
Understanding entrepreneurship development in Latvia: a cross-disciplinary approach

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Abstract: This paper analyses economic and educational challenges on the way of understanding and formation of entrepreneurship in Latvia in its almost 20-year long post socialistic period. Along with the state support programmes for small business development, entrepreneurship as a new concept is researched integrating as well the world experience in this field. It is shown that entrepreneurship is a dynamic system of the components determined in mixed methods research. The elaborated holistic functional-structural model of entrepreneurship illustrates that entrepreneurship can be developed holistically as a system when students identify, generate and realise opportunities into new personal, social or economic values not only in the context of specialised entrepreneurial disciplines, but within a wide range of disciplines in the unity of theory and practice.

Keywords: entrepreneurship; enterprise; higher education; small business; innovations; Latvia.

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Biographical notes: Tatjana Koke is a Professor of the University of Latvia. Since 2007, she has been the Minister of Education and Science of the Republic of Latvia. Her pedagogic activities encompass master and doctoral programmes lecturing, supervising and reviewing master and PhD theses. She is a member of UNESCO International Education Bureau Council, Genève; of European Adult Education Association, Executive Board; of Doctoral Council in Pedagogy and of Latvian Adult Education Association, Board. Her research interests are focused on lifelong learning; adult education – social pedagogical basics of adult education and contemporary research of it; and on higher education – criteria of education quality and its assessment, study programme productivity, problems on developing learning society, etc.

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Karine Oganisjana is a Master of Pedagogy. In 2009, she finished her Doctoral studies in Pedagogy in the University of Latvia and passed the pre-defence of her PhD thesis under the scientific supervision of Tatjana Koke. She has worked in different areas of pedagogy for 20 years – teaching physics, mathematics and English, writing problem books on physics commissioned by the Ministry of Education and Science of the Republic of Latvia. The theme of her doctoral research is ‘The development of students’ enterprise in study process’. The findings of the research were presented in different Latvian and international scientific conferences and summer schools and had published in scientific journals. She has participated in Latvian and international projects together with Tatjana Koke and Natalja Lace.

1 Introduction

The reinstatement of its independence in 1990 after about 50-year long socialistic past meant not only moral satisfaction with the rectification of the historical injustice in Latvia but as well a real challenge to the creation of its new economy and politics and regain its status among the other European countries. People who did not have any prior experience of creating their own businesses or any orientations in market economy had to survive and act in new economic and political conditions. The official pedagogy, being in unconditional submission of the political system, was not meant to foster entrepreneurial mindsets in pupils and students due to the incompatibility of entrepreneurialism and socialism. That might be the reason why there was not any correlation between the level of education and entrepreneurial activity of the first business starters of that period.

Looking back into that 20-year long period today it seems unbelievable that market economy with entrepreneurial relationships has been created for such a short period of time starting with trial and error method. In order to provide entrepreneurial practice with a proper theoretical background, entrepreneurship ought to be researched and the means of its development have to be elaborated. In the post-modern society it has become even more topical in the context of lifelong learning with the recognition of entrepreneurship as one of the eight lifelong learning key competences.

The aim of the paper is to study the concept of entrepreneurship and the prerequisites for its development on the basis of the expertise of the scholars of different regions of the world and the entrepreneurial experience in Latvia combining economic and educational aspects.

The methods used are analysis of scientific literature on entrepreneurship, normative documents, statistical data, qualitative content analysis, factor analysis, comparison and integration of the findings of the qualitative and quantitative phases of the study; the modelling of enterprise.

2 The first impulse to entrepreneurial activities in Latvia

The development of entrepreneurial activities, the same as of the whole market economy in Latvia, started in 1990; the operation of small enterprises was governed by the LR laws 'On business activity', 'On limited liability companies' adopted in 1990 and other relevant legal provisions. As a result, Latvian small and medium-sized enterprises play a significant role in national economy. In 2008, there were 69,863 economically active business entities (excluding agricultural and fishing farms and self-employed persons, who perform economic activity), 99.3% of which could be classified as SMEs. Total number of persons employed by SMEs constitutes 69.9% of the total number of persons employed in the private sector, which accounts for 63.2% of the gross domestic product (GDP). The distribution of SMEs by size (number of persons employed) is similar to SMEs structure in other EU member states: micro businesses constitute 78.6%, small businesses – 17.3%, medium-sized businesses – 3.5% [Ministry of Economics of Republic of Latvia, (2009b), p.108].

Despite the official statistics for 2008 of 31 enterprises per 1,000 residents in Latvia [Ministry of Economics of Republic of Latvia, (2009a), p.108], in reality it had reached the level of 56 business entities per 1,000 residents, which is close to the average EU indicator (40–60 enterprises per 1,000 residents), if taken into account all legal and physical entities which are engaged in business activities.

However, the further progress of entrepreneurship in Latvia was possible on the basis of thorough exploration of the first steps of entrepreneurial activities, which was conducted from 1995 to 2001 by the Central Statistical Bureau. The survey was realised in several rounds: in 1995, 1997 and 2001. The information within the framework of the survey was obtained from the respondents of the questionnaire – owners or managers of small enterprises. The main conclusions made were:

- 1 in order to enable entrepreneurs to use the opportunities available in the country effectively, it is necessary to provide wider information about the possibilities of getting *knowledge on entrepreneurship and its development*, as well as on risk assessment methods

- 2 in order to enable both the existing and newly established enterprises to find their niche and utilise the resources purposefully already at the very start, it is necessary to provide *state support* with regard to research of market saturation and competition.

2.1 Challenges to understanding entrepreneurship in Latvia

In the very beginning of the entrepreneurial era in Latvia several study programmes were created in Riga Technical University and in the University of Latvia; academic staffs attended various retraining entrepreneurial courses abroad. Gradually entrepreneurship has turned from being traditionally an economic topic into a problem of all the education system as one of the lifelong learning key competences necessary for personal fulfilment, social cohesion and employability in a knowledge society (Commission of the European Communities, 2005). The topicality of entrepreneurship research became obvious in all levels both objectively and subjectively (Oganisjana and Koke, 2008).

The first problem facing was of linguistic character. The literature used was mainly in English in which researchers used the word ‘entrepreneurship’ for characterising both process and person’s different qualities, traits, behaviour and their combination, while the Latvian analogue of the word ‘entrepreneurship’ (‘uzņēmējdarbība’) means activity and process only. In order to be able to use all the literature on entrepreneurship in full measure, it was decided to translate ‘entrepreneurship’ into Latvian as:

- 1 ‘uzņēmējdarbība’ with the meaning of process
- 2 ‘uzņēmējspēja’ concerning an individual’s traits, different qualities and behaviour as defined by Veronika Bikse (Bikse, 2009).

The second problem was connected with the confusion of the meanings of the concepts of business and entrepreneurship in the Latvian publications. The Latvian analogue of the word ‘entrepreneurship’, according to the Terminology Commission of the Latvian Academy of Sciences, is used with the meaning of regular economic activity (LZA Terminoloģijas komisija, 2002), which is closer to the meaning of the word ‘business’ but not ‘entrepreneurship’ in English. This approach is as well reflected in the research ‘*Society Integration and Business: the Ethnic Dimension*’ conducted by Baltic Institute of Social Sciences and Institute of Economics of Latvian Academy of Sciences (Treikale et al., 2004), which in its Latvian version has the word ‘uzņēmējdarbība’ as an equivalent to the word ‘business’ (Baltijas Sociālo Zinātņu institūts, LZA Ekonomikas institūts, 2004), which shows that ‘*entrepreneurship*’ is equated to ‘*business*’.

2.2 The state support to private initiative and innovation in Latvia

The state support for small business has manifested itself in a number of Latvian national programmes and initiatives.

The first draft of the national programme for the development of small business, which was elaborated by the LR Ministry of Economics, was presented on 20–22 September, 1995 in Riga. The elaboration of this program and its simultaneous implementation took place until the first quarter of 1997 including. This was the period of closer cooperation between SMEs and different EU institutions, establishment of the SME Credit Guarantee Fund, Business Incubator, Latvian Technological Park, Business Support Centre and other instruments of support for small business. In 1997, the Latvian

programme for the development of small and medium-sized enterprises for 1997–2001 was adopted.

In 2003, the elaboration of the new programme of development of small and medium-sized enterprises has commenced. On 27 January 2004, the LR Cabinet of Ministers approved ‘The guidelines of the development policy for small and medium-sized enterprises’, which laid down the basic principles of governmental activities, long-term goals and sub-goals, as well as key areas of activities with regard to SME development policy. The goal of the *guidelines* was to ensure promotion of favourable environment for carrying out entrepreneurial activities, to stimulate initiative of entrepreneurs and minimise general risk, to eliminate obstacles for entrepreneurship, to contribute to the stability and effectiveness of the financial system and equity market in order to enhance the competitiveness of enterprises in the market. The guidelines envisaged implementation of the policy based on the best practices of advanced countries, which was to be realised in accordance with the key activity areas highlighted in the European Small Enterprise Charter, simultaneously taking into account also specific problems of Latvian SMEs development.

For implementing the guidelines, on 25 May 2004, the LR Cabinet of Ministers approved ‘The Latvian development programme for small and medium-sized enterprises 2004–2006’ to promote the implementation of the goals of the SMEs development policy.

Realisation of the programme envisaged the following focus areas of activities:

- creation of favourable business environment, especially with regard to SMEs
- facilitation of access to financial resources for developing small and medium-sized business
- development of human resources and new business initiatives
- enhancement of competitiveness of SMEs
- analysis of business environment and development of additional measures for territories with low socio-economic development.

For most of business support activities laid down in the programme, it was envisaged to attract co-financing from the EU structural funds.

Taking into account the fact that 2006 was the final year of the Latvian SMEs development programme for 2004–2006, as well as the year of implementation of the activities under the National Innovation Programme 2003–2006, as well as pursuant to the practice of the European Commission to view the planning of development policy of business, innovation and industry in their interrelation, the LR Ministry of Economics elaborated a new programme for promoting competitiveness of business and innovation activity for 2007–2013.

The programme was aimed to:

- specify the principles and policy of activities with regard to enhancement of competitiveness of businesses, innovative activities and industrial development
- describe the vision for enhancing competitiveness, innovation and industrial development for the following seven-year period

- provide description of key goals and evaluation of factors which might affect these processes, as well as estimate the volumes of resources and scale of activities required for implementation of the programme.

However, as practice shows, the problems of development and competitiveness of SMEs can only partly be resolved by state support. It is becoming obvious that a special emphasis should be placed on educational aspects of promoting entrepreneurship.

3 Analysis of the world experience for disclosing the matter of entrepreneurship in Latvia

Taking into account the relative novelty of the topic of entrepreneurship in pedagogy, mixed qualitative and quantitative methods were used in this research with a sequential qualitative – quantitative exploratory design (Tashakkori and Teddlie, 2003; Cropley, 2002). The research of PhD thesis '*The development of students' enterprise in study process*' by Karine Oganisjana under the scientific supervision of Tatjana Koke was conducted from 2004 to 2009 with the participation of 450 students of seven higher educational institutions of Latvia, as well as of 51 participants of Comenius-Grundtvig contact seminar from 21 European countries. Advisory opinion on problems of economics was rendered by Natalja Lace.

In line with today's European tendencies to consider the concept of entrepreneurship in wide personal, social, cultural and economic contexts (Commission of the European Communities, 2005), which moves it closer to the meaning of enterprise (Kearney, 2006), it was decided that the research subject should be 'the development of students' enterprise' which is considered and researched within the frames of the concept of entrepreneurship with further expansion of the context from economics into all spheres of human activities.

It is an inductive research with the integration of the understanding of the concept of entrepreneurship from economics, business, management, psychology, sociology, and education policy. The wide range of positions revealed in the course of the analysis of literature and documents shows the absence of a consistent universal theory in entrepreneurship though there are a great number of competitive theories and approaches.

While the Americans define entrepreneurship as the pursuit of opportunity beyond the recourses one currently controls, tended to values and quick commitment, the Europeans mainly comprehend entrepreneurship as a certain set of administrative and managerial skills for controlling resources for long duration evolutionary commitment (Stevenson, 2000; Twaalfhoven and Wilson, 2004).

The categorical ambiguity of entrepreneurship has split the scholars into different groups; while a group of scholars argue that entrepreneurship is the *process* of creating new values: organisations, products, services, technologies, etc. (Schumpeter, 1934; Shane and Venkataraman, 2000; Bygrave, 1993; Gartner, 1988; Drucker, 1993), another group of researchers ascribe entrepreneurship *individual's different specific characteristics, traits, behaviour or their combination* (McClelland, 1961; Hornaday and Bunker, 1970; Gibb, 2007; Brockhaus, 1982; Kearney, 1999; Wennekers and Thurik, 1999).

Researchers have tried to find out the most specific profiles of entrepreneurship to create concise theories. But a chain of analyses has shown that entrepreneurship is a multi-component concept and its essence cannot be squeezed into one or two components only. Moreover, the review of different researches and criticism of various theories have served as a ground for concluding that entrepreneurship is not just an additive set of various categories, but a system, which means that its components separately do not have the properties of entrepreneurship as a whole; so they cannot substitute entrepreneurship (O'Connor and McDermott, 1998).

The way this idea was formed will be demonstrated on the examples of achievement motivation and risk taking.

- 1 David McClelland's theory of achievement motivation claimed to be a theory for economic growth (McClelland, 1961). He argued that entrepreneurs had a higher need for achievement than non entrepreneurs. What's more, his theory was implementable because achievement motivation can be learned. Therefore

“it formed the basis of training programmes aimed at stimulating entrepreneurship in underdeveloped regions of the world. It was used to evaluate would-be entrepreneurs. It was about as simple and elegant a theory as you could have wished for in the social sciences. It was so widely accepted that achievement motivation featured prominently in entrepreneurship textbooks. But it was a false theory. A quarter century of subsequent research eventually found that entrepreneurs have no more need achievement than comparable non-entrepreneurs. It shows how one simple, neat, but incorrect theory can mislead a research field.” [Bygrave, (1993), pp.258–259]

Brockhaus (1982) analysed some studies on the effectiveness of achievement training courses, which disclosed that achievement motivation training courses were not successful when the participants' opportunities to act were stifled by general business environment. Thus, it can be concluded that only achievement motivation cannot substitute the whole entrepreneurship, though nobody doubts that successful entrepreneurs do not have low achievement motivation.

- 2 The situation with risk taking is also disputable. While several researchers argue that entrepreneurship starts with risk taking (Knight, 1942; Hornaday and Bunker, 1970; Rushing, 1999; Bosma et al., 2002), some others, on the contrary, state that entrepreneurs minimise it to such an extent that they do not ever have to take risks at all (Drucker, 2007; Taffi, 1981; Gibb, 2007; Korunka et al., 2003; Brockhaus, 1982; Palmer, 1971). Stevenson (2000) cites an extremely successful entrepreneur who said “My idea of risk and reward is for me to get the reward and others to take the risks”.

The research ‘*Society integration and business: the Ethnic Dimension*’ conducted by researchers of Baltic Institute of Social sciences and Institute of Economics, Latvian Academy of Sciences, revealed the ethnic dimension of risk taking. If ‘a typical ‘Russian’ company is more dynamic and more risky, ‘Latvian’ companies are said to be calmer and more humble’ [Treikale et al., (2004), p.74]. That means entrepreneurship is possible both with high and low level of risk taking.

Similar analyses of other entrepreneurship categories have enabled to conclude that entrepreneurship is neither achievement motivation, nor risk taking; neither organisational skills, nor knowledge and so forth, if we consider these categories

separately as substitutes for entrepreneurship. It can be concluded that there should be a definite compensation mechanism, with the help of which the low level of its one component is compensated with the high level of other components in such a way that all the mechanism is able to function as a whole. The main idea of the approach in this research was not to find out which of the theories is better than others but maximally integrate them all, as they are correct within certain limits and, therefore, reflect only some of the aspects of entrepreneurship. Entrepreneurship must be treated holistically as a system which requires:

- 1 the determination of its structure
- 2 finding out the character of interconnections among its components.

3.1 *The structure of entrepreneurship*

The research is characterised by an initial phase of qualitative data collection and analysis followed by a phase of quantitative data collection and analysis [Tashakkori and Teddlie, (2003), pp.225–228]. The priority is given to the qualitative aspect of the study. The findings of these two phases are integrated during the interpretation phase.

3.1.1 *Qualitative phase*

The structure of entrepreneurship (as well as enterprise) was determined by using qualitative content analysis of the text composed of 50 interpretations of the concepts of ‘entrepreneurship’, ‘entrepreneurs’ and ‘enterprise’ according to Phillip Mayring’s ‘Step model of inductive category development’ (Mayring, 2000); the coded data were processed with AQUAD 6.0 (analysis of qualitative data) programme (Huber and Görtler, 2004). The results revealed nine key components of entrepreneurship specified by 108 indicators (numbers are shown in brackets next to each component):

- 1 ‘Personality traits’ (13)
- 2 ‘Motivation’ (7)
- 3 ‘Cognition’ [structured into *thinking* (9); *orientation in changing environment* (5); *self-concept* (4); *attitudes* (5)]
- 4 ‘Needs’ (7)
- 5 ‘Emotions’ (3)
- 6 ‘Abilities’ (17)
- 7 ‘Learning’ (3)
- 8 ‘Skills’ (21)
- 9 ‘Behaviour’ (14).

For demonstration of the outcomes of the research, the indicators of the entrepreneurship component ‘Skills’ are given below in Table 1.

Table 1 Indicators specifying entrepreneurship component ‘Skills’

<i>Component</i>	<i>Indicators</i>
Skills	<i>Organisational skills</i>
	1 To plan and organise
	2 To create social nets
	3 To manage projects proactively
	4 To manage situations holistically
	5 To think strategically
	<i>Social skills</i>
	1 To work cooperatively and flexibly in team with others
	2 To communicate, negotiate and inspire people
	3 To convince and influence
	4 To represent and explain one’s own ideas
	5 To take on the leadership and responsibility
	<i>Problem solving skills</i>
	1 To set goals and evaluate the resources needed for achieving them
	2 To identify potential opportunities and critically evaluate to which extent they correspond to one’s interests
	3 To monitor processes and evaluate those
	4 To understand and explain information
	5 To take optimal decisions in non – standard situations
	6 To recruit and manage resources
	<i>Skills of dealing with changing context</i>
	1 To be flexible and respond events without delay
	2 To identify, evaluate, manage and take risks when needed
	3 To think strategically
	4 To use creative ideas
	5 To analyse situation holistically

3.1.2 Quantitative phase

While the qualitative phase was based on the theoretical material and reflected the understanding of entrepreneurship by scholars and researchers in different regions of the world, the quantitative phase was mainly meant for creating the picture of understanding entrepreneurship by students in Latvia. For that in 2007–2008, 450 students of seven higher education institutions were asked to evaluate the level of importance and correspondence of different aspects according to their understanding of the matter of entrepreneurship.

The survey started with: “I think entrepreneurship is ...” and was followed by 40 aspects of entrepreneurship such as: the skill to evaluate and manage resources; optimism and ability ‘to see silver lining in every dark cloud’; flexibility in communication; autonomy and the ability to act independently reckoning mainly on oneself, etc. While evaluating, 0 corresponded to ‘not important’, 1 point – to ‘almost not important’, 2 points – ‘rather important than not’, 3 points – to ‘important’, 4 points – to ‘really crucial’.

The factor analysis of the data with SPSS 17.0 revealed one distinct factor with initial eigenvalue: total – 8.958 and cumulative variance – 22.394%. This factor is composed of: positive attitude to changes and innovations – 0.757; flexibility in changing environment – 0.658; original thinking and avoidance of stereotypes – 0.594; creative problem solving – 0.463; flexibility in communication – 0.426. This factor was named:

1 ‘creativity and flexibility in changing environment’

The other four factors have considerably smaller total initial eigenvalues varying from 1.930 to 1.273 and cumulative 45,766%. They were named into

2 ‘problem solving skills’

3 ‘locus of control and achievement motivation

4 ‘critical thinking and management of processes

5 ‘organisational skills’.

Kaiser-Meyer-Olkin (KMO) measure is 0.889, Bartlett’s test of sphericity – 0.000 and Cronbach’s alpha is 0.903. The five factors are included in the nine components of entrepreneurship determined in the qualitative phase. Indeed, the first factor ‘creativity and flexibility in changing situation’ is within the component ‘cognition’ (*orientation in changing environment and thinking*); the second factor ‘analytic problem solving skills’ is obviously a subcategory of the entrepreneurship component ‘skills’, etc.

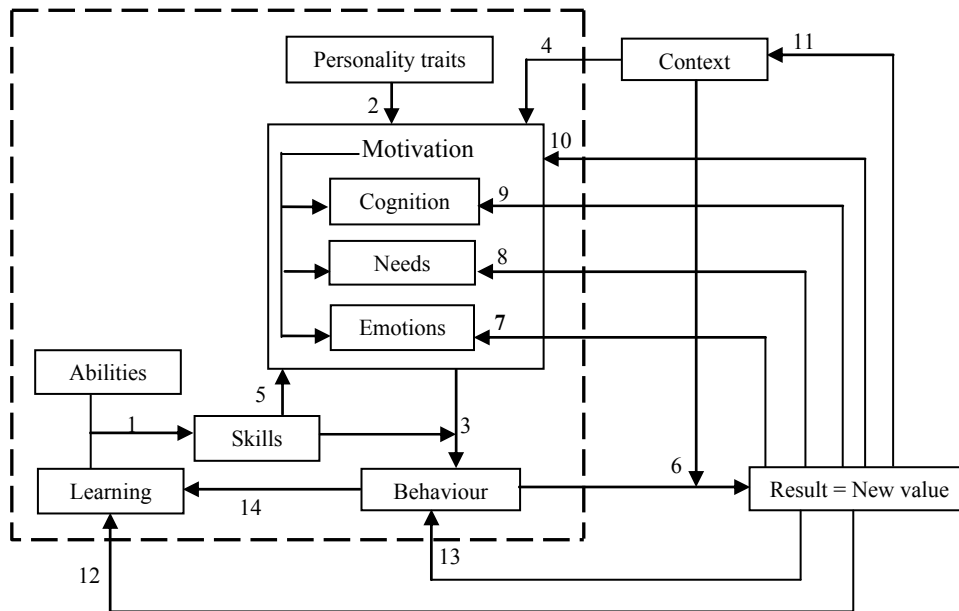
As the outcomes of quantitative phase are not in contradiction with the results of qualitative phase, the integration of both qualitative and quantitative data analyses brings to the conclusion that the nine component structure of entrepreneurship determined in the qualitative phase is appropriate to the Latvian context as well. However the main emphasis by the Latvian students is laid on creativity and flexibility in changing environment.

Since entrepreneurship is a system, to gain an insight into its matter it was essential to study as well the character of interconnections among its components.

3.2 *The holistic structural functional model of entrepreneurship*

The study of the interconnections among the components of entrepreneurship has enabled to elaborate ‘The holistic structural functional model of entrepreneurship’ (see Figure 1).

Figure 1 The holistic structural functional model of entrepreneurship elaborated by Karine Oganisjana



Entrepreneurship with its nine components determined in the qualitative phase of the study is located within the dashed lined box. Explanation of the interconnections among the components of the model:

- *Link 1.* The link among ‘Abilities’, ‘Learning’ and ‘Skills’ shows that by learning and practicing abilities, as they arise from nature without training, turn into skills ready for use at any point of time (Herron and Robinson, 1993).
- *Links 2 and regulation point 3.* The links among ‘Personality traits’, ‘Motivation’, ‘Behaviour’ and ‘Skills’ are built on the basis of ‘The causal impact of personality traits on performance, moderated by ability and mediated by motivation’ (Hollenbeck and Whitener, 1988) and ‘A structural model of the effects of entrepreneurial characteristics on venture performance’ (Herron and Robinson, 1993). ‘Personality traits’ have their effects on ‘Behaviour’ mediated by ‘Motivation’ (transition 2 → 3) and moderated by ‘Skills’ (regulation point 3).
- *Box of ‘Motivation’ and link 4.* ‘Motivation’ is depicted within one box together with ‘Cognition’, ‘Needs’ and ‘Emotions’ which make motivation’s three internal sources according to Reeve (2001), while its fourth source – external events are integrated in the ‘Context’ due to its meaning (link 4).
- *Link 5.* Depending on the extent to which ‘Skills’ are developed, a person has certain ‘Motivation’ to implement them in practice (Herron and Robinson, 1993).

- *Link 6.* Entrepreneurial 'Behaviour' which takes place in the interaction with the 'Context' brings to 'Results'. That means new personal, social or economic value is created (Schumpeter, 1934; Shane and Venkataraman, 2000; Bygrave, 1993; Gartner, 1988; Drucker, 1993).
- *Link 7.* The 'Results' and the new experience change the person provoking new 'Emotions' (Reeve, 2001; Dewey, 1974).
- *Link 8.* Maslow (1987) argues that 'Results' achieved satisfy the person's 'Needs' only partially or not at all. However, even so it makes the person review his needs and formulate new needs.
- *Link 9.* In its turn 'Results' and experience gained stimulate the person to reflect the course of things, review and evaluate, thus gaining 'Cognition', which in the future will serve as a basis for another experience and help to better understand the world around (Knowles, 1988; Kolb, 1984; Jarvis et al., 2003; Dewey, 1974; Kearney, 1999).
- *Link 10.* Even in cases of partial satisfaction of needs by the 'Results' achieved, it causes new 'Motivation' (Maslow, 1987; Dewey, 1974).
- *Link 11.* 'Results' achieved and the experience gained have active side which change to some degree the objective conditions under which experiences are had [Dewey, (1974), p.39]. That means that the results and new experience are able to cause changes in the 'Context'.
- *Links 12, 13 and 14.* Taking into consideration the three indicators of 'Learning':
 - learning from experience
 - learning by doing
 - learning from mistakes, determined in the course of qualitative content analysis, 'Results' are connected with 'Behaviour', and both of them with 'Learning'.

It is explained by the fact that experiential learning is realised by reflecting and within close learning cycles (Kolb, 1984; Jarvis et al., 2003; O'Connor and McDermott, 1998).

'The holistic structural functional model of entrepreneurship' is threaded by 16 learning cycles of different sizes and importance and all of them pass through behaviour which shows once again that entrepreneurship is not a special state of existence (Gartner, 1988) but it can be learnt only by doing. The biggest and the most crucial entrepreneurship training cycle is: 'Context' → 'Motivation' ('Cognition', 'Needs', 'Emotions') → 'Behaviour' → 'Results' → 'Context' though 'Learning' formally is not in it. This cycle can be interpreted in the following way:

- when the *context* offers an opportunity, the person may become *motivated* to realise it, first of all by evaluating the idea and all the aspects of the context through his *cognition*, then comparing its potential outcomes with his own *needs* and finally accepting it *emotionally*
- then certain *behaviours* follow (as mentioned above behaviour is moderated by skills (regulation point 3), which, like an adjuster may intensify behaviour if skills are appropriate for realising the goal, or, on the contrary, hold back from active

behaviour if skills aren't sufficiently developed for it; in its turn skills are formed by learning and training of person's abilities given him from nature as shown in link 1)

- behaviours may bring to certain *results*, which ought to be a new economic value in case of entrepreneurship and a new social value in a wider context, that is in case of enterprise
- the results are tested and evaluated in real life conditions (*context*), and the reflection of the course of the person's actions may cause new motivation, cognition, needs and emotions, which change the person.

This is what Peter Jarvis calls experiential reflective action learning, which, along with producing new skills and knowledge, can additionally be accompanied by other forms of learning involving attitudes, emotions and so on [Jarvis et al., (2003), p.64]. In fact the loop 'Context' → 'Motivation' ('Cognition', 'Needs', 'Emotions') → 'Behaviour' → 'Results' → 'Context' can occur many times causing reflective learning and moreover inducing other types of learning in other loops. So, 'The holistic structural functional model of entrepreneurship' features not only the interconnections among its components, but also illustrates in what way new values are created and how entrepreneurship is trained. On the basis of this model the holistic definition of entrepreneurship is formulated:

Entrepreneurship is a dynamic system of individual's causally interrelated personality traits, motivation, cognition, needs, emotions, skills and behaviour, which interacts with the context when identifying, generating and realising opportunities in order to create a new value.

It is obvious that no single component of entrepreneurship can bring to creation of any value without the integrative participation of the other components. This was proved in practice while analysing entrepreneurial performance in Latvia in the period of 2000–2008.

The official statistics (Central Statistical Bureau of Latvia, 2010), shown in Table 2, obviously demonstrates the growth of assets of all enterprises during eight years. The assets of small enterprises have grown 6.41 times, of middle-sized – 3.53 times and of large – 3.1.

Table 2 Growth of assets in the period from 2000 to 2008

Distribution of enterprises by number of employees	2000	2001	2002	2003	2004	2005	2006	2007	2008	
	Assets, thousand LVL	Indicator of dynamics								
Total	8,044,134.8	1	1.09	1.18	1.33	1.68	2.15	2.87	3.97	4.44
Small (0–49 persons)	2,975,051	1	1.1	1.19	1.46	1.48	2.90	4.07	3.55	6.41
Middle-sized (50–249 persons)	2,248,105.2	1	1.11	1.19	1.33	1.54	1.92	2.50	3.81	3.53
Large (250 and over)	2,820,978.6	1	1.06	1.14	1.19	2	1.55	1.90	4.54	3.10

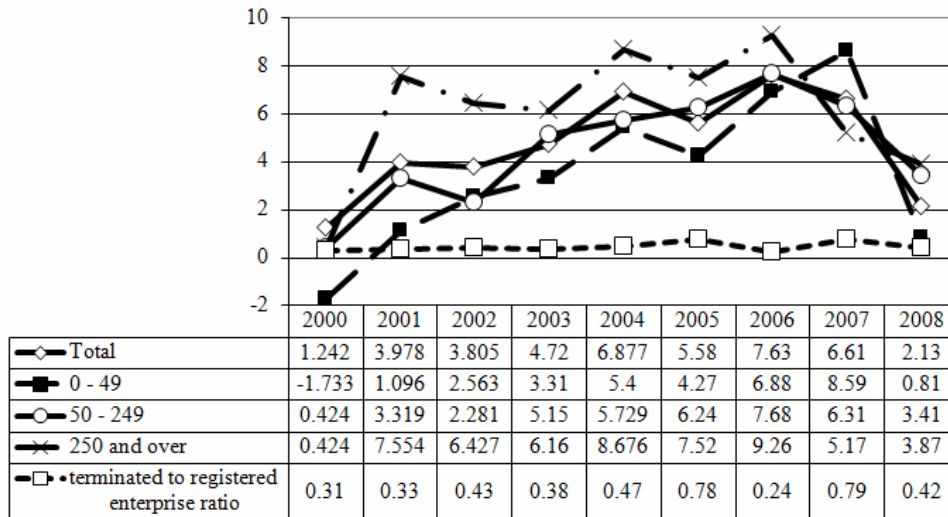
The dynamics of economically active business entities from 2004 to 2008 (2004 – 1; 2005 – 1.06; 2006 – 1.19; 2007 – 1.30; 2008 – 1.36) as well speaks for positive quantitative growth (Central Statistical Bureau of Latvia, 2009b).

Quantitative growth of assets, which logically is to imply growth of economic profitability, does not work in case of small enterprises as shown in Figure 2. For 2006 (before world economic crisis) return on assets of small enterprises (6.88) is smaller than of middle sized (7.68) and of large enterprises (9.26), though the speed of growth of assets of small enterprises comparing with the large companies is almost two times faster. Situation in 2007 and 2008 has changed and data demonstrates how economy of Latvia has gone into recession after economic growth lasting for several years.

Table 2 gives information about the quantitative aspects of entrepreneurship in Latvia, meanwhile Figure 2 reflects its qualitative aspects. Thus, the big amount of various enterprises created as a result of getting both certain *knowledge* on how to launch new enterprises and *state support*, were not sufficient for functioning effectively in the dynamically changing context bringing to the creation of new value.

According to the statistic data of ‘Lursoft’ and ‘Enterprise register’ of the Republic of Latvia, 14,208 legal commercial entities were registered in 2007, which is the highest point for the latest 13 years. It is for 6.0% more than in 2006 (13,404) (Lursoft, 2009). Though it must be mentioned that the number of enterprises closed down in 2007 was also very big – it made 11,186 enterprises (Lursoft, 2009) which speaks of certain problems of their sustainability.

Figure 2 Dynamics of economic profitability (percentage) and level of sustainability of enterprises



This process can be seen in Figure 2 (see the terminated to registered enterprise ratio).

The above mentioned shows that entrepreneurial activity cannot be sustainable and successful only on the basis of having certain *knowledge* on how to launch new enterprises without the other components of entrepreneurship. It also puts forward a principal question for discussion – can the quantity of enterprises be an appropriate criterion for judging about the entrepreneurial activity of a country?

4 Analysis of entrepreneurship development in Latvia

As stated in Section 2 small and middle-sized enterprises are the main promoters of the Latvian economy. SMEs comparing with large enterprises have a number of advantages covering different business spheres. They flexibly respond to changes in market demand, create new work places and contribute to forming middle class in the society. The most remarkable feature of SMEs is their ability to try new scientific and technical achievements in effective trials of economic innovations. Leaders in market can be only those who timely implement innovations in various aspects of their businesses instead of just caring for the analysis and functioning of financial, production, marketing and client service processes.

On the basis of the survey, carried out by Maastricht Economic Research Institute on Innovation and Technology (MERIT) and the Joint Research Centre (Institute for the Protection and Security of the Citizen) of the European Commission and Global Summary Innovation Index (GSII) scores determined in its course, the countries analysed were divided into four groups: global innovation leaders; next-best performers; group of follower countries and the group of lagging countries. Latvia is in the group of 'lagging countries', as in 2006 its GSII index was 0.21, while Finland's (the leader's) was 0.76 (European Innovation Scoreboard, 2006).

According to the data, obtained in the course of the survey carried out by Central Statistical Bureau of Latvia in 2004–2006 only about 14.7% of manufacturing enterprises and 17.8% of services were determined to be innovative as in that period they either introduced new or remarkably modified the existing products. Statistical data shows that there is certain correlation between the level of innovation and size of enterprise. 38% of Latvian manufacturing enterprises and 54.8% of service companies with more than 250 employees were innovative. As for small enterprises, this indicator was 9.8% for manufacturing enterprises and 15.8% for services (Central Statistical Bureau of Republic of Latvia, 2009a). It is mainly explained by low level of scientific potential.

Having analysed innovative activities, Ministry of Economics of Republic of Latvia came to the conclusion that only 0.8% of all employees are involved in researches and development. 60% of this category works in the sector of higher education, meanwhile only 14% – in private sector. As for EU, it makes 1.4% involvement in R&D, from which 49–50% are employed in private sector. The dominant sectors in the Latvian industry are connected with the processing of natural resources and utilising of low-cost labour. The weight of high technology products in industry makes 3–4%, while in economically developed countries it makes about 30% (Ministry of Economics of Republic of Latvia, 2009a).

The research conducted by Central Statistical Bureau of Republic of Latvia disclosed the main factors, which hinder innovation in Latvian enterprises; percentage of respondents who mentioned a concrete factor is given next to the factor:

- lack of financing (22.1%)
- high innovation cost (18.1%)
- too high economic risk (8.6%)
- not sufficient flexibility of rules and standards (7.3%)
- lack of qualified employees (6.8%)

- restrictions of organisational character (4.4%)
- lack of information about technologies (4.7%)
- lack of information about market (4.6%)
- customers' anxiety to buy new products or services (5.3%) (Denins, 2007).

Latvia as one of the youngest European Union countries suffers from the global financial and economic crisis after its swift economic development till 2008. One of the most painful problems as shown above among main factors hindering innovation in Latvian enterprises before the crisis was financing. It can be explained objectively, as the main sources of business financing were and are supplied in bank loans, which were not meant for developing innovative ideas. Bankers usually justify their reject to finance new business because of absence of collateral and of business and credit history, which cause uncertainty in forecasting incomes from new businesses. Moreover, in the beginning of 2009 the Latvian banks practically stopped business financing. It is obvious that the existing situation could be solved only by venture capital instruments.

However the analysis of venture capital carried out in Latvia revealed the following reasons why venture capital instruments had not gained the proper popularity in Latvia like in other EU countries (Laizans and Lace, 2007):

- there is lack of actually realisable and worthwhile ideas, which could be offered by the new enterprises
- lack of SMEs with rapid growing potential
- unwillingness of managers/owners to share certain technology nuances even when the investment agreement has been signed
- the fear of existing owners to lose their control over the enterprise.

The conclusions made above show that though financing is one of the most crucial aspects of successful entrepreneurship, yet, it is not sufficient to provide innovative activities and development of entrepreneurship in Latvia. The main accent should be laid on focusing on fostering certain entrepreneurial qualities and behaviours of people in lifelong learning.

5 Promoting students' enterprise in study process

In the course of the research 'The development of students' enterprise in study process', another model: 'Students' enterprise promoting sequential learning model' was elaborated and tested with students of the University of Latvia (August 2006 to June 2007). That model reveals the content of student's activities in study process which they are to realise in order to create new value while passing through the main entrepreneurship training cycle: 'Context' → 'Motivation' ('Cognition', 'Needs', 'Emotions') → 'Behaviour' → 'Results' → 'Context' (see Figure 1). As the creation of a new value is the key determinant of entrepreneurship and enterprise, the result of students' activity was evaluated on the Latvian and international levels at Comenius-Grundtvig contact seminar for partnership projects 'Learning by doing' held in Riga in 2007, with the aim to decide whether students had really created a new value. The

positive evaluation served as an evidence to conclude that the working with 'Students' enterprise promoting sequential learning model' can promote students' enterprise and entrepreneurship holistically as a dynamic system.

Entrepreneurship education should not be planned within refined entrepreneurship courses only, but should be introduced into non-business disciplines as well and integrated across the curriculum (Twaalfhoven and Wilson, 2004; Kearney, 1999; Hynes, 1996). As innovation is the cornerstone of entrepreneurship, implementation of different creativity techniques and constructive learning methods should be promoted in higher education for generating new ideas in the context of the study material uniting theory and practice. It must become students' habit and experience (Dewey, 1974) to try to see in what way knowledge got in university may be applied in practice in real life conditions.

6 Conclusions

Having analysed the situation in Latvia, it was concluded that financial support from the state is necessary but not sufficient for developing sustainable entrepreneurship in the country. All this ought to be reinforced by an appropriate entrepreneurship education in which innovation and creativity should be everyday norms.

As different approaches to explaining entrepreneurship reflect different sides of the truth about it, but do not encompass all the matter of entrepreneurship, the approach presented in this paper, aimed at not choosing the most preferable theory but at trying to maximally consolidate these positions for creating the holistic nature of entrepreneurship. Correspondingly, entrepreneurship development is considered not as the development of its separate components but of the dynamic system (see Figure 1), consisting of the nine components, in the course of certain activities, starting from the identification of opportunities in the context till their realisation into new values.

Therefore the concept of entrepreneurship as a lifelong learning key competence, consisting of entrepreneurial knowledge, skills and attitudes as so far it has been put forward in recommendation of the European Parliament and of the Council on key competencies for lifelong learning (Commission of the European Communities, 2005), should be revised and complemented at least with entrepreneurial behaviour. This conclusion is abreast with the latest European and Asian tendencies on comprehending competence stated at ASEM LLL network 'National strategies of lifelong learning' (Carlsen, 2009).

Higher education should be both theory and practice oriented to offer students the opportunity not only to perceive knowledge but as well motivate them to use it in the existing context, combining cognition with their needs, abilities and skills within certain activities for solving real life problems. As well different techniques of practical creativity should be acquired and trained by students to promote flexibility in changing environment.

The perspective of the further research is stipulated by the limitations of this research. That means that the research should be conducted on:

- with a larger number of participants for testing the 'Students' enterprise promoting sequential learning model'

- within the framework of different disciplines as well as on multi-disciplinary and cross-disciplinary basis
- in the context of other higher educational institutions.

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