline a significance of the entrepreneurship based on innovation activity because of its positive effects at the macro (country; society) and micro (enterprise) levels.

The entrepreneurship is viewed as a critical activity to regenerate and sustain economic growth in strong economies and also as a means of boosting employment and productivity in depressed regions or in

developing countries (OECD 2006). Moreover, it is also pointed out, that the growth and job creation effects happen through innovation (OECD 2010) while the entrepreneurship without innovation can only temporary boost the economic growth (Arizona State University 2006).

With regard to economic and social value creation, it is noted, that entrepreneurs who do not innovate do not create wealth (Michael & Pearce 2009, p.290-291). As Peter Drucker (1985) indicated, innovation is a specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service. In the meanwhile, Schumpeter (1934, 1939) defined innovation as behaviour and activities, based on destruction of contemporary frames of thoughts and action, which leads to the creation of new goods or quality of goods; development of new methods of production; establishment of new markets; utilization of

new supply sources or; industrial reorganization, and hence breaks with the existing. Audretsch (2006) emphasized an essential entrepreneur's role for the knowledge commercialisation and designated the entrepreneur as the missing link between the knowledge and the innovation (Vinnova & George Washington University 2006).

Thus, it is obvious, that the progressive and sustainable economic development requires efforts not just for business creation, but also for the development of business innovation activity. According to this, an article takes into account a concept of innovative entrepreneurship and discusses a public policy role in business innovation promotion. It is assumed, that a lack of public support to the development of innovative business sector or public policy actions' inefficiency hampers the formation of sustainable innovativeness in the country.

The main objective of this paper is to justify a need for the better development of innovative entrepreneurship by public policy initiatives with the focus on the Lithuania's case. In order to do that, the following goals were defined:

- 1) To provide a theoretical view on which the concept of innovative entrepreneurship and its role in public policy field is based.
- 2) To discuss the public policy role in business innovation promotion taking into consideration the strategic facets of current Lithuanian innovation policy.
- 3) To present the results of recent Lithuania's innovative enterprises survey performed with the aim to investigate the main challenges of business innovation activity in Lithuania as well as the significance of various innovation policy actions in the promotion of this type of activity.

The common research provided in the article is based on the interpretative, systematic and comparable analysis of the quantitative and qualitative data. More specifically, the following research methods were applied in this article:

- Analysis of relevant scientific literature and policy documents in order to: form the common conceptual picture of the innovative entrepreneurship phenomenon; summarize the previous empirical findings in field of business innovation activity; justify the significance of innovative entrepreneurship policy for the promotion of business innovation activity.
- Content analysis of Lithuanian public policy documents used to identify the Lithuania's strategic ap-

proach to business innovation promotion.

- Quantitative business survey focused on Lithuania's innovative enterprises (more detailed description of survey's methodology is provided in chapter 3.

The outcomes of this article can be useful for the further improvements of national public policy actions for more effective and sustainable promotion of business innovation activity.

Definitions used in this article:

- Innovation – the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations (Oslo Manual 2005, p. 46). A meaning of novelty is understood here from the business or market point of view.
- Business innovation activity is defined here as a complex of creation, development and commercialisation processes of a new or significantly improved products, processes or business organisation forms which brings a higher added value to the market or better performance results inside enterprise. The usage of new knowledge and entrepreneurial skills can be indicated as an anchor of such activity.
- Innovative enterprise is one that has implemented at least one innovation during the period under review, including those with successful, on-going and abandoned innovation activities (Oslo Manual 2005, p. 47, 59).
- Entrepreneurship is explained as a mind-set and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organization (Commission of the European Communities 2003).
- Innovative entrepreneurship is equated with the business innovation activity taking into account a conceptual interface between the innovation and entrepreneurship.

2. Literature review

Concept of Innovative Entrepreneurship

Entrepreneurship is multi-dimensional and can be considered in different contexts, but its importance for economic development and social wellbeing is unquestionable. It is usually related to the following positive effects as: economic growth through new businesses creation; increased competitiveness at

firms and countries levels; employment growth; productivity and unlocked personal potential (Balkienė & Jagminas 2010).

Economists tend to define entrepreneurship from an occupational, a behavioural or an outcomes point of view. From the occupational point of view, entrepreneurs are simply those who are self-employed and/or business owners. Behavioural definitions of entrepreneurship are related to the ‘Schumpeterian’ behavioural view by which entrepreneurship needs to be distinguished from other related activities, such as business ownership, business financing or business management. As it is stated, today many entrepreneurship scholars tend to agree that the defining feature of entrepreneurship is innovation through spotting and utilizing opportunities (Naudé 2011, p. 5-6). From the outcomes perspectives, entrepreneurship is usually examined by its contribution to different parameters of the economic development and quality of life.

The word entrepreneur originates from a 13th-century French verb “entreprendre” meaning “to do something” or “to undertake” (Hall & Sobel 2006). The first time the term of entrepreneurship was defined by the French economist Richard Cantillon in about 1730. He defined entrepreneurship as self-employment of any sort, and entrepreneurs as risk-takers, in the sense that they purchased goods at certain prices in the present to sell at uncertain prices in the future (OECD 2006; Casson 2010, p. 7). Ever since Cantillon’s (posthumous) publication “*Essai sur la Nature du Commerce en Général*” in 1755, entrepreneurs appeared in economic theory as contributors to society’s economic value (Mirjam Van Praag 1999).

An Austrian American economist Joseph Schumpeter (1934) made a great input to the development of entrepreneurship definition by highlighting a role of the entrepreneur as an innovator. According to Mirjam Van Praag (1999), he turned down the predominant paradigm of entrepreneurship as management of the firm and replaced it with an alternative one: the entrepreneur as leader of the firm and as the innovator and therefore, prime mover of the economic system. Schumpeter was also very clear about what entrepreneurs are not: they are not inventors, but people who decide to allocate resources to the exploitation of an invention; they are not risk-bearers: risk-bearing is the function of the capitalist who lends funds to the entrepreneur (Kuper & Kuper 1996, p 428-429).

Baumol (1990) took note of the existence of productive, unproductive and destructive entrepreneurship. That depends on the creation of the wellbeing of society. For Baumol, a productive entrepreneurial activity refers to any activity that contributes directly or indirectly to net output of the economy. An unproductive entrepreneur engages in innovative activity but makes no contribution to the real output of the economy. A destructive entrepreneur engages in innovative activity that leads to the misallocation of valuable resources into pursuits that from the viewpoint of the economy are useless and are carried out for the self-serving purposes of the entrepreneur (Baumol 1993).

Drucker (2002, p. 95) said that the term entrepreneurship refers not to an enterprise’s size or age but to a certain kind of activity. At the heart of that activity is innovation: the effort to create purposeful, focused change in an enterprise’s economic or social potential.

Blakemore (2006) took into consideration an impact of replicative and innovative entrepreneurs on economic growth. Innovative entrepreneurs create and commercialize new products, services and business practices, in contrast to the replicative entrepreneurs – those who open businesses that support a growing population Blakemore highlighted, that entrepreneurship without innovation can only temporary have a positive effect, while the long-term economic growth requires innovation (Arizona State University 2006).

Stam (2008) took notice of the following necessary conditions under which the concept of entrepreneurship is defined: 1) existence of entrepreneurial opportunities (environmental changes: technological, political/regulatory, social/demographic); 2) difference between people (in their willingness and ability to act upon an opportunity); 3) risk bearing, uncertainty until the entrepreneur pursues the opportunity; 4) organizing (new way of exploiting the opportunity); 5) innovation: recombination of resources into a new form that is by implication not a perfect imitation of what has been done before, and thus involves a change in the marketplace.

The different concepts of entrepreneurship and their links with innovation are provided in table 1.

Table 1. Evolution of entrepreneurship concept

Source	Concept of Entrepreneurship	Reference to innovation
Scientific sources		
Cantillon (1730)	Any kind of self-employment	-
Schumpeter (1934)	Activity based on purposeful and systematic innovation.	+
Kirzner (1973)	Equilibrating force in which entrepreneurs discover previously unnoticed profit opportunities and act on them	-
Wennekers and Thurik (1999)	Manifest ability and willingness of individuals, on their own, in teams, within and outside existing organizations, to: (i) perceive and create new economic opportunities (new products, new production methods, new organizational schemes and new product market combinations); and (ii) introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location, form and the use of resources and institutions	+
Drucker (2002)	Certain kind of activity focused on innovation	+
Shane (2003)	Activity that involves discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organizing, markets, processes, and raw materials through organizing efforts that previously had not existed	+
Stam (2008)	Introduction of new economic activity by an individual that leads to change in the marketplace, taking into account the necessary conditions for entrepreneurship, one of which is innovation.	+
Policy documents and other sources		
European Commission (1998)	Dynamic process by which individuals constantly identify economic opportunities and act upon them by developing, producing and selling goods and services	-
European Commission (2003)	Mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organisation	+
United Nations (2004)	Source of innovation and change, and as such spurs improvements in productivity and economic competitiveness	+
OECD (2005)	An action, process, or activity, in which creativity, risk-taking and innovation play a significant role	+
OECD (2007)	The phenomenon associated with entrepreneurial activity, which is described as the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets	+
Encyclopedia of Business in Today's World (2009)	Practice of starting a business or "breathing life" into an existing business	-
Global Entrepreneurship Monitor (2012)	Any attempt at new business or new venture creation, such as self-employment, a new business organisation, or the expansion of an existing business, by an individual, a team of individuals, or an established business	-

Source: formed by author

As it is seen, on the one hand, a number of the scientific sources and policy documents relate the concept of entrepreneurship to the creation and development of new businesses. However, on the other hand, most of them (Schumpeter 1934; Baumol 1968; Drucker 1985; et al.) also highlight a role of entrepreneur as an innovator, who is able to find and exploit the new opportunities, to take a risk and transform the new knowledge into practice.

Thus, there is a two-sided conceptual issue which needs to be more deeply considered: Could the entrepreneurship be seen just as an economic activity with the aim to create and/or develop business without the focus on novelty as it is described in the concept of innovation? Or should it be directly related to the innovation activity? What is different between traditional business activity and entrepreneurship?

Audretsch (2006) noted, that entrepreneurial model of doing business is about taking a new idea, typically based on new knowledge, and turning it into a high growth firm. He indicated the following features of entrepreneurship model: new emerging sectors; high R&D; high human capital; high wages; turbulence; new sources of finance; high growth (Vinnova & George Washington University 2006).

Lindholm (2006) distinguished between small firms and entrepreneurial firms pointing out, that a lot of entrepreneurial firms are small, but that is not always the same thing. By saying this, she gave reference to the public policy actions what sometimes have not equal influence on SMEs and entrepreneurship (Vinnova & George Washington University 2006).

Stam (2008) pointed out two important disclaimers concerning the measurement (not everything that is counted as entrepreneurship concerns innovation) and systemic effects (more entrepreneurship does not always mean more economic growth) of entrepreneurship, what should be considered by innovation policy makers.

Thus, taking into account all the scientific and political discussions provided above, this paper emphasizes the concept of innovative entrepreneurship, which clearly indicates the business innovation activity as a core element within the concept of entrepreneurship. The differences identified between entrepreneurship and innovative entrepreneurship are provided in the table below (table 2).

Table 2. Entrepreneurship vs. Innovative entrepreneurship

		Entrepreneurship	Innovative entrepreneurship
Features	<ul style="list-style-type: none"> • Knowledge • Competences • Culture • Science • Financing 	<ul style="list-style-type: none"> • Usage of existing knowledge • Business competences • Entrepreneurial culture • Traditional activity without R&D • Traditional sources of financing 	<ul style="list-style-type: none"> • Usage of new knowledge or new ways to apply the existing knowledge • To innovation oriented competences and creativity • Innovation culture • R&D activity and R&D personnel • New sources of financing
Focus		Successful practice; market's habits	Commercialisation of novelty
Effect		Self-employment; job creation	Progressive development of economy and society
Definition		Business activity based on replication of already existing one in the new or existing enterprise	Business activity based on the new knowledge and/or R&D results, and their implementation in the form of the new products or processes

Source: formed by author

Some sources of the literature (Lundström & Stevenson 2005; Dahlstrand & Stevenson 2007, 2010) relate the concept of innovative entrepreneurship to technological companies or high growth companies. However, according to the definition of innovation, this paper suggests associating the innovative entrepreneurship with business innovation activity without distinction between its technological or non-technological nature.

It can be assumed, that an application of the concept of innovative entrepreneurship in public policy area could contribute significantly to the purposeful and systemic approach based efforts for the sustainable development of favourable conditions for business innovation activity. Moreover, in respect of innovation role, the usage of the concept of innovative entrepreneurship would narrow the interpretations of

entrepreneurship's phenomenon down.

Thus, with regard to what was mentioned before, the further sections of this article will be focused on the business innovation related issues.

Previous Empirical Researches on Business Innovation Activity

In recent time a growing popularity of innovation related surveys can be observed. In the business innovation surveys' area, a great focus on innovative SMEs is seen. The most common issues analysed include: the role and sources of innovation; factors influencing business innovation activity; innovation impact on business performance results; innovation capacities; government's role in business innovation promotion; etc. A short review of previous researches

concerned with business innovation activity is provided below.

Lundström & Stevenson (2005, p. 144, 146), analysing the government practice of different countries in the business innovation promotion, indicated a number of barriers inhibiting the development of innovative new firms: intellectual property issues, lack of adequate premises, lack of pre-seed developmental and early-stage equity financing, lack of entrepreneurial and management skills, lack of interaction effects between possible innovations and potential entrepreneurs and lack of a dynamic environment to stimulate overall entrepreneurial activity. They also stated that evidence exists to support the idea that innovative entrepreneurship is likely to be more effective in environments where entrepreneurship is highly valued and supported by society.

McAdam, Reid, Harris and Mitchell (2008) conducted an empirical study of innovation incorporation in SMEs as a key sustainable source of competitive advantage, by controlling for key technological and organisational determinants. The survey's results are based on the investigation of 2086 UK SMEs. Authors found that innovation was most strongly related to government grant aid, firm size, industrial sector, and the approach taken by the firm to organise how it develops products and processes.

Oksanen and Rilla (2009) analysed the role of innovation in small Finnish entrepreneurial firms. The study was based on a questionnaire survey (220 Finnish companies having introduced an innovation to market in 1999-2004) and semi-structured interviews (70 Finnish innovative SMEs). According to the survey results, innovation is a crucial factor for existence of business. An identification of market niche and customer needs identified as the most important source for innovation among companies. Increase in profitability and competitiveness emerged as the most beneficial impacts of innovation in all companies but also new contacts and co-operation that arise in the process of innovative activity were highly valued, especially in micro firms.

Chamberlin, Doutriaux and Hector (2010) explored the relationship between innovation and various business success factors in 3701 firms across 34 Canadian service sectors. The findings confirmed that innovative firms are more likely to develop their human talent, to actively manage their organisational knowledge and adopt new technologies than non-in-

novative firms, while non-innovative firms are more likely than innovative firms to identify proximity to clients and suppliers.

Jørgensen and Ulhøi (2010) investigated how firms develop their innovation capacity through network participation. The results have shown that the network relationships formed during the earliest stages of the firm's life cycle played a critical role in developing the SME's capacity for sustained innovation.

Kaufmann, Tsangar and Vrontis (2012) studied the existing hurdles for innovation and the level of systematic application of different management functions relevant for innovation management in 204 European SMEs. The research performed in six European countries (United Kingdom (30 SMEs), Cyprus (30), Spain (28), Italy (30), Greece (23: Thessaloniki; 33: Athens), Lithuania (30)) resulted in the following major findings:

- The two major reasons blocking innovation are lack of money and lack of time, while the lack of money was strongest perceived in Italy, Greece and Lithuania.
- The factors that significantly lead to successful innovation, in order of importance, are: 1) Corporate culture; 2) If the company has a department of innovation or a formal process for innovation; 3) The number of employees, i.e. the size of the company (the more employees the higher the level of innovation); 4) whether existing products, even successful ones, get reviewed from time to time.
- Very low level of SME co-operation with universities in all six countries found: 62.2% of all companies do not co-operate with universities in terms of innovation.
- Better technology, new market opportunities and customers' requirements were perceived by all companies as reasons for improvements.
- New product ideas come from owners, what showed a contradiction between the awareness of the importance of customer requirements and the actual involvement of customers in the innovation and creativity process.
- Companies prefer more incremental rather than radical product changes.
- SMEs do not feel to be supported by governments as to innovation activities. The reasons for this perception were suggested to be subject for further research.

At national level some authors also performed to the

business innovation activity oriented surveys.

Tvaronavičienė and Korsakienė (2007, 2008) explored an approach of 1264 Lithuanian companies towards innovations, taking into account the economic conditions and public policy. The survey revealed the limited government role in innovation promotion: business companies did not feel the effects of active state policy for innovation promotion and were not aware of state and other external available sources of financing. The authors also indicated the weak relationships between business companies and scientific institutions, what was emphasized as one of the factors impacting low value added innovations developed without input from the R&D sector.

Masiulis, Sudnickas et al. (2009) measured an impact of innovation policy on the SMEs development in Vilnius region (Lithuania). The SMEs indicated that innovation policy in Vilnius region is not properly implemented. The financial support and support for R&D activity was perceived as the most important areas for SMEs, while an establishment of business incubators and technology transfer centres was the least significant. There was also denoted a weak cooperation between SMEs and public administration institution.

Baležentis and Žalimaitė (2011) conducted the research aiming to identify the innovation development factors in Lithuania. The results, reflecting an opinion of 7 Lithuania's innovative companies, indicate the following factors hindering the business innovation activity: financing problems as the high innovation costs; lack of creative and skilled personnel; and motivation problems. According to the companies interviewed, the main factors influencing the slow innovation development in Lithuania include: insufficient collaboration between business and science; and focus on low-value-added products and services.

The annual survey “Innobarometer” (2001, 2002, 2003, 2004, 2007, 2009, 2013) coordinated by the European Commission's on innovation issues collected the following set of findings:

➤ Types of innovation introduced by the companies in the EU:

- 2007: Goods-related innovation is the type that's the most widespread across the EU, while the service innovation are less frequently reported. At the same time the least widespread innovation activity of com-

panies is application for patents.

- 2013: Companies are most likely to have introduced new or significantly improved products, services, or processes than other innovation forms (organisational, managerial, marketing innovations) between 2009 and 2011.

➤ Reasons and incentives for innovation activity (by order of importance):

- 2001: 1) the desire to build up market shares and company profitability; 2) a wish to preserve the independence of the company; 3) the desire to create jobs; 4) compliance with environmental standards.

- 2003: 1) consumers' needs; 2) increasing price competition; 3-4) need to improve the productivity level of personnel as well as need to improve the efficiency of machinery and equipment; 5) increasing product competition; 6) response to new regulatory or legislative obligations.

- 2009: 1) increased pressure from competitors; 2-3) increased demand from existing commercial clients as well as the new opportunities to expand within existing markets or enter new ones.

➤ Contributors to companies' strengths in innovation (by order of importance):

- 2002: 1) qualifications and professionalism of staff; 2) good co-operation with suppliers, customers or trade associations; 3) flexibility and adaptability of production to market needs; 4) efficient production methods making best use of resources; 5) leadership in finding out and exploiting new market trends; 5) technological advance and R&D competencies.

➤ Companies' unsatisfied needs for innovation (by order of importance):

- 2001, 2002: 1) accessing innovative customers and/or markets; 2) finding or mobilising human resources; 3) financial resources; 3) finding and using new technologies; 4) knowledge sharing or networking; 5) protecting knowledge.

➤ Networking and cooperation of innovative companies:

- 2002, 2003: The innovative companies would preferably seek advice from private external consultants or most likely from their suppliers or customers for introducing of new management approaches than from research institutions or public advisory centres.

- 2004: The proportion of enterprises which confirmed their participation in the innovation networks including other firms, universities or research insti-

tutes was very low.

- 2007: Companies tend more to carry out in-house R&D than to contract out R&D to other companies, consultants, universities and research institutes.

➤ Public support or initiatives for companies' innovation activity:

- 2003: The support of national authorities for companies' innovative efforts was indicated as rather dissatisfied than satisfied.

- 2004: Nine in ten enterprises which introduced new or significantly improved processes did not receive public support for this. Latvia, Lithuania, Luxembourg, Poland, Estonia and the Czech Republic were the countries where public support for R&D activities was either absent or its availability was unknown to companies, as almost all innovative enterprises in these countries did not obtain public support for this.

- 2004: Public support for training staff in order to improve innovation capabilities was perceived by the companies as the most valuable form, while public support for the introduction of new or significantly improved processes came next in this ranking.

- 2007: Only less than half of innovative enterprises in the EU have received public support for their innovation activity, where large enterprises have better access to public assistance. The most widespread forms of public assistance do not involve direct or indirect financial benefits, while the participation in trade fairs or trade missions and information provision were the most likely activities received public assistance.

Summarising, it can be seen, that despite the different geographical and methodological facets, the previous researches clearly show the two common challenges concerned with business innovation activity: (i) a weak cooperation between business, especially SMEs, and science as well as a lack of interest to participate in the innovation networks in general; and (ii) a lack of public support, including the financial initiatives, for business innovation activity.

In general, the areas of previous researches related to business innovation activity vary widely. However, they can be divided into the two main groups: 1) researches concerned with business internal environment and actions (issues at micro level); and 2) researches oriented to the external factors influencing business innovation activity including political, economic, social and technological aspects (issues at macro level).

Additionally, it is important to note, that the scientific papers referring to the promotions of innovative entrepreneurship are still rare. Moreover, the public policy actions and their impact on business innovation activity are mainly investigated by request of public institutions and organisations (i.e. initiated by the European Commission, the OECD, the United Nations, national governments, etc.).

From Innovation Policy to the Innovative Entrepreneurship Policy

In the emerging market economies (countries in transition) the sustained economic growth based on the use of innovation has come forward as the major objective of government policy. In countries rich in resources, decision makers have increasingly realized that economic development based on their exports is hardly sustainable given the volatility of external market demand and prices. In other countries, poor in natural resources, there has been no alternative to innovation-based development since the start of transition (United Nations 2012). Thus, this justifies an important role of national innovation policies for the development of sustainable innovativeness ensuring higher economic and social value creation and future prosperity.

Going back to the history, it is stated, that innovation policy was developed on a basis of science and technology policy and industrial policy, and its appearance signalled a growing recognition that knowledge in all its forms plays a crucial role in economic progress (Oslo Manual 1996).

Some sources relate an explicit formulation of innovation policy to the 1960s (Aubert 2004), others indicate, that the "Innovation" was only beginning to emerge as a policy area in 2000-2001 (Lundström & Stevenson 2005, p. 123).

Taking into account the broad understanding of innovation and its different factors of influence, the innovation policy can be defined as the public policy initiatives and actions implementing with the aim to foster the development of innovation activity both at macro (country; society) and micro (enterprise) levels.

According to the analysis of EU strategic priorities for innovation development in period from 1993 to present-days, the following main areas of public policy actions are identified:

- Innovation and entrepreneurship culture (educa-

- tion and training; researchers' and students' mobility promotion; innovation in public sector; focus on all forms of innovation; etc.);
- Collaboration culture (collaboration between business and science; public-private partnerships; cross-border knowledge transfer);
 - Sufficient investment in R&D and innovation (better business access to finance; increase of public investments in R&D&I; increase of private sector's investment in R&D&I; public-private partnerships for innovation financing; etc.);
 - Favourable regulatory framework (Intellectual and industrial property rights protection; regulatory and administrative simplifications); and
 - Other public actions that should ensure the effectiveness of innovation policy implementation (e.g. effective innovation governance; monitoring and foresight activities; improvement of innovation support services) (Baležentis & Balkienė 2011).

In the meanwhile, the innovation policy instruments and measures include those to: increase basic research and R&D investments; facilitate collaboration between enterprises and other actors to promote joint innovation activities and knowledge exchanges and foster spin-offs firms (e.g., cluster networks); support innovation infrastructure, such as technology transfer offices, science parks, and business / tech-

nology incubators; encourage the uptake of strategic technologies among SMEs; promote an increase in the percentage of science and engineering graduates; improve the intellectual property rights regime; improve access to pre-commercialization funding and venture capital; provide tax and other incentives and supports to accelerate the commercialization of new technologies and products (Lindholm & Stevenson 2007, 2010).

However, in regard to business innovation promotion, a link between innovation and entrepreneurship policies should be highlighted here. On the one hand, it is obvious, that the promotion of business innovation activity requires favourable conditions for the business development in general (business development and entrepreneurship policies), including legislative and regulatory system, entrepreneurial culture, business skills ensuring education and training system, etc. But, on the other hand, the specific focus areas (e.g. science and R&D activity; specific innovative business support infrastructure; innovation oriented competences; funding sources for innovation; etc. (innovation policy)) essential for the innovative business activity should be taken into consideration properly. Agreeably to this, the table 3 presents the differences between public policies concerned with the entrepreneurs and innovative entrepreneurs.

Table 3. Differences between public policies for entrepreneurs and innovative entrepreneurs

Policy features	Entrepreneurs	Innovative entrepreneurs
Rationale for policy	Job creation, social inclusion, diversity; gender equity	Wealth creation; innovation; creation of value from R&D
Basis of demographic selection	Groups with lower than national average self-employment or business ownership rates	People with post-secondary educations; working in postsecondary educational environments (graduates, researchers, technologists)
Objectives	Develop entrepreneurial potential; increase start-up rates	Stimulate innovative start-ups; foster development of high-growth potential firms
Dominant policy areas		
Financing	Micro loan programmes; loan guarantee schemes	Equity financing schemes (pre-seed funds, angels, venture capital)
Support Infrastructure	Dedicated enterprise centres/agencies	Technology incubators/ innovation centres
Business support measures	Advice and counselling	Technical assistance and consulting
Regulatory issues	Government procurement set-asides	Review of intellectual property rules; simplification of patenting laws and procedures
Networks	Support for formation of entrepreneur associations	Support for cluster networks; networks of high-growth firms
Skills development	Self-employment training	Entrepreneurial skills, business development support

Source: Lundström & Stevenson 2005, p. 124

As a source of the United Nations (2012) states, the business climate in which the innovation-based enterprises operate is influenced by the following factors: the scope of R&D, which determines the stock of inventions and innovations to be commercialized; the quantity and quality of human resources available for R&D; regulatory and institutional environment conducive to innovation, including stable property rights; transparent and simple rules, and low costs governing the registration and operation of enterprises; intensity of linkages between the various actors involved in innovation; openness to foreign technologies and to cross-border cooperation in innovation; and the wide use of information and communication technologies.

Thus, in accordance with information provided above, it can be stated, that the link and differences between the innovation and entrepreneurship policies serve as a precondition for the application of the term of innovative entrepreneurship policy (conceptual view provided in picture 1).

Summing up, it is necessary to highlight, that the emphasized concept of innovative entrepreneurship policy is based on the requirement to perceive the promotion of business innovation activity in the systemic and complex way, where interaction between innovation and entrepreneurship policies ensures the purposeful and comprehensive implementation of public policy actions for the productive and sustainable innovation development.

As Audretsch (2004) noted, an important new direction for public policy to promote innovation and economic growth involves instruments promoting entrepreneurship. Future research needs to explicitly identify what exactly those instruments are and how public policy can best be deployed to promote innovative entrepreneurship (Audretsch 2004; Lindholm & Stevenson 2007, 2010).

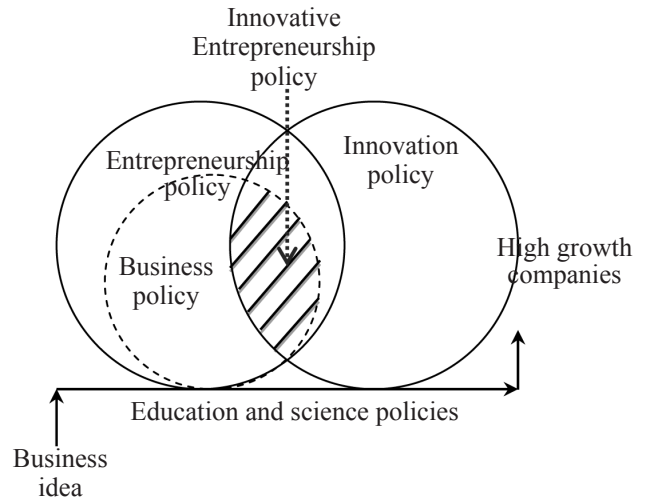


Figure 1. Conceptual view of innovative entrepreneurship policy

Source: formed by author

3. Methods and Methodology of Empirical Survey

Lithuania's innovative enterprises survey was initiated in order to identify the main challenges of business innovation activity in Lithuania as well as the significance of various innovation policy actions in the promotion of this type of activity. In order to do that, the survey investigated:

- A range of the reason for innovation activity in business sector (Why do Lithuanian enterprises perform the innovation activity?);
- The main challenges perceived by the enterprises in their innovation activity (With what obstacles do the innovative enterprises face when they perform the innovation activity in Lithuania?);
- The needs of Lithuania's innovative enterprises with regards of public policy initiatives for business innovation promotion (In what fields of actions should the public policy intervene in order to help companies to develop their innovation activity?);
- A significance of existing and other possible innovation policy actions for business innovation activity in Lithuania (How the Lithuania's innovative enterprises assess the different public policy initiatives in terms of their innovation activity?).

As it was mentioned in the beginning of this article, the empirical research was performed by using quantitative research data collection method – the quantitative business survey. The empirical data were collected between 29th May and 8th July 2013 by using a structured online questionnaire (a structure of the questionnaire is provided in table 4).

Table 4. A structure of business survey’s questionnaire

In total: 14 questions		
Part I. Information about company’s innovation activity	Part II. Information about the significance of public policy for company’s innovation activity	Part III. Information about company and respondent
<ul style="list-style-type: none"> • Nature of innovation activity • Duration of innovation activity • Reasons for innovation activity • Obstacles for innovation activity • Fields of public policy intervention required in order to support business innovation activity • Collaboration in innovation activity 	<ul style="list-style-type: none"> • Significance of possible public policy initiatives/actions for business innovation activity • Assessment of current innovation policy in terms of its usefulness for companies’ innovation activity • Importance of current Lithuanian Innovation Strategy implementation measures for companies’ innovation activity 	<ul style="list-style-type: none"> • Respondent’s position in the company • Legal status of the company • Number of employees • Field of company’s activity • Suggestions and comments

A content of the questionnaire was designed according to: (1) the results of international innovation experts’ survey performed by the author in the second part of 2012; (2) the analysis of policy measures included in the Lithuanian Innovation Strategy Implementation Plan for 2010–2013; (3) the review of scientific literature on business innovation activity.

The survey sample formed from all the Lithuania’s innovative enterprises that met at least one of the following criteria (in total: 303 enterprises were invited to participate in the survey):

- Company is included in the catalogue of innovative companies operating in Lithuania “Gateway to Innovation in Lithuania” (<http://www.inovacijos.lt/gate2inno/>); or/and
- Company got the Innovation Award in the period 2005–2012 (all the Lithuania’s innovative companies awarded are announced here <http://www.inovacijuprizas.lt/>).

The invitations to participate in the survey, including the link to the online questionnaire, were distributed among companies electronically by using their e-mail addresses (a preference was given to the contact details of companies’ managers or owners).

The factual sample consisted of 84 Lithuania’s innovative companies that filled the survey’s questionnaire (a response rate is 27%).

However, despite the low number of companies agreed to participate in the survey, the findings obtained are considered as valuable taking into account the fact that all enterprises were included in the sample by the same categorization criteria of innovativeness. Additionally, it is important to note, that this survey does not seek to reflect the opinion of all Lithuanian companies and is only related to those companies, which were indicated as innovative. Thus, this survey can be considered as pilot research requiring additional

time and financial resources to ensure its continuity by complementary research data collection methods.

4. Findings

Review of National Innovation Policy: Challenges, Current Strategic View and Actions

The innovation activity in Lithuania still needs to be enhanced considerably. Lithuania lags behind almost all the EU countries by the Summary Innovation Index (23th place out of 27) announced annually by the European Commission (Innovation Union Scoreboard 2013) for the evaluation of countries’ innovation performance results. According to this and other international innovation assessment tools (i.e. Summary Innovation Index (SII); Global Innovation Index (GII); Global Competitiveness Index (GCI)), Lithuania’s innovation strengths are usually related only to an education of human resources and the information and communication technologies, while the following areas of weaknesses talk about the requirement to strengthen public policy efforts (European Commission 2013; Cornell University & INSEAD & WIPO 2013; Schwab 2012):

- Business R&D expenditure (SII; GII; GCI) (this can be named as one of the biggest challenges in terms of business innovation activity: in 2011 the R&D expenditure in Lithuania’s business enterprise sector was only 0.24% of GDP, while at the same time the EU27 average accounted for 1.26% (Eurostat 2011));
- SMEs innovation activity (SII);
- Intellectual assets including different forms of intellectual property rights (SII; GII);
- Quality of science and research systems, taking into account the scientific outputs (SII; GII);
- Funding opportunities, including affordability of financial services, ease of access to loans (GCI) as well as venture capital availability (GCI, GII);

- Collaboration networks in regard to the state of cluster development (GCI, GII).

Thus, in order to better react to innovation related challenges and to ensure more effective development of innovative economy and society Lithuania has approved its first Innovation strategy for 2010–2020. This strategy highlighted a need to implement a horizontal approach based policy for more effective development of innovative economy and society in

Lithuania. The following four priorities of innovation policy actions were determined: 1) acceleration of Lithuania’s integration into the global market; 2) education of a creative and innovative society; 3) development of broad-based innovation; and 4) implementation of a systematic approach to innovation (Government of the Republic of Lithuania 2010). The full picture of current Lithuanian innovation policy, including the main objective, priority areas and goals, is presented in figure 2.

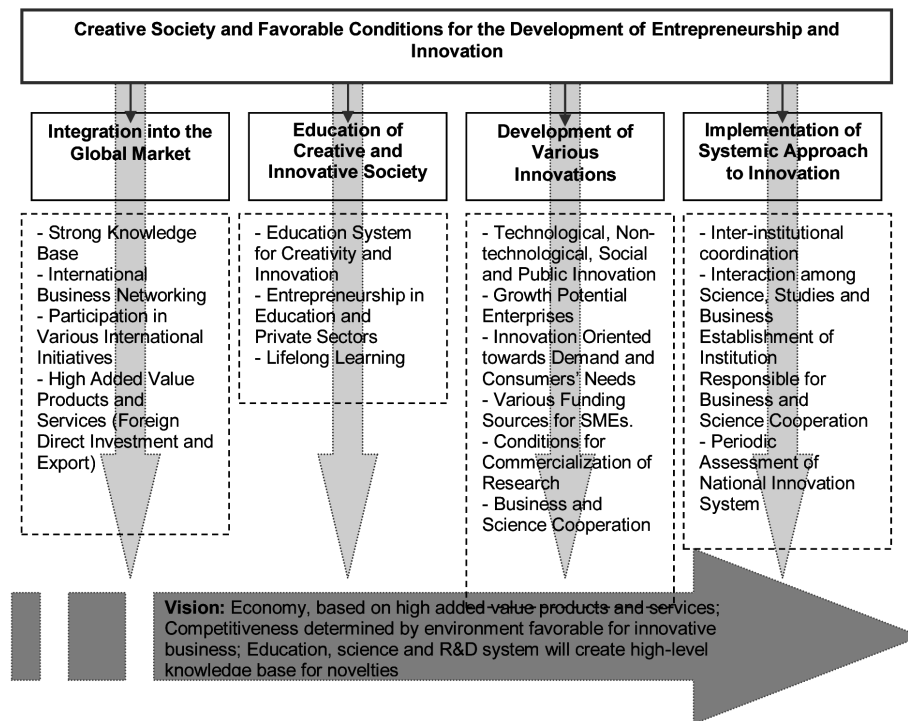


Figure 2. Current National Innovation Development Framework

Source: Baležentis & Balkienė 2011

However, in the context of this article, it is important to discuss the Lithuanian strategic approach to business innovation promotion. From this point of view, it can be stated, that Lithuanian innovation policy initiatives are not sufficient. An analysis of current innovation policy measures included in the Lithuanian Innovation Strategy Implementation Plan for 2010–2013 showed, that only 18% of all strategy’s measures (i.e. 21 out of 119) are directly oriented to business needs, including those that are concerned with business innovation activity (i.e. 11 out of 21). By the nature these measures encompass: 15 measures focused on financial support to various business related activities (clusterization; R&D projects and infrastructure; internationalization; protection of intellectual property rights; etc.); 2 measures directed to business

and science cooperation (researchers employment in SMEs; innovation vouchers scheme); and 4 measures for education and information services (dissemination of information; trainings) (Balkienė 2013).

In terms of financing, around 716 million euros (only 30 % of total funding for all strategy’s actions) planned to the implementation of these business related measures, where the main source of funding is the EU structural funds (Balkienė 2013).

In conclusion, there should be emphasized a need to strengthen the national efforts for faster and more effective promotion of business innovation activity in Lithuania. It is essential in order to ensure the progressive and sustainable development of national economy as well as the better living conditions for whole society.

Results of Lithuania's Innovative Enterprises Survey

Part I. Information about company's innovation activity

In order to know how Lithuania's innovative companies vary by their innovation activities, the respondents were asked to identify a nature of their innovation activity. According to the results (figure 3),

around half of all companies (47%) performed the innovation activity oriented to manufacture of the new or significantly improved products, while the innovative service sector was represented only by 15% of enterprises interviewed. It is important to note, that the majority of respondents indicated more than one kind of innovation activity.

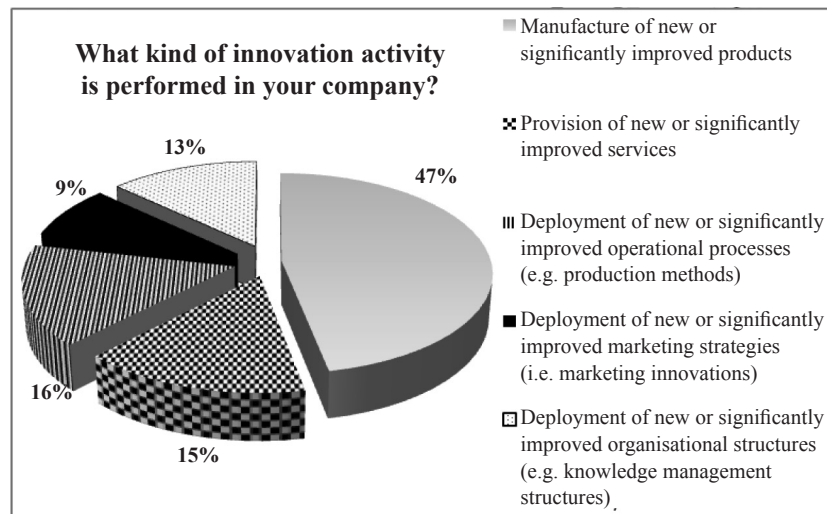


Figure 3. Distribution of the companies by types of innovation activity

Analysing the duration of companies' innovation activity, it is seen that 74% of them performed the innovation longer than 3 years, 12% of which implemented the innovation based activities more than 10 years (figure 4). As the main reasons for companies to be involved in innovation activities were indicated the following wishes to: respond to the market needs; increase company's profitability; improve the prod-

ucts' quality; and increase the market share (figure 5). These results justify the innovation motives indicated by different literature (e.g. Oslo Manual 1996). However, the companies' orientation to social and public interests, such as the development of environmentally friendly products, job creation or improvement of working conditions, is poorly expressed.

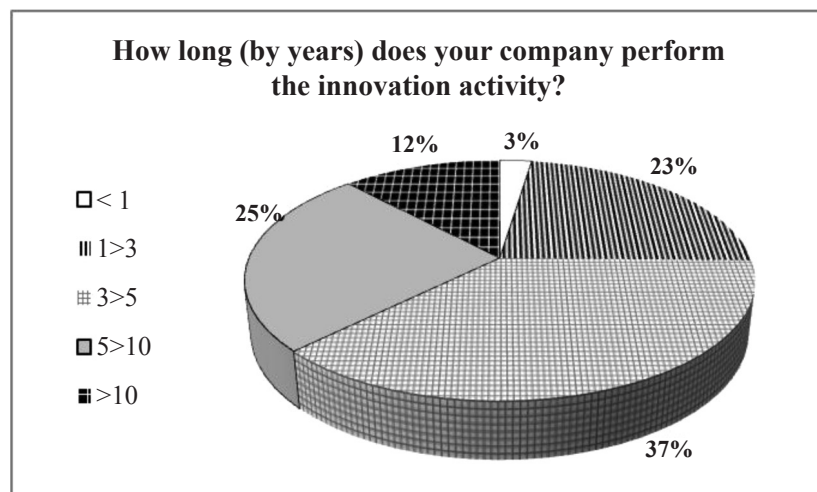


Figure 4. Distribution of the companies by duration of their innovation activity

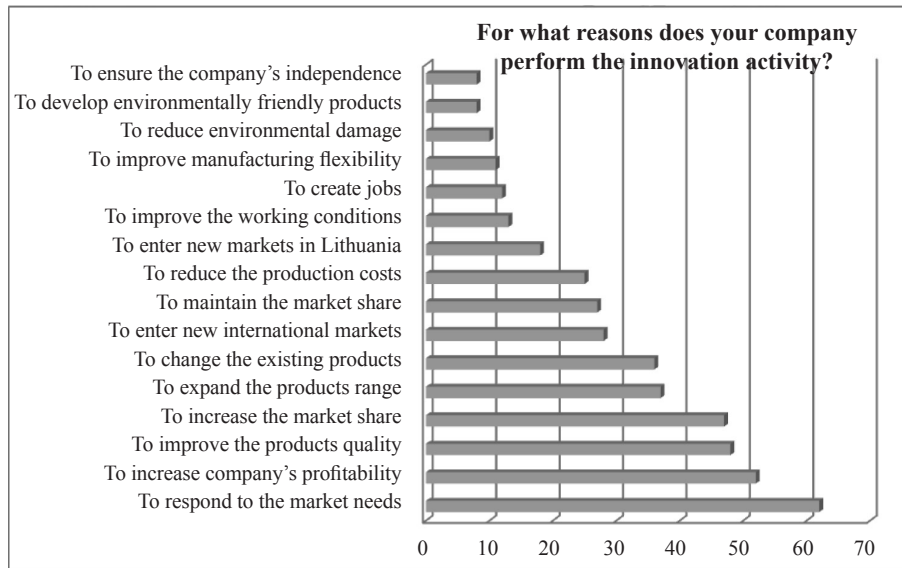


Figure 5. Reasons to be engaged in the innovation activity
 (by number of companies reported different kinds of reasons)

Further in this survey the main obstacles for business innovation activity in Lithuania were investigated. A list of factors, that impede the innovation activity, was formed according to the findings of international experts' survey previously carried out by the author.

The results show that companies have the same experience based opinion on the innovation obstacles provided, what at the same time confirms the information obtained by the former research. Despite the fact that all factors provided in the list were indicated as hindering the companies' innovation activity (figure 6), the major obstacles for business innovation

in Lithuania include (as a big obstacle indicated by more than 50% of all respondents): 1) lack of financial instruments for business innovation promotion; 2) lack of financial resources; 3) market related obstacles (e.g. limited demand; non-transparent competition; etc.); 4) limited external collaboration; 5) cultural obstacles (e.g. lack of risk tolerance; weak innovation culture; lack of trust; etc.).

In the meanwhile, a lack of high skilled employees in the company as well as in the labour market, and the limited technological possibilities were marked as more neutral than negative factors.

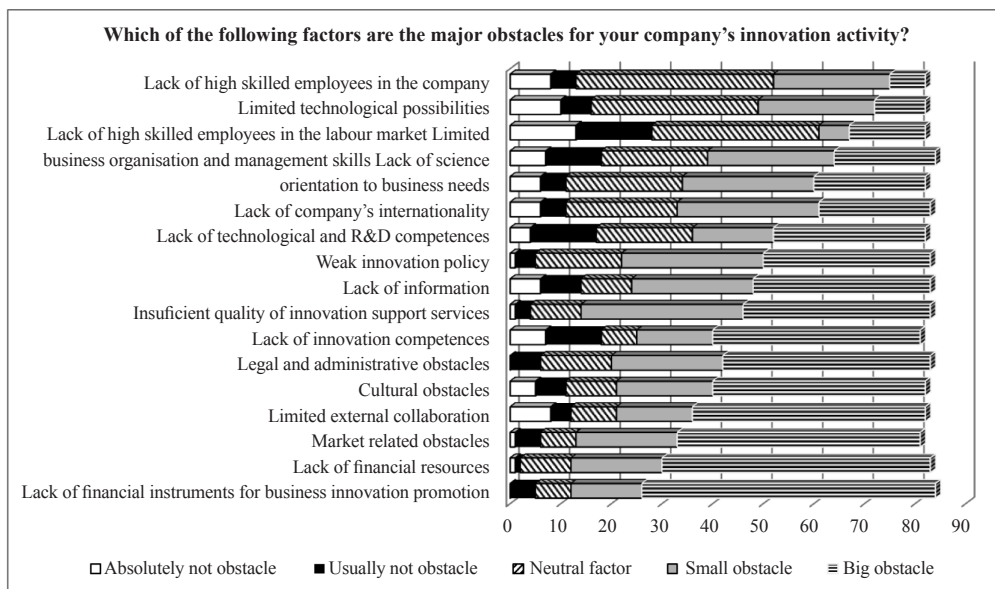


Figure 6. Major obstacles for companies' innovation activity

In regards to public support for innovation, the Lithuania’s innovative companies indicated the following key areas in which government should take initiatives: 1) better communication between business and

policy makers; 2) more collaboration opportunities; 3) improvement of business legal and regulatory environment; 4) financial support for innovation projects (figure 7).

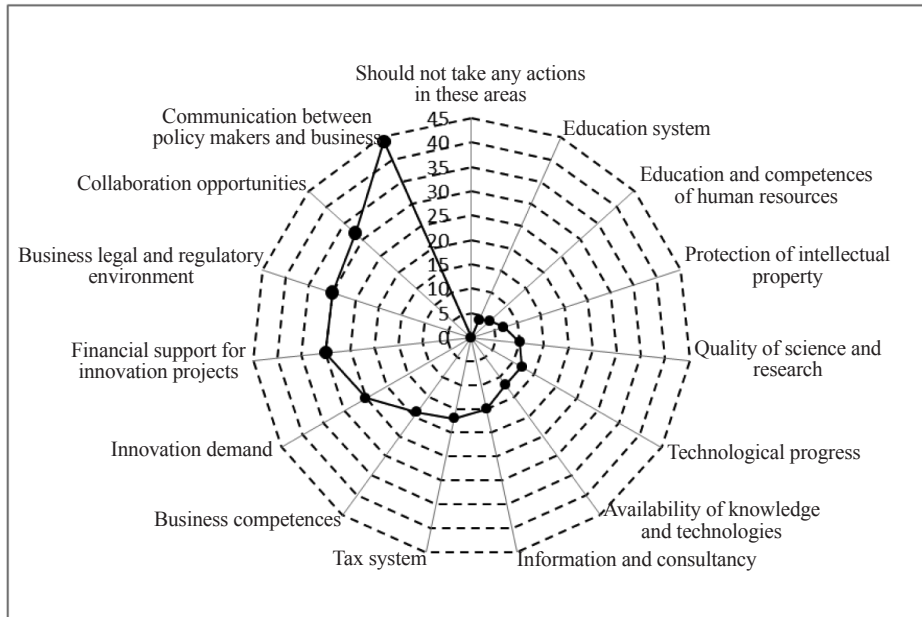


Figure 7. The main areas in which government should take initiatives for better support of companies’ innovation activity

Agreeably to survey’s results, it should be noted here, that the collaboration related issues play a very important role in the companies’ innovation activity: a limited external collaboration was identified as one of the major challenges for companies to innovate;

the collaboration opportunities underlined as a second priority area of government actions for business innovation promotion; and all the companies interviewed had at least one kind of partnerships for the innovation purposes (figure 8).

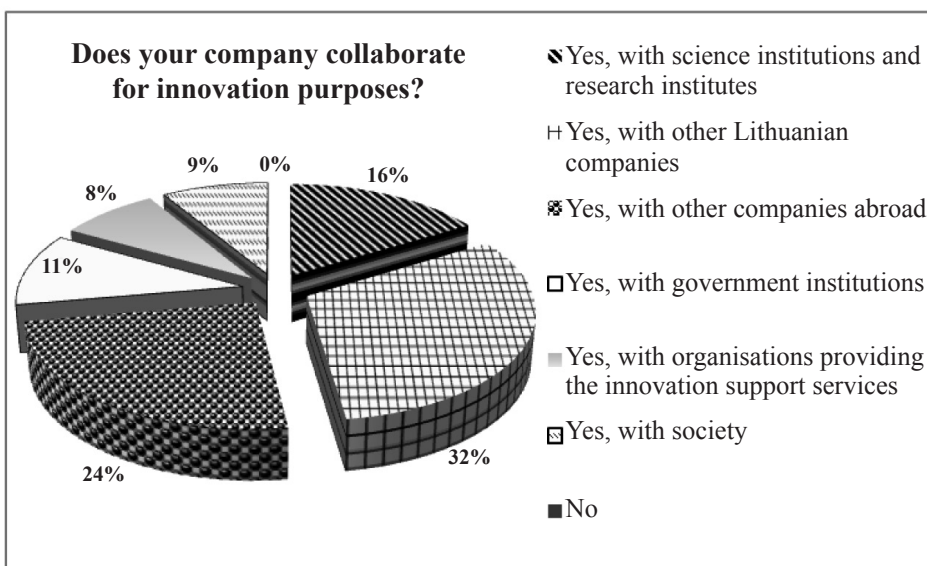


Figure 8. Distribution of companies by their collaboration partners

Part II. Information about the significance of public policy for company's innovation activity

In this part of survey, an attempt was made to evaluate the innovative companies' needs for different

types of policy actions.

First of all, the significance of various innovation promotion initiatives pointed out by innovation experts in former research was investigated (figure 9).

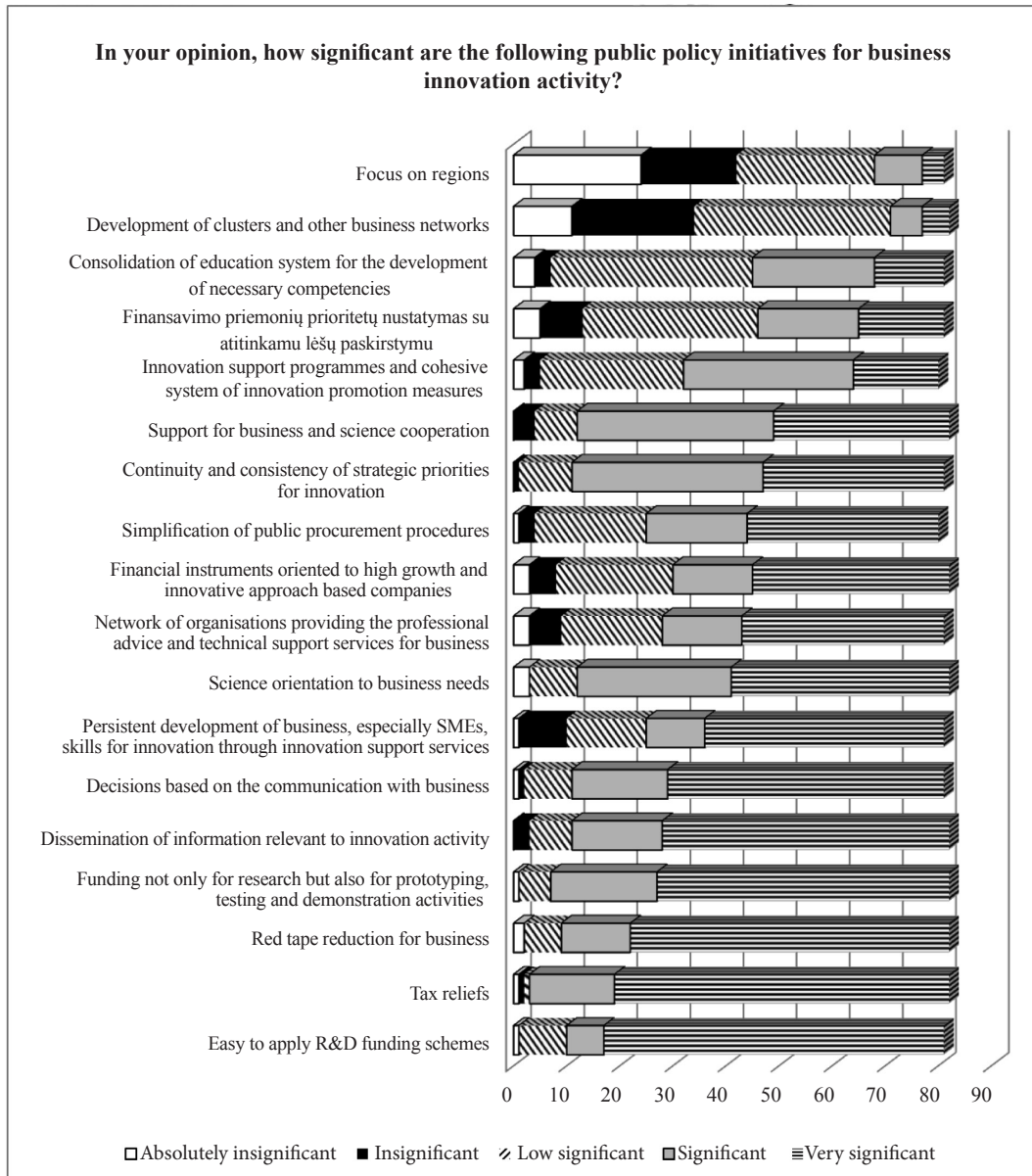


Figure 9. The significance of various public policy initiatives for business innovation activity

According to more than 70% of all respondents, the most significant public policy initiatives for business innovation promotion are: 1) easy to apply R&D funding schemes; 2) tax reliefs for business innovation related activities; and 3) actions related to red tape reduction for business.

In addition to initiatives mentioned above, the following policy actions were also perceived by Lithuanian companies as having significant role for business

innovation activity: funding not only for research but also for prototyping, testing and demonstration activities; dissemination of information relevant to innovation activity; decisions based on the communication with business; science orientation to business needs (e.g. industrial PhD studies; orientation of R&D activities to the future needs; researchers mobility and internships in business sector; etc.); continuity and consistency of strategic priorities for inno-

vation; support for business and science cooperation. At the same time, a focus on regions was indicated as the least significant policy initiative for innovation (marked by 50% of all respondents). However, this can be explained by the geographical distribution of companies interviewed: the majority of innovative companies were based in the five biggest cities of Lithuania (i.e. Vilnius, Kaunas, Klaipėda, Šiauliai, Panevėžys).

In order to assess the national policy actions for business innovation promotion, the companies were asked to share their opinion on the significance of current Lithuanian innovation policy in terms of their innovation activity. The results show, that only 12% of all Lithuania's innovative companies think that current innovation policy is beneficial to them (figure 10). This clearly justifies a need to better focus the national policy efforts on business innovation promotion.

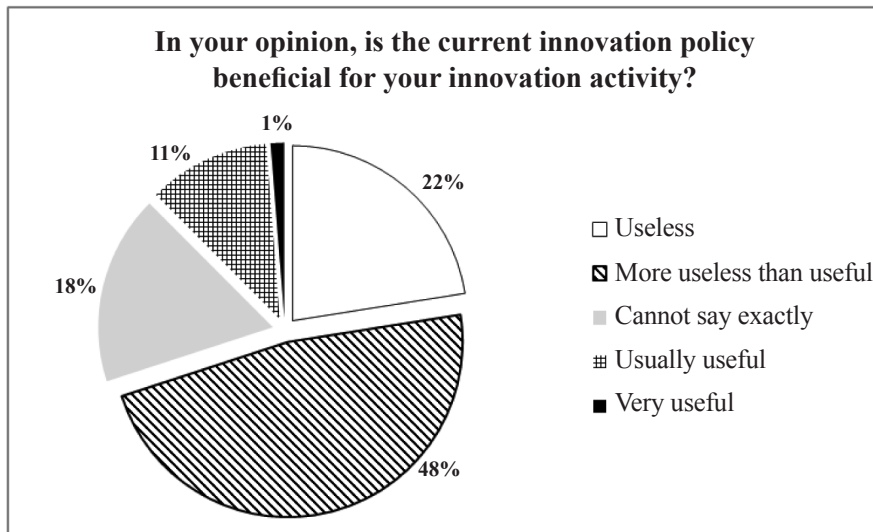


Figure 10. Usefulness of current innovation policy for companies' innovation activity

Moreover, in regards to concrete national innovation policy actions, the survey investigated the companies' attitudes towards current Lithuanian innovation strategy implementation measures (figure 11). The findings demonstrate that the most significant measures for companies' innovation activity are (indicated

by more than 60% of all respondents): the funding for business R&D projects and public support services for business (i.e. dissemination of information relevant to business activity; various trainings; assistance in finding the cooperation partners; etc.).

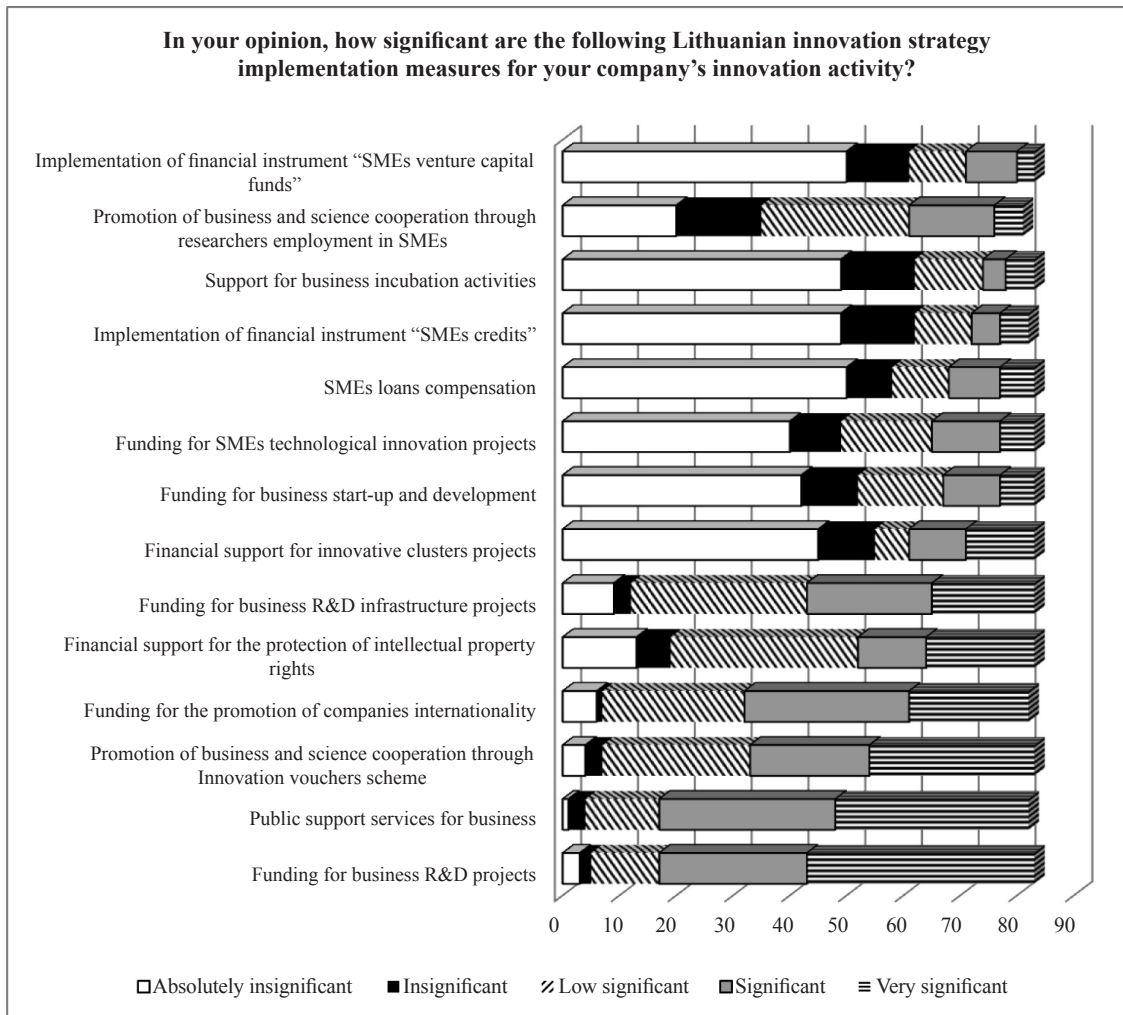


Figure 11. The significance of Lithuanian innovation strategy implementation measures for companies' innovation activity

In the meanwhile, the majority of measures which have been designated as insignificant belong to the SMEs oriented actions' field. Knowing that more than 90 per cent of all companies participated in the survey were SMEs, these data should be taken into account properly. The two most likely preconditions can be made here: (i) the SMEs interviewed have a lack of relevant information; or/and (ii) an access to SMEs oriented innovation policy tools is too difficult regarding the complicated administrative procedures and bureaucratic requirements. However, a verification of these preconditions requires further researches.

Part III. Information about company and respondent

The survey's data show that the majority of respondents (84%) were responsible for companies' management functions, including the top level managers (26%), managers in specific areas (45%) and business owners (13%). Other part of respondents indicated themselves as the specialists.

By legal status, 82% of all companies interviewed were private limited companies (figure 12) and the majority of them had less than 250 employees (i.e. 93% of all innovative companies participated in the survey were SMEs) (figure 13). However, by business sector the Lithuania's innovative companies varied significantly and only the ICT sector was represented by 20% of companies interviewed (figure 14).

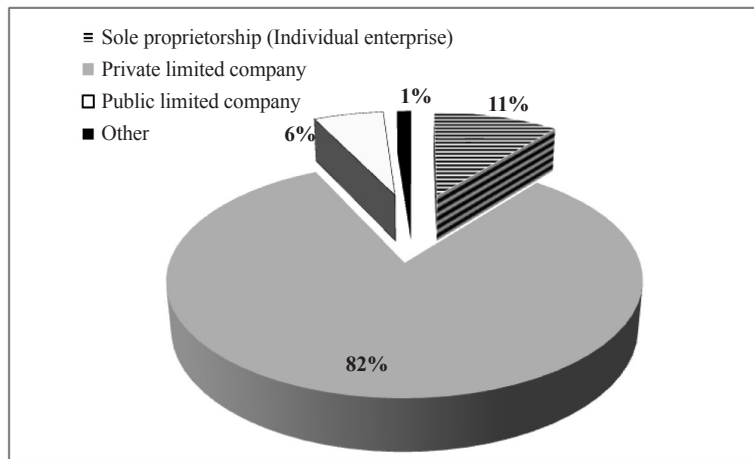


Figure 12. Legal status of the companies interviewed

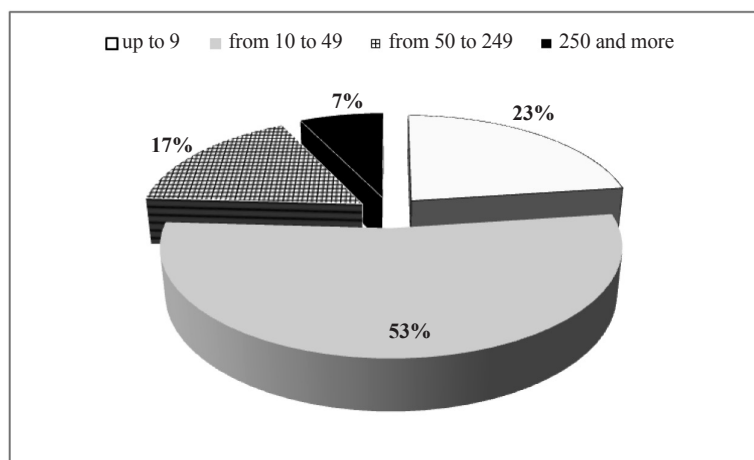


Figure 13. Number of employees in the companies interviewed

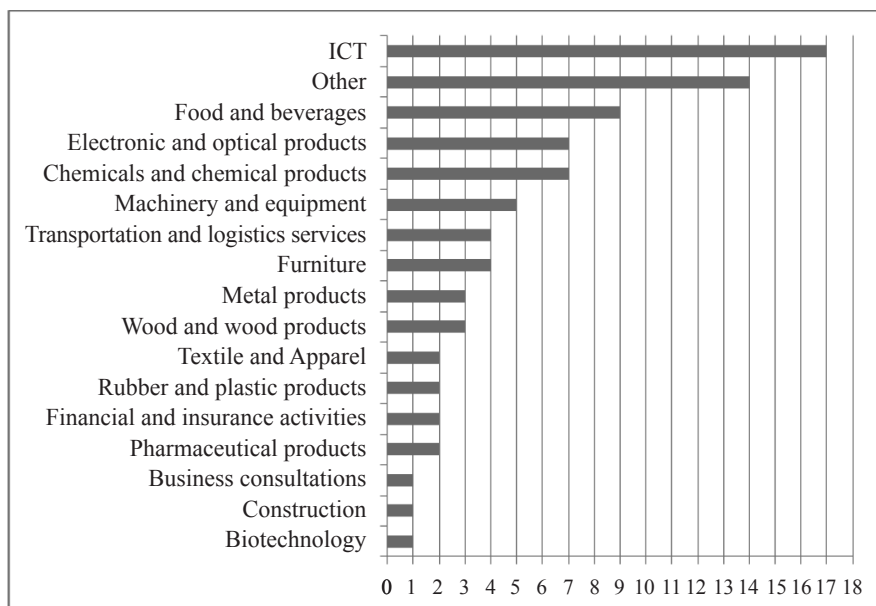


Figure 14. Distribution of companies interviewed by field of their activity

Summarising, it can be stated, that the promotion of business innovation activity in Lithuania should become a clearly explicit priority, while the improvement of existing innovation policy actions should be based on the real business challenges and needs.

5. Discussion and Implications

As it is stated, the innovation and entrepreneurship policies are both relatively recent as distinct policy areas, and therefore seldom integrated in the most countries. However, according to Lindholm and Stevenson (2007), for innovative entrepreneurship to be able to fully contribute to economic growth and development, its importance needs to be further acknowledged in innovation as well as entrepreneurship policies.

Additionally to these statements, the findings obtained from the international experts' survey performed previously by the author can be mentioned here. The innovation experts from six countries were asked to share their opinion about the need to integrate the innovation and entrepreneurship policies/determine the joint initiatives and actions for business innovation promotion. The majority (72%) of all innovation experts confirmed that innovation and entrepreneurship policies should be better interlinked (figure 15 and 16).

The experts, who agreed that innovation and entrepreneurship policies should be related for better business innovation promotion, also indicated the arguments, justifying their views, which have been systematized into table 5.

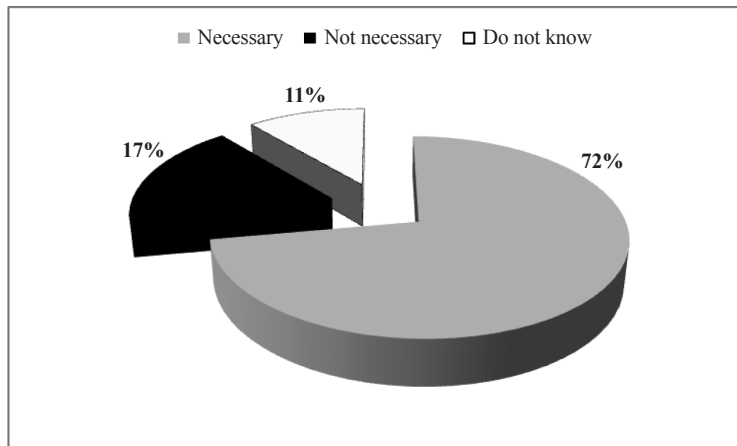


Figure 15. A need to integrate the innovation and entrepreneurship policies (% of all experts)

Source: formed by author according to the data of experts' survey performed in 2012

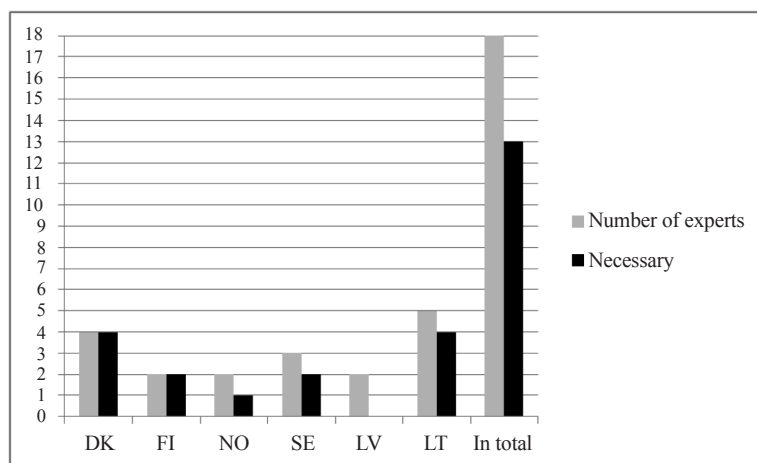


Figure 16. Distribution of experts who indicated the need to integrate the innovation and entrepreneurship policies (by number and countries of origin)

Source: formed by author according to the data of experts' survey performed in 2012

Thus, taking into account all the information provided, the public policy actions directed to better integration of innovation and entrepreneurship policies could lead to the more effective promotion of business innovation activity.

However, from the traditional business perspectives, there are still many doubts on the advantages of innovative entrepreneurship policy. Therefore, it is important to note, that this paper does not argue about

the need to develop the better general conditions for business to flourish, but highlights an idea of innovative entrepreneurship policy as the precondition for more effective public support to innovation oriented business, which always needs both: the general favourable environment for business start-up and development, and special conditions fostering their innovation based activities.

Table 5. Foundation of the innovation and entrepreneurship policies integration

Need	Focus areas of integration	Benefit
<ul style="list-style-type: none"> ● Innovation and entrepreneurship as closely interlinked elements should become the integrated part of education system ● Entrepreneurship is often related to start-ups, but this type of companies is usually also innovative companies ● Business without innovation will not be able to respond to market's needs ● Lithuania does not have institution responsible for entrepreneurship policy implementation ● Lithuanian innovation and entrepreneurship policies are currently disconnected 	<ul style="list-style-type: none"> ● Education system ● Innovation schemes ● To entrepreneurship oriented trainings ● Funding optimization ● Responsibility and Coordination ● Collaboration ● Continuity and consistency of policy actions ● Business orientation to innovation activity 	<ul style="list-style-type: none"> ● More efficient development of entrepreneurship and innovation culture ● Better business orientation to activity based on innovation (motivation and support) ● Economical use of resources, including finance ● Better coordination of policies implementation ● Cooperation and liaison between different elements of innovative entrepreneurship ● Better focus on entrepreneurship promotion than on just business development

Source: formed by author on the basis of experts' survey performed in 2012

6. Concluding Observations

This paper makes a contribution to the literature discussing the innovation and entrepreneurship related issues from the business innovation promotion point of view. The issues analysed serve as the preconditions for the formation of sustainable innovative entrepreneurship policy.

The number of empirical findings presented in this article leads to the final conclusion highlighting an unquestionable requirement to strengthen national public policy actions for the more effective and sustainable business innovation promotion in Lithuania. In order to improve the existing situation, better attention should be paid to the real challenges and needs of innovative business sector, taking into account the great importance of bilateral-goals-based communication between business, science and government. Thus, the development of sustainable innovativeness requires not only formal implementation of public policy actions, but also calls for the long-term strategic view clearly showing business role in

building progressive and competitive economy.

From the perspectives of future researches, the following facets of business innovation promotion could be investigated: an effectiveness of national innovation policy measures in terms of their impact on various business performance results; the arguments justifying the usefulness/uselessness of separate innovation policy actions for the development of business innovation activity; the challenges of innovative business with regards to public support received; a role of sustainability in the content of national innovation policy and its impact on business orientation to sustainable innovation.

References

Adekola, A & Korsakienė, R & Tvaronavičienė, M. 2008. Approach to Innovative Activities by Lithuanian Companies in the Current Conditions of Development', *Technological & Economic Development of Economy* 14(4): 595-611.

Ahmad, N & Hoffman, A. 2007. *A Framework for Addressing and Measuring Entrepreneurship*, Organisation for Economic

- Cooperation and Development Available on the Internet: <<http://www.oecd.org/industry/business-stats/39629644.pdf>> [Accessed: 22 July 2013].
- Arizona State University .2006. *The Two Faces of Entrepreneurship, Part 2: Innovative Entrepreneurs Bring New Wealth to the Economy*, Knowledge W.P. Carey. Available on the Internet: <<http://knowledge.wpcarey.asu.edu/pdf.cfm?aid=711>> [Accessed: 11 July 2013].
- Aubert, J.E. 2004. *Promoting Innovation in Developing Countries: A Conceptual Framework*, World Bank Institute. Available on the Internet: <<https://openknowledge.worldbank.org/bitstream/handle/10986/8965/wps3554.pdf?sequence=1>> [Accessed: 28 July 2013]
- Audretsch, D. B. 2004. Sustaining Innovation and Growth: Public Policy Support for Entrepreneurship, *Industry and Innovation* 11: 67-191.
- Baležentis, A & Balkienė, K .2011. Analysis of Lithuanian Innovation Policy Priorities in the Context of European Union Initiatives', *Public Policy and Administration*, vol. 10, no. 2, pp. 212-230.
- Baležentis, A & Martyna, Ž. 2011. Application of Expert Evaluation in the Analysis of Innovation Development Factors: Assessment of Lithuanian Innovative Enterprises, *Management Theory & Studies for Rural Business & Infrastructure Development* 27(3): 23-31.
- Balkienė, K. 2013. The State of Play of Business Innovation Promotion in Lithuania: Theoretical, Strategic and Statistical Aspects, *Intellectual Economics*, 7(2/16): 230-244.
- Balkienė, K & Jagminas, J. 2010. Allusion to Public Policy: Innovative Entrepreneurship, *Public Policy and Administration* 34(32-46).
- Baumol, W. J. 1968. Entrepreneurship in Economy Theory, *American Economic Review* 58(2): 64.
- Baumol, W. J. 1990. Entrepreneurship: Productive, Unproductive, and Destructive, *Journal of Political Economy* 98(5):893-921.
- Baumol, W J. 1993. *Entrepreneurship, Management and the Structure of Payoffs*. London: MIT Press.
- Casson, M. 2010. *Entrepreneurship: Theory, Networks, History*. Edward Elgar Publishing, USA.
- Chamberlin, T & Doutriaux, J & Hector, J. 2010. Business Success Factors and Innovation in Canadian Service Sectors: An Initial Investigation of Inter-Sectoral Difference, *Service Industries Journal* 30(2): 225-246.
- Commission of the European Communities .2003. *Green Paper of Entrepreneurship in Europe*. Available on the Internet: <http://eur-lex.europa.eu/LexUriServ/site/en/com/2003/com2003_0027en01.pdf> [Accessed: 26 June 2013].
- Cornell University & INSEAD & WIPO .2013. *The Global Innovation Index 2013: The Local Dynamics of Innovation*, Geneva, Ithaca & Fontainebleau. Available on the Internet: <<http://www.globalinnovationindex.org/content.aspx?page=gii-full-report-2013>> [Accessed: 28 July 2013].
- Drucker P. F. 1985. *Innovation and Entrepreneurship: Practice and Principles*. Harper & Row, New York.
- Drucker P. F. 2002. The Discipline of Innovation, *Harvard Business Review* 80(8):95-103.
- European Commission .1995. *Green paper: Innovation*. Available on the Internet: <http://europa.eu/documents/comm/green_papers/pdf/com95_688_en.pdf> [Accessed: 26 June 2013].
- European Commission. 1998. *Fostering entrepreneurship in Europe: Priorities for the Future*, Communication from the Commission to the Council Available on the Internet: <http://ec.europa.eu/enterprise/policies/sme/files/support_measures/docs/fostering-98_en.pdf> [Accessed: 26 June 2013].
- European Commission. 2001. *Innobarometer 2001: Innovation - Experience and Priorities of European Managers*. Available on the Internet <http://ftp.cordis.europa.eu/pub/innovation-smes/docs/f_innobarometer_report_en_2001.pdf> [Accessed: 20 July 2013].
- European Commission .2002. *Innobarometer 2002: Innovation - Experience and Priorities of European Managers*. Available on the Internet <ftp://ftp.cordis.europa.eu/pub/innovation-smes/docs/f_innobarometer_report_en_2002.pdf> [Accessed: 20 July 2013].
- European Commission. 2003. *Innobarometer 2003: Innovation - Experience and Priorities of European Managers*. Available on the Internet <ftp://ftp.cordis.europa.eu/pub/innovation-smes/docs/f_innobarometer_report_en_2003.pdf> [Accessed: 20 July 2013].
- European Commission. 2004. *Innobarometer 2004: Innovation - Experience and Priorities of European Managers*. Available on the Internet <ftp://ftp.cordis.europa.eu/pub/innovation-smes/docs/f_innobarometer_2004_en_report.pdf> [Accessed: 20 July 2013].
- European Commission. 2007. *Innobarometer 2007: Innovation Transfer*. Available on the Internet: <http://ec.europa.eu/public_opinion/flash/fl_215_en.pdf> [Accessed: 20 July 2013].
- European Commission. 2009. *Innobarometer 2009: Strategic Trends on Innovation*. Available on the Internet: <http://ec.europa.eu/public_opinion/flash/fl_267_en.pdf> [Accessed: 20 July 2013].
- European Commission. 2013. *Innobarometer 2013: Investing in Intangibles: Economic Assets and Innovation Drivers for Growth*. Available on the Internet: <http://ec.europa.eu/public_opinion/flash/fl_369_en.pdf> [Accessed: 20 July 2013].
- European Commission. 2013. *Innovation Union Scoreboard 2013*. Available on the Internet: available from: http://ec.europa.eu/enterprise/policies/innovation/files/iuis-2013_en.pdf [Accessed: 28 July 2013].
- Eurostat .2011. *Research and development expenditure, by sectors of performance*. Available on the Internet: <<http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tsc00001&language=en>> [Accessed: 28 July 2013].

- Government of the Republic of Lithuania. 2010. *Lithuanian Innovation Strategy for 2010-2020*, Resolution no. 163 of 17 February, 2010 of 12. Available on the Internet: <http://www.ukmin.lt/uploads/documents/imported/lt/veikla/veiklos_sritys/ino/LIS_ENG.doc> [Accessed: 11 July 2013].
- Hall, J C & Sobel, R S. 2006. *Public Policy and Entrepreneurship*. The Center for Applied Economics, the University of Kansas. Available on the Internet: <[http://www.business.ku.edu/sites/businessdev.drupal.ku.edu/files/images/general/Research/TR%2006-0717--Entrepreneur%20\(Hall%20%26%20Sobel\).pdf](http://www.business.ku.edu/sites/businessdev.drupal.ku.edu/files/images/general/Research/TR%2006-0717--Entrepreneur%20(Hall%20%26%20Sobel).pdf)> [Accessed: 21 July 2013].
- Harkema, S J M & Henk, S. 2008 Incorporating Student-Centred Learning in Innovation and Entrepreneurship Education, *European Journal of Education* 43(4): 513-526.
- Jørgensen, F & Ulhøi, J. P. 2010. Enhancing Innovation Capacity in SMEs through Early Network Relationships, *Creativity & Innovation Management* 19(4): 397-404.
- Kaufmann, H. R & Tsangar, H & Vrontis, D. 2012. Innovativeness of European SMEs: Mission not yet accomplished, *Economic Research* 25(2):333-360.
- Kirzner, I M. 1973. *Competition and Entrepreneurship*. Chicago: University of Chicago Press.
- Kuper, A & Kuper, J. 1996. *The Social Science Encyclopedia*. Routledge, London & New York.
- Lindholm, D. A & Stevenson, L. 2007. *Linking innovation and entrepreneurship policies*, Innovative Policy Research for Economic Growth, Swedish Foundation for Small Business Research. Available on the Internet: <http://www.ipreg.org/ipreg_asalois_web.pdf> [Accessed: 26 June 2013].
- Lindholm, D A & Stevenson, L. 2010. Innovative Entrepreneurship Policy: Linking Innovation and Entrepreneurship in a European Context, *Annals of Innovation & Entrepreneurship* 1(1). Available on the Internet: <http://www.innovationandentrepreneurship.net/index.php/aie/article/view/5602/html_34> [Accessed: 26 June 2013]
- Lundström, A & Stevenson, L.A. 2005. *Entrepreneurship Policy: Theory and Practice*, International Studies in Entrepreneurship, Kluwer Academic Publishers.
- Masiulis, K & Sudnickas, T & Židonis, Ž & Gudelis, D. 2009. Innovations in the European Union Regions: the Role of Public Administration Institutions, *Public Administration* 1(21): 6-11.
- McAdam, R & Reid, R & Harris, R & Mitchell, N. 2008. Key determinants of organisational and technological innovation in UK SMEs: an empirical study, *Int. J. Entrepreneurship and Innovation Management* 8(1):1–14.
- Michael S C & Pearce J A. 2009. The Need for Innovation as a Rationale for Government Involvement in Entrepreneurship, *Entrepreneurship & Regional Development* 21(3): 285-302.
- Mirjam Van Praag, C. 1999. Some Classic Views on Entrepreneurship, *De Economist* 147(3), available from: <http://www1.fee.uva.nl/pp/bin/705fulltext.pdf> [Accessed: 18 July 2013].
- Naudé W 2011, 'Entrepreneurship and Economic Development', Studies on Development Economics and Policy. UNU World Institute for Development Economics Research, CPI Antony Rowe, Chippenham and Eastbourne, Great Britain.
- Oksanen, J & Rilla, N. 2009, 'Innovation and Entrepreneurship: New Innovations as Source for Competitiveness in Finnish SMEs', *International Journal of Entrepreneurship*, vol. 13, pp. 35-48.
- Organisation for Economic Cooperation 1996, *Oslo Manual*. Available on the Internet: <<http://www.oecd.org/sti/inno/2367580.pdf>> [Accessed: 26 June 2013].
- Organisation for Economic Cooperation and Development .2005. *SMEs and Entrepreneurship Outlook*.
- Organisation for Economic Cooperation and Development 2006, *Understanding Entrepreneurship: Developing Indicators for International Comparisons and Assessments*, Report on the OECD's Entrepreneurship Indicators Project and Action Plan. Available on the Internet: <[http://search.oecd.org/officialdocuments/displaydocumentpdf/?doclanguage=en&cote=STD/CSTAT\(2006\)9](http://search.oecd.org/officialdocuments/displaydocumentpdf/?doclanguage=en&cote=STD/CSTAT(2006)9)> [Accessed: 4 July 2013].
- Organisation for Economic Cooperation and Development 2010. *SMEs, Entrepreneurship and Innovation*. OECD Studies on SMEs and Entrepreneurship. Organisation for Economic Cooperation and Development & Statistical Office of the European Communities 2005, *Oslo Manual*. Available on the Internet: <http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/OSLO/EN/OSLO-EN.PDF> [Accessed: 26 June 2013].
- Schumpeter, J. 1934. *The Theory of Economic Development*. Cambridge, Harvard University Press.
- Schumpeter, J. 1939. *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*. New York: McGraw-Hill.
- Schwab, K. 2012. *The Global Competitiveness Report 2012–2013*, World Economic Forum, Geneva. Available on the Internet: <http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf> [Accessed: 28 July 2013].
- Shane, S .2003. *A General Theory of Entrepreneurship. The Individual-Opportunity Nexus*. Cheltenham, Edward Elgar Publishing.
- Stam, E .2008. *Entrepreneurship and Innovation Policy*, Centre for Technology Management, the University of Cambridge. Available on the Internet: <http://www.fep.up.pt/conferencias/eaepe2007/Papers%20and%20abstracts_CD/Stam.pdf> [Accessed: 28 June 2013].
- Tvaronavičienė, M & Korsakienė, R. 2007. The Role of Government in Implementation of Innovations: A Case of Lithuania, *Business: Theory & Practice* 8(1):9-13.
- United Nations. 2004. *Entrepreneurship and Economic Development: the Empretec Showcase*, United Nations Conference on Trade and Development, Geneva. Available on the Internet: <http://unctad.org/en/Docs/webiteteb20043_en.pdf> [Accessed: 26 June 2013].
- United Nations Economic Commission for Europe .2012. *Fostering Innovative Entrepreneurship*. Available on the

Internet: <<http://www.unece.org/fileadmin/DAM/ceci/publications/fe.pdf>> [Accessed: 18 July 2013]

Vinnova & George Washington University. 2006. *The Innovation Imperative Globalization and National Competitiveness*, Conference Summary. Available on the Internet: <<http://www.vinnova.se/upload/EPiStorePDF/vr-06-14.pdf>> [Accessed: 28 June 2013].

Wankel, Ch. 2009. *Encyclopedia of Business in Today's World*, SAGE Publications.

Wennekers, S & Thurik, R. 1999. Linking Entrepreneurship and Economic Growth, *Small Business Economics* 13(1): 27.

Xavier, S. 2012, *Global Entrepreneurship Monitor*. 2012 Global Report Available on the Internet: <<http://www.gemconsortium.org/docs/download/2645>> [Accessed: 23 July 2013].