COOPERATION AND INNOVATION AS A KEY SUCCESS FACTORS FOR DEVELOPMENT IN REGIONS

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ABSTRACT
Innovation and entrepreneurship in regions is one of essential tools, in added value creation in economics and in development in national level. It is very important to encourage creativity, new ways of thinking and continuous process of learning of individuals. There are some different approaches how to measure competitiveness of state economy and competitiveness in regional level. Global Competitiveness Index shows competitiveness of state among other world economies based on the 12 pillars of competitiveness, which is difficult to apply in regional or entrepreneurial level due to lack of data at regional level. Innovation is a key factor for development and competitiveness in individual (individual, enterprise) and institutional (local governmental institutions, regional, national and global level. Scientific problem of article is that impact of creativity, knowledge creation and dissemination and cooperation could not be measured trough quantitative data. Aim of the article is to define support model for cooperation of individual – institutional level in innovative entrepreneurship and its impact on regional development. Methods ar analysis of scientific literature, and political planning documents for define of support model in dynamic external environment.
KEY WORDS: *innovation, regional development, cooperation level*.

JEL CODES: M21, O18, R11

Introduction

Entrepreneurship is considered more as a creative and sustainable tool in the context of global challenges, less as a tool for individual benefit and profit in the last decades. High level of innovation in the entrepreneurship creates essential domino effect in economics worldwide. It is very important to promote development of non-technological innovations – creativity, new way of thinking in entrepreneurship development and commercialization of new ideas, continuous process of learning and research process of new forms of organization and new markets.

The latest stage of development in the innovation theory and practice evolved in the first decades of the 21st century, when relentless work on pre-established models and schemes, nevertheless did not shed enough light on why some companies with their new ideas were able to become more successful and develop, while others with equally successful ideas have not been able to achieve a competitive level of development. The style of management, focused on the formulation of orders and the control of their execution, defining goals and directions of development, is no longer viable. More and more importance should be allotted to seemin-

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gly secondary factors, i.e. both the methods of achieving the goals and the goals and priorities themselves change as a result of a dynamic environment (Sharmer, 2018).

As Joe Kaeser, President of Siemens, said at the World Economic Forum (2018): "However, the Fourth Industrial Revolution is not just about technology and business models; it's also about society."

Problem. Decrease of inequality between EU average and Latvia based on GDP, labour force, level of entrepreneurial activities and other indicators is one of the main challenges for Latvia on macroeconomic level. Decrease of Latvia evaluation in indexes related to innovation and development, decrease in investments of research and development in GDP. Existing problems of development are orientation on cheap labor business model more than innovation development, weak cooperation between industry and science and monocentric regional development and week cooperation. It is hard to evaluate soft skills of entrepreneurs, like "thinking out of box", non-traditional models of working and other non-financial and quantitative data.

Purpose. Purpose of the article is to define support model for cooperation of individual and institutional level in entrepreneurship development in regions, by taking into account elements of external environment.

Object. Object is individual – institutional level cooperation model.

Tasks:

- analyze scientific literature of role of innovation in regional development;
- creation of support model for cooperation in individual and institutional level.

Methods. Analyze of scientific literature, empirical studies, analyze of statistical data on national level and studies of political planning documents.

1. The Role of Innovation in entrepreneurship

Studies of latest researches shows that innovation concept and its definition and classification depends on implementation - more important role in innovation definition gains systemic and multidimensional approach (Andersson & Karlsson, 2004; Godin, 2015), researchers focus on *cross-industry innovation capability* and its systematism (Dosi, Grazzi, Moschella, 2017; Taalbi, 2017). Interesting scientific discussion has started about innovation historical development and its cycle (Godin, 2015; Franken, 1997).

Author stress that there are fundamental differencies in management and leadership of innovative enterprises and non-innovative or traditional enterprises (Griffin, 2009). Therefore cooperation models are essential. Most entrepreneurship development models (f.e.tripple helix [Etzkowitz, 2011], geographical proximity of mentor is important for development of new ventures), (Chresccenzi, Filipetti, Iammarino, 2017) shows that university – industry cooperation is very important in management of enterprise.

Investigations of regional development, made by researchers (Anderson, Karrlson, 2004) who specialized in regional innovation systems, shows, that innovative business have tendencies to be spatially localized while standard business have tendencies to globalized. For best results all tree participants in innovation systems (Fini, Grimaldi, Santoni, Sobrero 2011) (academic environment, researchers; business supporting institutions as business incubators and science parks and entrepreneurs) should cooperate very close (Shepard, 2017). Innovation strategies in nowadays asks not to do something just better than competitors, but do it in absolutely different way or something else for most important results. It means that entrepreneurs should make their business in unique way and find their own smart specialization strategy.

2. The Role of Innovation in Economic Development

Global Competitiveness Index shows the relationship and impact within the national economy over several years, as well as how the country's economy looks on a global scale. By examining in more detail the performance of the pillars and concluding that this is the lowest in relation to market size, innovation and the institutional environment, while the highest for higher education, technological readiness and the macroeconomic environment, one can conclude that although there are very favorable conditions for implementing

innovation and providing competitiveness, the institutional environment and the size of the market hinder the development of these circumstances.

Index, which provides a reflection on the state policy situation in relation to business promotion. The Doing Business study is linked to the Global Competitiveness Index in areas affecting institutional frameworks, product and service market efficiency, labor market efficiency and the level of financial market development.

In Doing Business 2017, Latvia is ranked 14th, which is a very good indicator. Estonia ranks 12th, leaving Lithuania in 21st position.

The European Innovation Scoreboard (EIS, 2018) provides an assessment of the innovation performance of EU Member States and some third countries, as well as the strengths and weaknesses of national innovation systems, and evaluates their structure. The European Innovation Scoreboard of 2018 confirms that innovation performance in general both within the EU and for EU on a global scale is increasing, but the progress within the EU is uneven. The 2018 report demonstrates that innovations and business investment in Latvia are the weakest dimensions, while the strongest are the innovation-friendly environment and the financial and support system. In terms of human resource potential, Latvia is relatively close to the EU average in this field, ahead of moderate innovators, e.g., Spain, Italy, Portugal. Latvia possesses comparatively good intellectual property readings in comparison with other countries. Moreover, in terms of number of people with higher education percentage-wise of the whole population, Latvia was expected to reach 34.0% in 2020. This level already has been reached – from 40.7% in 2013 to 45.6% in 2017 – and it is one of the indicators contributing to Latvia joining the moderate innovators' circle.

Funding for science and research, both in the public and private sectors, is one of the most unfavorable indicators of stagnation and recession. The already mentioned contribution from gross domestic product to R&D, which was planned to be reached in 2020 through the "economic breakthrough" in the context of the National Development Plan, will not be reached in the planned amount of 1.5% by the set deadline. Figure 1 shows investments in Research and Development, % of Gross Domestic Products from year 1996 to 2015.

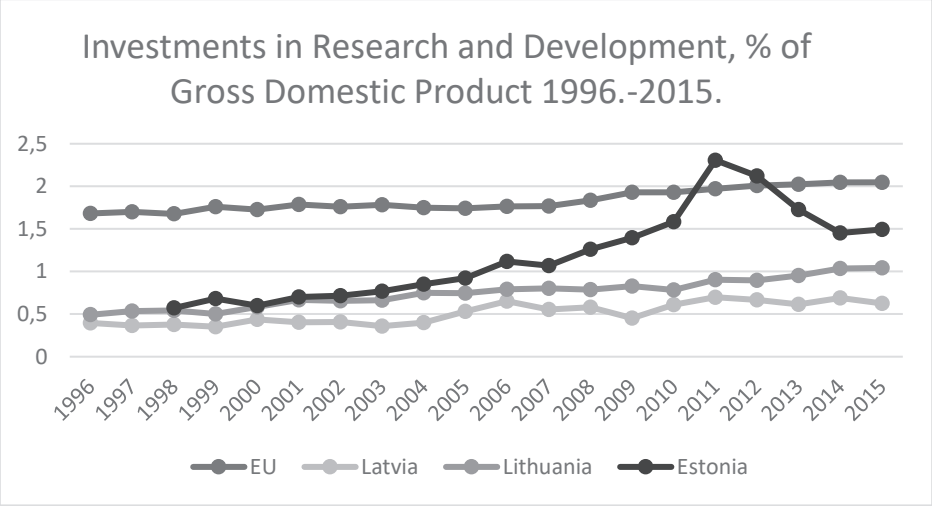

Figure 1. Investments in Research and Development, % of Gross Domestic Product 1996–2015

Source: Author's construction based on Eurostat yearbook, 2017

In 2018, the Ministry of Education and Science of the Republic of Latvia informed that the contribution has been reduced to 0.44% of the GDP. These are indications that something is not right with the previously developed system, because this indicator is still lower than during the time prior to the 2008 crisis. These are very serious preconditions that objectives planned in documents of national level are not stated in correct way.

3. The support model for cooperation of institutional – individual level

The model defined in the figure includes institutional-individual level aspects that work in a dynamic environment with a set of environmental factors that can be grouped by type of impact:

Factors of legal, ecological, technological, social, economic and political environment, constantly changing their influence, form a set of external environmental factors, which at every moment in time influence the individual-institutional level. The impact of individual factors can be predicted, but as a result of the continuous interaction of factors, the ability to predict the overall result decreases.

At all levels from individual to institutional, organizational management functions are used: planning, organization, management, control. Thus, ensuring the existence of an organization or company. The following is a set of tasks divided in levels and interconnection between following levels.

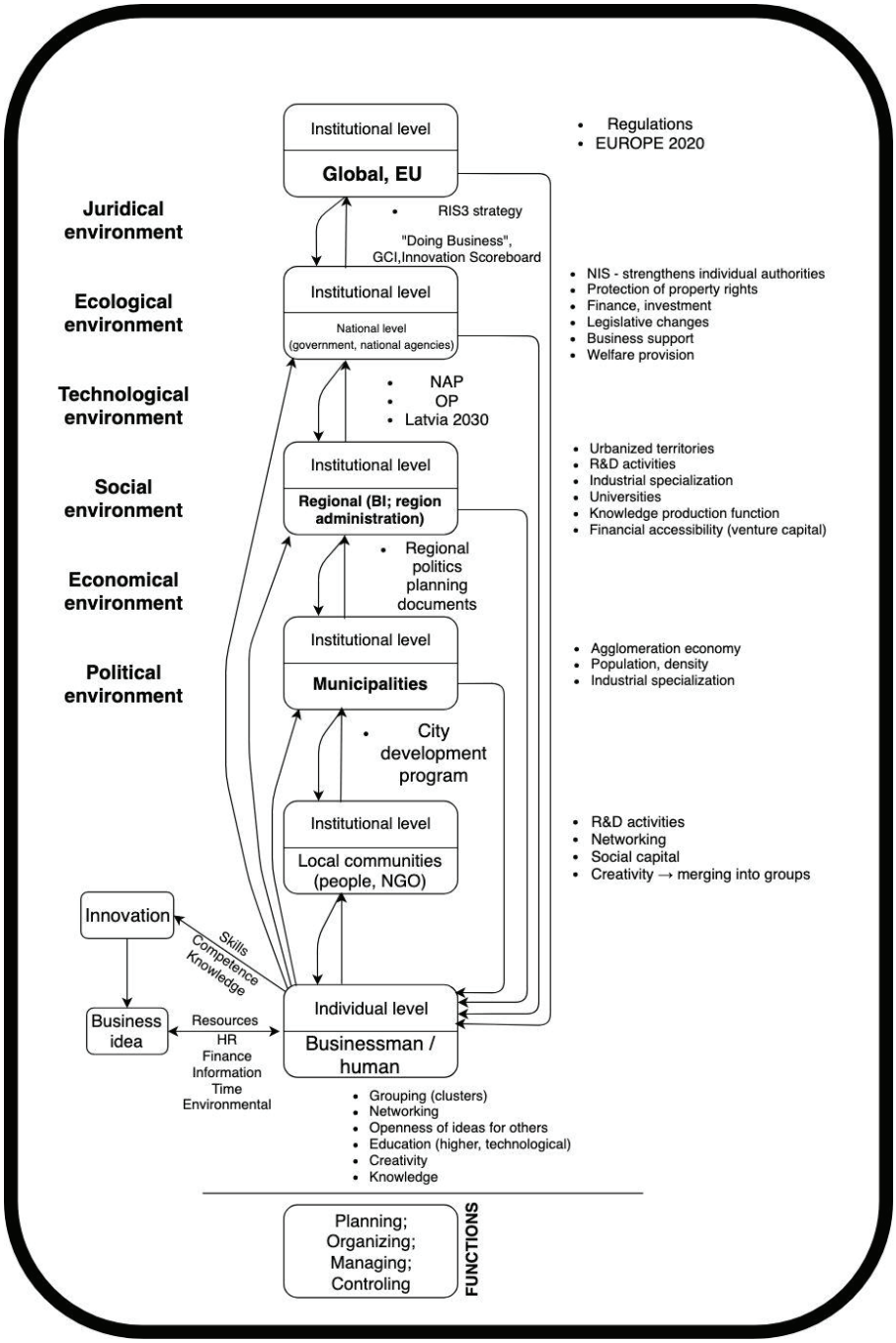

Figure 2. The Support Model for cooperation of individual – institutional levels

Source: Author's construction based on research results

At individual level (company, human, or micro level), there are a number of tasks that form the set of activities that the company carries out when it develops its innovative idea in the market. These include the formation of interest groups, or clustering, networking, openness of ideas, education (higher, technological), creativity, knowledge formation. At this level of cooperation, among the most important tasks are development of creativity and knowledge-building. At the individual level, the entrepreneur can also be alone and create his own idea, but it is important for him to first answer the question "Why?" and inspire others who will believe in this idea and help to drive it with the same enthusiasm (Sinek, 2009). The individual or micro level receives information and external tasks from the upper or institutional levels – local communities, municipalities, regional administrations, state institutions, which also perform scrupulous control, especially when projects with external financing are implemented and mediated through the state or macro level – and receives information and tasks also from the international, global or *mundo* level. The individual level is significantly influenced by decisions taken at the macro level, based on decisions demanded by intergovernmental organizations, e.g., the International Monetary Fund, the World Bank, the UN and others. Sharmer (2018), defines these institutions as more of negotiators than power hubs. Thus, the model reflects the opposite direction of the vertical of power, when the individual level is heard by all further institutional levels, which show cooperation. It is not an easy-to-organize task, but it is possible to start with the lowest institutional levels – the local authorities – and the regional level (*meso*), because it is more local, geographically closer to the individual level. First of all, it would be necessary to strengthen cooperation at the regional level, as mentioned above, by strengthening cooperation between higher education and research, local communities and municipalities and entrepreneurs.

Institutionally, at the individual level (micro-meso) (local communities, NGOs), the most important tasks are to provide research and development activities, and boost creativity, networking, social capital development. There are also regional universities, universities of applied sciences, knowledge centers at this level, and it also sees active collaboration in the development of technology parks and business incubators. At this level, the interrelation with the individual level is strong as mutual cooperation in the promotion of entrepreneurship takes place – local communities and knowledge centers are an essential human capital development platform that actively participates on individual level. At this level, too, it is also of utmost importance to ensure the involvement of controlling institutions (macro level), information and tasks, but I believe that this is the level of involvement that is essential for the planned (macro) level tasks for them to retain the touch with reality and meet the true needs of local communities.

Institutional level (meso) (municipalities, counties) – the most important tasks at this level are related to industrial specialization, agglomeration economy, changes in population and its density. At this level, the tasks set out to ensure the development of the local area and the use of potential and resources. Collaboration with the levels below is essential not only for controlling but also for identifying common challenges and solutions. One of the most important challenges is to keep the population in this area, and only by providing a favorable environment for living, working and creativity, i.e. creating new ideas. More and more we come to the conclusion that in today's information space, when we are constantly available in the virtual environment, favourable conditions are stimulated by nature, peace, silence and the break from being "accessible at all times". At this level, an important role is played by the city and municipality development and planning documents.

Institutional level (meso) (regional administrations, regional institutional centers) – regional level knowledge centers and regional business incubators can also be found at this level, but the closer these institutions are to entrepreneurs and creators of knowledge, without any additional intermediaries, the better this cooperation develops. At this level, the tasks are again connected with research and development activities, urbanized areas, industrial specialization, knowledge production, access to venture capital and finance. This level is essential to serve as a 'filter' for tasks that an individual or group of people at an individual level cannot do without collaboration with other institutional-level bodies (Sentana, Gonzalez, Gasco, Llopis, 2017). These institutions have a key role to play in regional development and cooperation in the region. At this level, the most important documents are regional planning documents and regional development guidelines.

Institutional Level (Macro, National Level) (State Institutions, Agencies, Government) – tasks here are connected with national mechanisms for economic and business development, regulations and laws, property protection, finance, investments, legislative changes, business support, welfare. It is essential to ensure cooperation between institutions on this level and mundo, or global-level institutions, to provide individual-level competitiveness as it, in turn, promotes the country's competitiveness. This is the level at which the next, that is, global level settings are interpreted differently. At this level it is very important to build a constructive relationship with the representatives of the levels in the model below, as the task of the representatives of the state institutions is to work together with the individual level representatives to achieve the tasks mentioned in the national documents. Documents binding to this level are the National Development Plan of Latvia for 2014–2020 and Sustainable Development Strategy of Latvia until 2030, Industrial Policy Guidelines, Science, Technology Development and Innovation Guidelines, etc.

Institutional level (mundo, global level) – EU institutions, global level organizations – developing global tasks and documents and defining challenges that are relevant to the world and affect all levels. At this level, documents become shorter and more concise than national-level documents and tasks, as one must be aware that these tasks must be comprehensible at all levels. Here the package contains the European Research and Innovation Strategies for Smart Specialisation (RIS3), as well as a number of studies and indexes defining their development: GCI, Doing Business, European Innovation Scoreboard, and others.

Conclusions

Traditional (non-innovative) and innovative entrepreneurship has different competitiveness and sustainability factors, performance of them affected by dynamic external environment and specialization of regions. It is necessary to respect resources of region, including natural resources and specialization of corresponding region in regional development strategies.

Entrepreneur generates social and economic benefits, focus on innovation and transformation starts at individual level, therefore important is social capital and enterprises forms near to living space

Modifying of systemic innovation in regional level defines smart specialization confirms thesis that cooperation model depends from region knowledge centres and regional specialization Smart specialization in context of innovative entrepreneurship means using of local resources with innovative approach, to minimize consumption of resources and impact on environment.

Ranking of innovation in different international indexes shows performance of institutional level of Latvia in global environment. Tendencies are visible. High evaluated pillars are technological readiness and accessibility of higher education, lowest – innovation and institutional capacity and institutional framework, that stress, that problems exist straight in institutional level. GCI, Doing Business, EIS shows stagnation. Strengths are in human resources, weaknesses in institutional environment.

Mutual cooperation systems are created both vertically and multidimensionally. Global level – EU – country – region – local communities – company (human). On an individual level, the entrepreneur cooperates with other entrepreneurs and the institutional level, yet all communication remains on an individual level, as this person is always facing another person representing the municipal authority, public authority, European Commission and other institutional entities. The cooperation will or will not develop depending on the cognitive abilities and communication skills of these two people, and their own understanding of what comprises good cooperation.

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BENDRADARBIAVIMAS IR INOVACIJOS, KAIP PAGRINDINIAI REGIONŲ PLĖTROS VEIKSNIAI

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Santrauka

Inovacijos ir verslumas regionuose – viena pagrindinių nacionalinės ekonomikos plėtros priemonių. Labai svarbu skatinti kūrybiškumą, naujus mąstymo būdus, nuolatinį individų mokymosi procesą. Pateikiami keli požiūriai, kaip matuoti ekonomikos ir konkurencingumo lygį regionuose.

Pasaulio konkurencingumo indeksas kiekvienos šalies konkurencingumą vertina pagal 12-a konkurencingumo veiksnių, kuriuos sunku taikyti regiono ar konkrečios organizacijos lygmeniu dėl nepakankamų

statistinių duomenų regioniniu lygmeniu. Inovacijos yra pagrindinis vystymosi ir konkurencingumo veiksnys individualiu (individualiu, verslo) ir instituciniu (vietos valdžios institucijų, regioniniu, nacionaliniu ir pasaulio) lygmenimis.

Mokslinė straipsnio problema – kūrybiškumo, žinių kūrimo ir sklaidos poveikis bendradarbiavimui negali būti vertinamas, remiantis kiekybiniais duomenimis.

Straipsnio tikslas: sukurti individualaus institucinio lygmens bendradarbiavimo paramos modelį, kurį būtų galima taikyti plėtojant regionų verslumą, įvertinus išorinės aplinkos veiksnius.

Metodai: mokslinės literatūros, statistinių duomenų, politinio planavimo dokumentų analizė, empiriniai tyrimai nacionaliniu lygiu.

Atlikus tyrimą galima teigti, kad abipusio bendradarbiavimo sistemos kuriamos tiek vertikaliai, tiek multidimensiškai: *pasaulis–ES–šalis / regionas–vietos bendruomenės–bendrovė (žmogus)*. Individualiu lygmeniu verslininkas bendradarbiauja su kitais verslininkais ir institucijomis, kai visi ryšiai yra individualaus pobūdžio, nes asmuo visada komunikuoja su kitu asmeniu, kuris atstovauja institucijai. Bendradarbiavimo plėtrą lemia komunikuojančių žmonių pažintiniai gebėjimai ir bendravimo įgūdžiai bei supratimas, kaip turėtų atrodyti bendradarbiavimas.

PAGRINDINIAI ŽODŽIAI: *naujovės, regioninė plėtra, bendradarbiavimo lygmuo*.

JEL CODES: M21, O18, R11

Received: 2019-03-20
Revised: 2019-04-21
Accepted: 2019-05-05