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DOCTORAL THESIS

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**The Approaches of Public Administration in the Development of
Competitive Labour Force in Vocational Education and Training in Latvia**

**Publiskās pārvaldes pieejas konkurētspējīga darbaspēka sagatavošanā
profesionālajā izglītībā Latvijā**

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ANNOTATION

The dissertation “The Approaches of Public Administration in the Development of Competitive Labour Force in Vocational Education and Training in Latvia” is devoted to the role and tasks of public administrations in the development of competitive labour force in vocational education and training (VET) under the new social, economic and demographic circumstances. The central problem of the work is the existing and potentially necessary institutional and co-operation mechanisms enabling the public administrations to implement the training of such competitive labour force by the VET system. In the knowledge society competitiveness implies high-level skills and innovation competence also for the medium level labour force. This has been shown as a new challenge for public administrations requiring appropriate institutional and co-operation mechanisms among various stakeholders at national, regional and local level, as well as new forms of governance. This has challenged also the existing traditional co-operation schemes between the various types of education and research institutions. In this context, the public administrations themselves have to undergo transformation and become innovative in seeking solutions to these new challenges, despite the traditional and inherent conservatism and inertia of public administrations. As a result of theoretical and empirical research, the author of the work has defined the framework against which the strategic tasks and operations of public administrations is being analysed - when seeking solutions for the training of competitive labour force in VET in Latvia. This framework is being characterised by parallel centralisation and decentralisation processes in VET governance with the development of new governance mechanisms, the formation of new type of co-operation between various stakeholders at national, regional and local levels, the approaching (coming closer) of the world of education with the world of work, the internationalisation of VET and increasing possibilities to overtake the best practice from other countries and the need for international comparability of qualifications and increasing possibilities to overtake the best practice from other countries, as well as the overall changing of thinking paradigms, also in relation to the gradually blurring borderlines between various types and levels of education and training. Based on the defined framework, as well on a detailed analysis of the empirical research results, the author has identified the key challenges for public administrations in VET and described the existing and emerging institutional and co-operation mechanisms as the driving force that would contribute to the development of a competitive labour force in VET in Latvia. Within the framework of the thesis, conclusions have been drawn regarding the VET reforms in Latvia in relation to the research problem and recommendations have been developed for improved decision making for public administrations in the training of competitive labour force in VET.

ANOTĀCIJA

Disertācija “Publiskās pārvaldes pieejas konkurētspējīga darbaspēka sagatavošanā profesionālajā izglītībā Latvijā” veltīta publiskās pārvaldes lomai un uzdevumiem konkurētspējīga darbaspēka sagatavošanā profesionālajā izglītībā jaunajos sociāli ekonomiskajos un demogrāfiskajos apstākļos. Darba centrālais jautājums ir esošie un nākotnē nepieciešamie institucionālie un sadarbības mehānismi, kas ļauj publiskajai pārvaldei nodrošināt šāda konkurētspējīga darbaspēka sagatavošanu profesionālajā izglītībā. Zināšanu sabiedrībā konkurētspēja arī daudziem vidējā posma darbiniekiem ietver augsta līmeņa prasmes un inovāciju kompetenci. Disertācijā tas parādīts kā jauna veida uzdevumus publiskajām pārvaldēm, šī uzdevuma risināšanai veidojot atbilstošus institucionālos un sadarbības mehānismus nacionālā, reģionālā un vietējā līmenī, kā arī jaunas pārvaldības formas. Tas rada izmaiņas arī tradicionālajās augstākās izglītības, profesionālās izglītības un zinātnes sadarbības formās. Publiskajai pārvaldei arī pašai jāpārveidojas un jāklūst inovatīvai jaunu risinājumu meklējumos pretēji publiskās pārvaldes tradicionāli konservatīvajai un inertajai dabai. Teorētiskās un empīriskās izpētes rezultātā darba autore ir definējusi ietvaru, kas ietelmē publiskās pārvaldes stratēģiskos uzdevumus un darbību, meklējot jaunus risinājumus konkurētspējīga darbaspēka sagatavošanai profesionālajā izglītībā valstī. Minēto ietvaru raksturo paralēlie centralizācijas un decentralizācijas procesi profesionālās izglītības pārvaldībā un jaunu pārvaldības mehānismu veidošanās, ciešākas saites ar daudzveidīgiem sadarbības partneriem nacionālā, reģionālā un vietējā līmenī, izglītības un darba vides tuvināšanās (tajā skaitā darba vidē balstītas mācības), profesionālās izglītības internacionalizācija ar lielākām iespējām pārņemt labas prakses piemērus un tās starptautiskā salīdzināmība, kā arī vispārēja domāšanas modeļu maiņa, tajā skaitā mazinoties robežšķirtnēm starp dažādām izglītības pakāpēm un izglītības veidiem. Pamatojoties uz šo definēto ietvaru un detalizētu empīrisko datu analīzi, autore ir definējusi publisko administrāciju profesionālajā izglītībā galvenos risināmos uzdevumus, kā arī aprakstījusi esošos un nākotnē nepieciešamos institucionālos un sadarbības mehānismus kā dzinējspēku, gatavojot konkurētspējīgu darbaspēku Latvijas profesionālās izglītības sistēmā. Disertācijā ir ietverti secinājumi par profesionālās izglītības reformas gaitu pētāmā jautājuma kontekstā, kā arī izstrādāti ieteikumi labākai lēmumu pieņemšanai publiskajā pārvaldē konkurētspējīga darbaspēka sagatavošanā.

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LIST OF ABBREVIATIONS

ALMPM - active labour market policy measures

CC - competence centre (in VET)

CEDEFOP - European Centre for the Development of Vocational Training

CSR - Country Specific Recommendation

CTC - Chamber of Trade and Commerce

CVET – continuing vocational education and training

DGEAC - Directorate General for Education and Culture

DGEmploy - Directorate General on Employment

EC - European Commission

ECTS - European Credit Transfer System

ECL - Employers' Confederation of Latvia

EDG - Education Development Guidelines

ECVET - European Credit Transfer System in Vocational Education and Training

EQAVET - European Quality Assurance System in Vocational Education and Training

EQF- European Qualifications Framework

EQSS - Education Quality State Service

ERDF- European Regional Development Fund

ESF - European Social Fund

ET2020 - Strategic framework „Education and training”

EU- European Union

EU Council - Council of the European Union

Europe 2020 - Strategy Europe 2020. Strategy for smart, sustainable and inclusive growth

FTUCL - Free Trade Union Confederation of Latvia

HE – higher education

HEDs - heads of Education Departments of local governments

ICT - information and communication technologies

ILO - International Labour Organisation

IVET - initial vocational education and training

KSC - knowledge, skills and competencies

LIDA - Latvian Investment Development Agency (LIAA)

LO - learning outcomes

MoE - Ministry of Economics

MoES - Ministry of Education and Science

MoF - Ministry of Finance

MoW - Ministry of Welfare

NDP - National Development Plan of Latvia 2014–2020

NIS - National innovation systems

NRP - National Reform Program

OECD - Organisation for Economic Co-operation and Development

R&D - Research and Development

SEC - Sector Expert Council

StEC - State Education Centre

SEDA - State Education Development Agency (VIAA)

SES - State Employment Service (NVA)

SEQS - State Education Quality Service (IKVD)

TSCVET - Tripartite Sub-Council in VET

VET - vocational education and training

VET CC - vocational education and training competence centres

WBL - work-based learning

NEC - National Education Centre (VISC)

LIST OF TERMS

Apprenticeship

A long-established form of VET that includes alternating periods at the workplace and in a school or vocational training centre, in which a contract of training exists between the apprentice and the employer, and in which the apprentice is legally an employee, rather than a student, and receives a wage or allowance from the employer.

Assessment

The methods and processes used to evaluate the attainments (knowledge, know-how, skills and competences) of an individual, and typically leading to certification.

Competence or competency

The demonstrated capacity to perform: the possession of knowledge skills and personal characteristics needed to satisfy the special demands or requirements of a particular situation. The ability to apply learning outcomes adequately in defined context.

Continuing education

Education and training after initial education and training or after entry into working life aimed at helping individuals to: improve or update their knowledge and or skills; acquire new skills for a career move or retraining; continue their personal or professional development.

Dual system

Vocational training system, which takes place both in vocational schools and in enterprises. The term is typically used for apprenticeships in Germany, Austria, Switzerland, Denmark

Formal learning

Learning that occurs in an organised and structured environment (e.g. in an education or training institution or on the job) and is explicitly designated as learning (in terms of objectives, time or resources). Formal learning is intentional from the learner's point of view. It typically leads to validation and certification.

Informal learning

Learning resulting from daily activities related to work, family or leisure. It is not organised or structured in terms of objectives, time or learning support.

Innovation

An article or goods of new construction, a variety of an existing article (goods), new and effective technological process, production method, a new or improved management method etc. Innovation is related to the research development, it helps enterprises to preserve and strengthen their position in the market, be competitive, to increase their turnover, as well creates other preferences.

Labour force

The total number of people who are eligible to work, including employed and unemployed people, of a country, the world, etc.

Learning outcomes

Statements of what a learner knows, understands and is able to do on completion of a learning process defined in terms of knowledge, skills and competence.

Lifelong learning

All learning activity undertaken throughout life, which results in improving knowledge, know-how, skills, competences and or qualifications for personal, social and professional reasons.

Mentor

A trusted and experienced supervisor or adviser (noun). To serve as a teacher or trusted adviser (verb). Mentoring can be one of the techniques used, either formally or informally, to promote enterprise-based learning or experiential learning.

National qualifications framework

An instrument for the development and classification of qualifications (e.g. at national or sector level) according to a set of criteria (e.g. using descriptors) applicable to specific levels of learning outcomes.

Practice

Learning through actually doing something, by rehearsal or by repetition.

Qualification

Educational qualifications are the degrees, diplomas, certificates, professional titles and so forth that an individual has acquired whether by full-time study, part-time study or private study, whether conferred in the home country or abroad, and whether conferred by educational authorities, special examining bodies or professional bodies.

Recognition

Acknowledgment of learning, gained either through formal courses of education and training, or through previous life or work experience, and which may be used to grant status or credit in a subject or module.

Skill

The ability to perform a particular mental or physical activity which may be developed by training or in practice.

Social partners

Employers' associations and trade unions forming the two sides of a social dialogue.

Recognition of prior learning

Accreditation of learning (informal/formal) which the individual has obtained in the past.

Training

The development of skills, knowledge, attitudes or competences through instruction and practice.

Vocational education, or vocational education and training (VET), or technical and vocational education and training (TVET)

Vocational training, given in primary or secondary schools, in enterprises or in higher educational institutions designed to develop occupational skills. Education and training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market.

Work-based learning

Learning that takes place within the workplace using tasks or jobs for instruction and practical purposes. It may be formal and structured using instructional plans, or informal, occurring incidentally, in the process of normal daily work, for example, through experience, practice, mentoring or demonstration.

INTRODUCTION

In the context of recent economic, social and demographic changes qualified and competitive labour force has increasingly been recognised as a decisive factor for further successful development of national knowledge based economies. For this reason, the public administrations are faced with new tasks and challenges in developing such labour force. The new tasks have attracted attention of academic researchers worldwide and are extensively being analysed in the strategic documents of the European Union (EU). In recent years particularly the increased need for medium level specialists prepared by the vocational education and training (VET) systems is being stressed, and there is also a call to question the traditional distinctions between higher education (HE) and VET¹. There are claims that labour force with HE can address only part of the tasks in the labour market, and that excellent labour market abilities are being developed also by the VET systems². The growth of Latvian national economy in medium term will considerably depend on the structural policy for improving the economic competitiveness, implemented by the Latvian government³. The public administrations concerned with the training of labour force have to take into consideration the mid-term aims of this structural policy where export being considered as its major driving force, with parallel adjustment to sustainable development models. The need for a gradual change of the overall economic paradigm is being stressed with more focus on production-based branches.

Since priority is given to the production of goods and offer of services with higher added value, to higher investments in information and communication technologies (ICT) and innovation, specialists with respective competences will be needed at all levels, including VET. This calls for improvements in education and research systems, for their closer links to production processes and better co-operation mechanisms with the employers. This requires putting an even greater emphasis for improved VET systems in this respect⁴. In this context the public administrations have to become more aware of the need for innovation and flexibility in their governance and administrative procedures – to be able to respond to the emerging social, economic, demographic and technological challenges.

However, statistical data, as well as evidence in the form of regular requests from employers show an increasing lack of such competent medium level labour force. This indicates

¹ CEDEFOP Research paper No15 “Vocational education and training at higher qualification levels”, Luxembourg: Publications Office of the European Union, 2011.

² Gurthrie & Dawe, 2004. Overview. “Vocational Education and Training and Innovation”. Research readings. Edited by Susan Dawe. Publishes by Australian National Training Authority, pp. 10-19.

³ Report by the Ministry of Economics on the Development of National Economy in Latvia (June 2014) [vhttps://www.em.gov.lv/files/tautsaimniecibas_attistiba/2014_jun_eng.pdf](https://www.em.gov.lv/files/tautsaimniecibas_attistiba/2014_jun_eng.pdf), viewed 20.12.2014.

⁴ Report by the Ministry of Economics on the Development of National Economy in Latvia (June 2014) https://www.em.gov.lv/files/tautsaimniecibas_attistiba/2014_jun_eng.pdf, viewed 22.12.2014.

that the present system for preparing the medium level specialists is not fully operational, and the problem areas need to be identified and addressed. This creates a new task for public administrations in VET – to develop and implement adequate institutional mechanisms and co-operation schemes among the involved stakeholders in order to address the identified problems. Under the new circumstances the long established orders and procedures with low effectiveness have to be reviewed. In Latvia during the economic crises numerous education and research institutions had to be closed due to scarcity of resources and non-efficient work of a number of these institutions. A policy document was developed in 2010 (and implemented in the subsequent years) on the optimisation of the network of VET institutions⁵. An important development in response to the new challenges was the Concept for Raising VET attractiveness in Latvia and the involvement of social partners⁶.

Numerous academic research studies have been carried out in the world on the development of human capital by governments - as an investment for future returns. The theory of human capital, although challenged many times, has preserved its role in the theoretical thought on human resource development. More recently the focus of academic research is increasingly on systemic VET reforms and innovative approaches in VET implementation. The various aspects of human resources' development have been analysed in world congresses and conferences, for example, in the annual *World Conference on Educational Sciences*. Specialised research journals have been dedicated to this issue, for example the *International Journal of Public Sector Management*, *Management Development Review*, *Human Resource Management Review*, *Government Information Quarterly*, *Journal of Management Development*, *Knowledge Management Research & Practice*, *International Journal of Training Research*, *Journal of Vocational Behavior*, *International Journal of Educational Development*, *Journal of Workplace Learning*, *International Journal of Entrepreneurial Behaviour and Research*, *Teaching and Teacher Education*, *European Journal of Operational Research*, *The Economic and Labour Relations Review*, *Educational Research Review*, *International Business Review*, *Technological Forecasting & Social Change* and other. World renowned authorities in the field of academic research, e.g. M. Kuijpers, F. Meijers from the Hague University and C. Gundy, Carla Haelarmans from Maastricht University in the Netherlands, Kristof de Witte

⁵ Guidelines “Optimisation of the Vocational Education Institutions’ Network 2010 – 2015)” (confirmed by the Order of the Cabinet of Ministers of 6.01.2010, Nr 5), also available also at <http://izm.izm.gov.lv/nozares-politika/izglitiba/profesionala-izglitiba/7187.html> (accessed 10.02.2013).

⁶ Concept „Raising the Attractiveness of Vocational Education and Training and Involvement of Social Partners to Secure the Quality of Vocational Education” (confirmed by the Order of the Cabinet of Ministers of 16.09.2009, Nr 629), also available at http://izm.izm.gov.lv/upload_file/prof_konsepcija_ar-MK-rik-629.pdf, (accessed 10.02.2013).

from the Leuven Catholic University in Belgium, *S.F. Lee and KK. Lo* from Hong Kong Productivity Council Environment and Product innovation institute through their studies have contributed to the successful implementation of VET reforms in many countries.

In Latvia research and studies on professional development, vocational training and human resources development issues have been performed and promoted by Baiba Rivža, Juris Krūmiņš, Tatjana Kože, Andris Kangro, Inesa Vorončuka, Andris Grīnfelds, Andrejs Geske, Valerijs Praude, Andrejs Rauhvargers, Biruta Sloka, Andris Broks, Rasma Garleja, Veronika Bikse, Andris Kangro, Dainuvīte Blūma, Ilze Ivanova, Oskars Zīds, Māris Purgailis, Margarita Dunska, Māris Pūķis, Tatjana Volkova, Baiba Ramiņa, Edvīns Vanags, Inga Vilka, Ilze Brante, Artūrs Graudiņš and other researchers. Doctoral thesis on human resources development, VET and professional development have been defended by many scholars. Doctoral thesis on human resources development, vocational education and training, professional development have been defended by many scholars and will be referred to in Part 1.1. of the present thesis.

The classical ideas for the development of human capital are being continuously enriched with new research, and academic studies increasingly show the growing role of VET level specialists in the innovation process, especially regarding technology diffusion⁷. It is being stressed that a competitive VET level specialist today should be with innovation and technology competence (Rogers uses the words ‘innovation’ and ‘technology’ as synonymous)⁸. This requires additional research on new co-operation schemes in education, research and industry. This also opens up a wide field for further academic research on new approaches and paradigms in VET development.

Performing reforms under a globally new situation and without previous experience is a major challenge, taking into account the traditionally conservative character and inherent inertia of the public administrations. In Latvia, research on VET developments at systemic level is increasing but still remains scarce, especially regarding the challenges in the context of the above-described global developments. Therefore, such studies are urgently needed. Especially now when the current EU policy has announced the training of competitive VET level specialists a top level EU priority, in order to bridge the skills’ gap in the labour market. It is being represented also in recent administrative changes in the European Commission – the VET policy issues from November 2014 being transferred under the governance of the Directorate General on Employment (DGEmploy) - previously VET policy issues were under the governance of Directorate General for Education and Culture (DGEAC).

⁷ Toner.P. Innovation in Vocational Education. *The Economic and Labour Relations Review*, December 2010, vol.21 no. 2, pp.75-98.

⁸ Rogers, E.M. Diffusion of innovation (5th ed.). New York: Free Press, 2003.

EU policy wise - in the strategy „Europe 2020. Strategy for smart, sustainable and inclusive growth”⁹ (Strategy Europe 2020) the issue of qualified and competitive labour force has been raised as a high priority question for all the EU countries and their public administrations in the context of knowledge and innovation based economy. For Latvia the issue of innovation is of a particular concern, since for several years running Latvia occupies the lowest places in Europe as regards the implementation of innovation, according to Innovation Union Scoreboard 2011¹⁰. In the Latvian National Reform Plan¹¹ (NRP), based on the Strategy Europe 2020, prepared by the Ministry of Economics, the training of competitive labour force at all levels have been recognised as of paramount importance. The Education Development Guidelines 2014-2020¹² and the draft Amendments to the VET Law already address many of these challenges.

Dealing with the new challenges requires an extensive analysis of the existing academic research on the issue, a study of the experience and best practice of other countries, as well as the analysis of the actual experience and procedures of the Latvian VET system. Such studies are needed for preparing the basis for an empirical research among the involved Latvian stakeholders, as only through a theory and policy informed empirical study the key problems for public administrations can be identified and possible ways for addressing these problems at systemic level suggested. Nowadays it is not sufficient to make decisions on the introduction of new measures by the educationalists alone. The decision on the labour force development and the legal framework have to be thought out, proposed, discussed, coordinated and tested among a broad spectrum of stakeholders.

Not all public administrations are immediately ready for such challenges. The public administrations themselves need to reflect on their activities and become more innovative in their activities. There is an urgent need for research on the role, opinions and activities of public administrations and their co-operation partners in the development of competitive labour force by VET, as the topic is still under-researched in Latvia, and the results of such research can greatly contribute to better decision making by public administrations and improved functioning of the VET system in Latvia.

The field of study of the Doctoral Thesis concerns the role of public administration in the development of competitive labour force within the VET system – in relation to the existing

⁹ European Commission (2010). Europe2020: A strategy for smart, sustainable and inclusive growth. Brussels, 3.3.2010. COM(2010) 2020 final.

¹⁰ Innovation Union Scoreboard 2011, European Union, 2012

¹¹ National Reform Programme of Latvia for Implementation of the “Europe 2020” Strategy. Approved by a Decision of the Cabinet of Ministers, April 2011. The National Reform program is under the supervision of the Ministry of Economics, and it is developed and implemented in co-ordination with the Strategy Europe 2020, available also at http://www.em.gov.lv/images/modules/items/LV_NRP_lat.pdf (accessed 1.02.2013).

¹² Izglītības attīstības pamatnostādnes 2014.-2020.gadam, Saeima, 22.05.2014

or potentially needed institutional mechanisms and co-operation networks for the implementation of the task.

The problem of the Doctoral Thesis concerns the opinions and attitudes, the choice of conceptual approaches, the activities, institutional mechanisms and co-operation networks - by which public administrations in Latvia aim at reaching their set goals and targets in the development of competitive labour force in the VET system.

The research object and subject,

The research object: The public administrations in VET in the development of a competitive labour force.

The research subject: The existing and needed institutional and co-operation mechanisms for public administrations for the development of competitive labour force by VET system in Latvia and the potential of these mechanisms to address new challenges

The aim of the Doctoral Thesis is: To determine the key existing and potentially needed institutional and co-operation mechanisms and their value from the point of view of the involved stakeholders and to develop and describe the possibly best suited operational scheme that would allow the public administrations to ensure the development of modern competitive labour force by the vocational education and training system in Latvia.

For reaching the aim of the work the following tasks were set and implemented:

- To develop an academic research based theoretical justification on the need for public administrations to implement new approaches in the development of competitive labour force;
- To evaluate the EU strategic framework, as well as the strategic and legal framework in Latvia in the context of the research problem;
- To determine the framework of factors that in Latvia create the necessity for new approaches in VET for the development of competitive labour force, as well as to identify the tasks arising for public administrations in this respect;
- To identify the relevant existing institutional and co-operation mechanisms in the development of labour force within the VET system;
- To analyse the positive and negative aspects in the operation of the existing institutional and co-operation mechanisms in order to be able to suggest potential improvements;
- Based on the analysis to develop and describe the possibly best suited operational scheme enabling the Latvian public administrations to improve the development of a competitive labour force within the VET system, as well as to produce recommendations for improved decision making to implement such a scheme in practice.

Based on the academic and policy desk research and empirical research performed in the period 2012 - 2015, the author of the work has determined the general reference framework

for the development of the best suited scheme for the training competitive labour force by Latvian public administrations in VET. The reference framework implies:

The reference framework implies:

- 1) Major investments by public administrations in the VET system in recent years to raise VET attractiveness, against the traditionally low prestige of VET in Latvia and in the context of the centralisation, decentralisation and institutional network optimisation processes in the Latvian VET system, with the increasing and widening role of the VET competence centres in the life-long learning perspective and the increasing role of the local stakeholders in the VET planning and provision;
- 2) New demands for the development of knowledge, skills, competencies and innovation in VET in the context of fast changing social, economic and technological contexts, formation of new strategic partnerships in employment and education, also in the lifelong learning settings with a need for continuous growth and development, and permeability horizontally and vertically with other types and levels of education and training providers, nationally and internationally;
- 3) Traditionally weak links between VET and HE and research, with the subsequently limited role of VET in regard to innovation and excellence; weak links between VET and general education with inherent financial sensitivities for attracting learners to the both systems;
- 4) Necessity for closer linkage between the world of education and the world of work – arising from the objective labour market demand and requiring new co-operation schemes;
- 5) Arising respective need for the actual development and implementation of new types of institutional mechanisms and governance schemes at VET institution level and at VET systemic level with an increasing number of involved stakeholders;
- 6) Need for parallel analysing and overtaking or adapting the best practice from other countries, if appropriate, in order to address the new challenges more effectively and in compliance with modern European developments;
- 7) Increasing need for a common operational reference structure in Europe in the context of the internationalisation of VET processes and need for international compatibility and comparability – implying also implementation of the European Qualifications Framework (EQF)¹³ and development of respective national qualification frameworks (NQFs) related to European quality assurance framework (EQAVET)¹⁴, and with the potential for links with the European system for credits in VET (ECVET)¹⁵;

¹³ The European qualifications Framework for Lifelong Learning, https://ec.europa.eu/ploteus/sites/eac-efq/files/broch_en.pdf, accessed 17.09.2014)

¹⁴ Recommendation on establishing EQAVET to be found at - <http://www.eqavet.eu/gns/library/policy-documents/policy-documents-2009.aspx>

¹⁵ Recommendation on establishing EQAVET to be found at - <http://www.eqavet.eu/gns/library/policy-documents/policy-documents-2009.aspx>

- 8) A new type of challenge for all involved parties including the public administrations themselves - under the situation of unprecedented uncertainty of social, economic, demographic and technological developments, and in relation to the accompanying risks of this uncertainty; a need for the development and flexible and adaptable mind-sets and thinking paradigms – to become adjustable emerging previously unknown challenges.

Based on the determined framework the author of the work puts forward the following thesis to be defended:

1. With the increasing role of regional and local factors in the economic and social development, the existence of effective cooperation and decision mechanisms by regional and local level stakeholders are becoming as important as national level decision making mechanisms;
2. The success of the measures implemented by public administrations for increasing VET attractiveness in Latvia greatly depends on the success for raising the overall VET prestige and innovation has to be recognised as factor with high level potential for raising VET prestige.
2. The implementation of EU strategic priorities and overtaking the best practice from other countries will be beneficial for the Latvian VET system, provided the public administrations and the involved stakeholders critically evaluate the suitability of these measures for the Latvian situation and interests.
4. For effective operation of the existing and new institutional mechanisms and governance schemes substantial discussions among involved stakeholders and target groups are needed during the development process of these mechanisms and as an ‘information loop’ (feed-back) concerning the achieved results.

The limits for the topic of the Doctoral Thesis

The Doctoral Thesis does not aim at analysing the overall VET reform started in Latvia in 2009. Only those aspects of the reform will be analysed which are in compliance with the research problem – conceptual and strategic approaches, opinions, attitudes and activities of the public administrations in the development of competitive labour force in the VET system and the institutional mechanisms and co-operation scheme by which the public administrations ensure the reaching of their set targets and goals – contributing to the development of competitive labour force in Latvia.

The data used in the Doctoral Thesis

The data of the Central Statistical Bureau¹⁶ of Latvia, European Commission Statistical Office of The European Communities (EUROSTAT)¹⁷ and other international organisations;

¹⁶ Central Statistical Bureau of Latvia

¹⁷ Statistical Office of The European Communities (EUROSTAT)

data and results from 10 surveys and in-depth interviews by the author; research results from several projects.

The research approach and the research framework, the research methods

1. Analysis of research publications and analysis of research studies, policy papers and documents, legal acts, reports, statistical and impact analysis.

2. Empirical research providing data from nine surveys 2012 till 2015 at various levels.

The following qualitative and quantitative research methods have been used: in-depth interviews, focus group discussions, expert surveys. The **data processing methods** included: the indicators of central tendency or location (arithmetic mean, mode, median), as well as indicators of variability (variance, standard deviation, standard error of mean, range, etc.), hypothesis testing, regression and correlation analysis; variance analysis; and factor analysis.

For the surveys criteria and questionnaires were developed with respectively formulated questions for various relevant target groups: education, research, employment, economic, regional development and financial administrators (at national and local level), experts, representatives of sector employers and employees organisations. Before the implementation of the surveys the prepared questionnaires were tested among proved professionals in the above mentioned fields and in pilot groups.

The following qualitative research methods have been used: in-depth interviews, focus group discussions, expert surveys.

The following data processing methods have been used: the indicators of central tendency or location (arithmetic mean, mode, median), as well as indicators of variability (variance, standard deviation, standard error of mean, range, etc.), hypothesis testing, regression and correlation analysis; variance analysis; and factor analysis was applied.

The novelty of the research. The research topic is new in the Latvian context. The Thesis comprises the following research novelty:

1) The blurring of the borderlines between the VET and higher education (HE) and the role of innovation in the training of middle level competitive labour force have been substantiated as a new feature with the potential to raise the VET prestige;

2) The need for the changes in the VET governance schemes has been substantiated, revealing the increasing role of the local governments, social partners and other VET stakeholders in the context of regional development; the relevance of the information exchange among the stakeholders has been shown as the precondition for achieving the planned results;

3) For the first time the decisive role of the strategy chosen by the Latvian public administration – the *bottom-up* approach has been substantiated for the implementation as an innovative VET form – the work-based learning (WBL) in the form of a pilot project

implemented from 2013 till 2015; this can be considered as an European level example of good practice; the author has also contributed to new theoretical perspective in the development of public administration of Latvia – being the author of the Report of the Ministry of Education and Science (MoES) to the Cabinet of Ministers – on the implementation on WBL (the result sand conclusions form the research have been included in the Report.

4) The recommended co-operation scheme for the involved stakeholders in the development of competitive labour force by VET has been worked out, taking into consideration the research results on the VET development tendencies in Latvia and beyond its borders, as well as the actual results in the implementation of the VET reform.

The theoretical value of the research

The research results are of value in European and global contexts. The author has formulated and substantiated the ‘bottom up’ approach implemented by the Latvian public administration, revealing its decisive role in successfully implementing the high level VET priority – the WBL. This theoretically justified approach has been highly evaluated in the discussions with experts from the European Commission and OECD. The analysis of the broad theoretical and empirical material, as well as the evaluation of the best practice from other countries has allowed to draw conclusions on the further needed actions in the VET reform, as well as to develop proposals for improved decision making.

The practical value of the research

The research results have been used in the development of the Report of the Ministry of Education and Science on the introduction of work-based learning (accepted in the Cabinet of Ministers 12 August, 2014), in the development of the VET chapters in Education Guidelines 2014-2020, in preparing VET parts in Latvia and EU strategic development reports, including the mid-term evaluation of the Bruges communique short-term deliverables, the revision and improvement of EU tools ECVET and EQAVET, for taking part in bilateral discussions and interviews with the European Commission, CEDEFOP, OECD, UNESCO, ILO. The research will serve as a basis for further decision making by Latvian public administrations, taking into consideration the developments of the VET reform started in 2009, the current changes in the governance of VET institutions and the introduction of the innovative WBL approaches in the Latvian context. The key findings and conclusions have been taken into account in preparation for the Presidency of Latvia in EU Council - in drafting the Latvian VET priorities, conceptual approaches and Agenda of the DGVT and education ministers’ meetings, the *Riga Conclusions* (the mid-term deliverables for European VET till 2020), as well as in trio (Italy, Latvia, Luxembourg) and other discussions in the European Commission committees’ and working groups’ meetings.

Overview of the structure of the Doctoral Thesis

Chapter One. Theoretical justification on the new tasks for public administrations in the development of competitive labour force. In this chapter an academic research and scientific publications' based theoretical justification on the need for public administrations to implement new approaches in the development of competitive labour force is presented. The EU strategic framework in the context of the research problem is also analysed. The role of public administrations in the training of competitive labour force is shown as an inherent part of the challenges in modern labour market developments. Based on the research results from other countries, on research literature and relevant strategic reports, the theoretical framework for the performance of the empirical study of the present thesis has been developed. The tasks of public administration in this context have been reflected from a scientific perspective.

Chapter Two. The framework for VET developments in Latvia and the challenges for public administrations. In this chapter VET reforms and the development of competitive human resources by VET systems in Latvia have been analysed against the background of the actual social and economic processes. Framework for the key systemic VET developments in Latvia has been developed and presented, based on the analysis of the existing strategic, legal and institutional framework and co-operation schemes and networks. Key areas of challenges for public administrations have been identified in this context. This has contributed to the subsequent implementation of the empirical research with the aim of specifying the challenges and proposing solutions – through developing the possibly best suited operational scheme for public administrations and their co-operation partners to implement the training of competitive labour force by the VET system in Latvia.

Chapter Three. The tasks of public administrations in VET for improved labour force competitiveness in Latvia. In this chapter the results of the empirical study carried out by the author among top and medium level public administrators at national, regional level and local, as well as among employers and employers' organisations have been analysed - allowing the author to identify the governing opinions of the key stakeholders in relation to the research problems of the present works. The results of the analysis in its turn have allowed to define the key challenges for the public administrations in VET for the development of competitive labour force and to develop the possibly best suited scheme for improved decision taking in addressing the key challenges. Particular emphasis has been laid on the improved institutional mechanisms and co-operation schemes, as well as the set of pre-conditions (identified by the author through her empirical research) that are needed for a successful continuation of the VET reform under the new economic, social, demographic and technological conditions. Focus has been put also

on the lessons learnt from some recent innovative developments by Latvian public administrations, e.g., the implementation of the pilot project in work-based learning.

Conclusions and Recommendations. **Conclusions** regarding the research problem have been drawn. Traditional approaches were still prevailing in the opinions of public administrators in 2012 regarding the training of competitive labour force by the VET systems. Later surveys in 2014 among public administrators and employers indicate to new attitudes and a gradual change of the thinking paradigms. New and innovative institutional mechanisms and co-operation schemes have been created and the existing ones improved. Implementing EU VET policy initiatives and critically overtaking best practices from other countries has been identified as a meaningful aspect in the strategic approaches by the Latvian public administrations in VET. Also the role of the regional and local factors and the parallel centralisation and decentralisation process in VET governance have found reflection in the strategic approaches by VET public administrations, with a conscious and appropriate choice of ‘top down’ or ‘bottom up’ approaches, e.g. in the implementation of a key new initiative - the work-based learning. This has allowed the Latvian public administrations in VET to set a new platform for the training of competitive labour force under the new social, economic and demographic circumstances. However, innovation in VET is still under-addressed at strategic level and requires further solutions. Conclusions have also been drawn on a set of preconditions that determine the success of the VET reform and that should be taken in regard by VET administrations in Latvia, for example, when addressing the challenge of the prestige of VET in the Latvian society, as raising the VET attractiveness alone may not be sufficient for a breakthrough in VET public image. Regarding new modes of VET governance, the desired results can be achieved provided there is a continuous information loop and feedback from the involved partners and target groups on the results of the strategic approaches. In order to improve the implementation of innovation in VET, new strategic partnerships have to be created and co-operation schemes with general education and higher education institutions sought. At the same time good governance under the conditions of growing global uncertainty requires (self)reflection and flexibility, and this has implications for public administrations as well. Public administrations themselves have to become more flexible and innovative in order to respond to the new challenges effectively. This is a difficult task, given the traditionally inherent conservatism and inertia of public administrations. At the same time, developing flexible institutional mechanisms and co-operation schemes can offer improved solutions.

Recommendations have been prepared – arising from the identified challenges for public administrations within the determined framework, further on described in the suggested

operational scheme between the involved stakeholders for improved decision taking by public administrations in VET for the training of competitive labour force.

The basis for the empirical study

The author has prepared, organised and implemented several surveys, as well as taken part in several studies and research projects related to the research topic of the thesis. The surveys, studies and research projects are:

- 1) a survey prepared and carried out in 2014 - 2015 among public administrators in education, employment and economic and regional development on the need for introduction of innovative approaches in VET system in Latvia;
- 2) a survey prepared and carried out in 2014 – 2015 among micro, small, medium and large enterprises on the need for introduction of innovative approaches in VET system in Latvia;
- 3) in-depth interviews with top-level public administrators in education in Latvia in 2014;
- 4) a survey prepared and carried out in 2013 among local government top level public administrators in education on the need for introduction of innovative approaches in VET system in Latvia;
- 5) a survey prepared and carried out in 2012 among public administrators and experts in education and research;
- 6) a survey prepared and carried out in the spring of 2013 regarding the implementation of the European qualifications Framework (EQF) and the innovative learning outcomes (LO) approach through the EU ECVET tool – among ECVET pilot project managers in Latvia;
- 7) study of the results of the implementation of the pilot project in work based learning (WBL) – implemented by MoES starting from the academic year 2013/2014 and continued in the academic year 2014/2015. The author herself is directly involved in the implementation of the project and in the analysis of the achieved results – as a source of information for further informed decision taking by public administrations in VET;
- 8) a research carried out in 2013 on the needs of the Iecava region in Latvia in the context of education, employment and regional development¹⁸. A survey of entrepreneurs was included in the study on the local developments in relation to education and employment. The author jointly with the project group developed the questionnaires for surveys of various target groups, carried out surveys and interviews with respondents, analysed the survey results, participated in the planning of focus groups and carried out other tasks in relation to the

¹⁸ Results of the empirical research on European Social Fund project „Research of Needs of Iecava Municipality for Realisation of EU and other Financial Institutions Co – Financed Projects and Activities” are available on Iecava municipality webpage <http://www.iecava.lv/page/621>

specificities of the project research. For this reason vast empirical material has been available also for the use in the present work;

- 9) a study prepared and carried out in 2013 – 2014 on the compliance of the VET system in Latvia to the needs of the labour market, the development of co-operation model and organisation of training for mentors in practical training – developed within the framework of the Latvian – Lithuanian cross-border co-operation project “VocEdu”¹⁹. The author jointly with the project group developed the questionnaires for surveys of various target groups, carried out surveys and interviews with respondents, analysed the survey results, participated in the planning of focus groups and carried out other tasks in relation to the specificities of the project research.

In addition - the author has started expert work and research within an EU Erasmus+ supported policy project on work based learning in the Baltic states; the author has started research within an EU Erasmus+ supported project GUTS on intergenerational learning for better employability and social integration; the author has started research within the EU Tempus program project „Fostering the Knowledge Triangle in Belarus, Ukraine and Moldova (FKTBUM). The project topic is directly linked to the author’s studies on the implementation of innovation – on the knowledge triangle; a study performed in 2010 on the planned theses topic in the Namur University in Belgium – within the framework of the EU 7th framework research project „EGAIS” under the supervision of Professor Philippe Goujon²⁰ with interviews of high and medium level EU Commission officials and experts;

The list of publications. The research results and conclusions have been published or have been submitted for publication in the following peer-reviewed editions:

1. Sloka, B., Kantane, I., Buligina, I., Tora, G., Dzelme, J., Buligina, A., Tora, P. & Vilcina, A. Required Employee’s knowledge and skills from the Employers Perspective. *Economic Science for Rural Development*, Vol. 40, pp. 140-169, 2015. **EBSCO; Thomson Reuters.**
2. Buligina, I. & Sloka, B. Strategic Partnerships for the Development of Competitive Labour Force Through Vocational Education and Training. 15th EBES scientific conference in Lisbon, Portugal 8-10 January, 2015 (in print 10 p).
3. Sloka, B., Kantāne, I., Buligina, I., Tora, G., Dzelme, J., Buševica, R., Buligina, A., Tora, P. Employers Needs and Expectations for Qualified Employees (Case Study on Opinions in One of Regions in Latvia). *Economics and Business*, Vol. 27, 2015, pp. 69-75. **EBSCO.**
4. Buligina, I. & Sloka, B. Changing the VET Governance for Improved Labour Market Training – the international scientific conference „Conference on Marketing, Management and Economics” EUMMAS, Sarajevo, Bosnia and Hercegovina, 2014 (accepted for publication 9 p.).

¹⁹ Information available at

http://www.kurzemesregions.lv/projekti/Latvijas_un_Lietuvas_parrobezu_sadarbibas_programma/Profesionalas_izglitiba_pilnveidosana_atbilstosi_darba_tirgus_prasibam

²⁰ For more information on EGAIS project see: <http://www.egais-project.eu>

5. Buligina, I., Sloka, B., Dzelme, J., Tora, G. & Kantane, I. Changing the Management Paradigm of Education and Training for Improved Competitiveness. Proceedings of the 8th International Scientific Conference “Business and Management 2014” in Vilnius, 2014, pp. 700 – 708. **Thomson Reuters**
6. Buligina, I., Sloka, B., Dzelme, J. & Tora, G., Quality and Transparency in VET: New Challenges for Public Administrations in Latvia. Proceedings of the international ICEM conference in Riga, *Procedia - Social and Behavioral Sciences*, **Elsevier**, 2014, pp. 355-359. **Science Direct; Thomson Reuters.**
7. Buligina, I., Sloka, B., Dzelme, J. & Tora, G. Triple Helix for VET: New Challenges for Public Administrations. *ECONOMIC SCIENCE FOR RURAL DEVELOPMENT*, Vol. 35, 2014, pp. 217 – 225. **EBSCO, Thomson Reuters.**
8. Buligina, I., Sloka, B. Investing in Skills and Innovation – New Strategic Tasks for Public Administrations. *European Integration Studies*, Vol. 8, 2014, pp. 115-123, **EBSCO.**
9. Buligina, I., Putans, R. & Sloka, B. Coherence of Work Based Learning and Regional Development in Latvia. *Economics and Business*, Vol. 25, 2014, pp. 19 – 26. **EBSCO.**
10. Buligina, I. Innovation in Vocational Education – the New Tasks of Public Administration in Training Competitive Labour Force. *Journal of Economics and Management Research*. Volume 2, University of Latvia, 2013, pp. 26-40.
11. Buligina, I. & Sloka, B. Matching vocational training and labour market demands – the opinion of public administrations. *Economic Research*, 2013, pp. 299 – 310. **Thomson Reuters, SCOPUS.**
12. Buligina, I., Sloka, B. On the Demand of High Level Vocational Skills in the Labour Market. Proceedings of the Tartu University VI International Scientific Conference „New Developments in Organizational Performance: from Tangible to Intangible”, 11-12 April 2013, Tartu, Estonia, pp. 50-62.
13. Buligina, I., Sloka, B. Towards work-based learning – a new challenge for public administrations in VET reform”. Proceedings of the international ICEM conference “Economics and Management, Kaunas 2013, in disc (11p.).
14. Buligina, I. & Sloka, B. Reconsidering Labour Force Training to Enhance Innovation for Economic Development. Proceedings of 53rd International Scientific Conference of the Riga Technical University, October, 2012, in disc (9p.).
15. Buligina, I. & Sloka, B. Reconsidering Governance Approaches in Modern Labour Force Training. Proceedings of the International Scientific Conference “Evolution of International Trading System: Prospects and Challenges”, Sankt – Petersburg State University, October, 2012, pp. 69 – 79.
16. Buligina, I. Governance Aspects in the EU Research Policy to Support Innovation. Proceedings of the International Conference „New Challenges of Economic and Business Development”, University of Latvia, 2012, pp. 87 – 98, **Thomson Reuters.**
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2. Kantāne, I., Sloka, B., Buligina, I., Tora, G., Dzelme, J. Vocational Education and Labour market Demands in Kurzeme Region. International Scientific Conference European Integration and Baltic Sea Region: Diversity and Perspectives – 2015, June 11-13, 2015, University of Latvia.
3. Buligina, I., Sloka, B., Kantāne, I., Līce, A. Work-based learning: Employers' preparedness for Involvement. International Scientific Conference European Integration and Baltic Sea Region: Diversity and Perspectives – 2015, June 11-13, 2015, University of Latvia.
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17. Buligina, I. & Sloka, B. Approaches to Improved Institutional Mechanisms in Training Labour Force to Promote Innovation. 17th International Scientific Conference "Economics and Management-2012 (ICEM-2012)”, Tallinn University of Technology, Tallinn, March 28-30, 2012.
18. Buligina, I. Implications for Public Administration within EU Research Policy – Study of Ethical Aspects in the Governance of EU 7th Framework Technological Projects. International Scientific Conference “Current Issues in Economic and Management Sciences”, Riga, University of Latvia, November 10 – 12, 2011.
19. Buligina, I. 2011. Modern Approaches to Public Administration of Technological Research - On Reflexive Ethical Governance. Proceedings of International conference: European Integration and Baltic Sea Region: Diversity and Perspectives, Riga, 26 – 27 September, 2011.

Testing of the research results

The author has tested the research results by her participation in numerous local and international level events in relation to VET development – by her presentations, panel, round table and focus group discussions, interviews, bilateral discussions with the European Commission (EC), CEDEFOP, OECD, ILO, World Bank and other institution. In the capacity of the member of two working groups of the European Commission in the field of VET– on the implementation of ECVET and the ET2020 VET Thematic working group – thus having been able to test and promote the results of her research also among colleagues from other countries. As the nominated expert by the Ministry of Education and Science (MoES) for VET surveys performed by UNESCO, CEDEFOP, OECD and the EC, the author has been able to use the

acquired results of her research and studies to contribute to the Latvia and European level developments in VET. Over recent years the author has regularly reported and presented at European level in the Advisory Committee for Vocational Education and Training and in the European meetings of Directors General on VET. The author has prepared the Report of MoES to the Cabinet of Ministers - on the role of WBL in VET developments in Latvia (positively evaluated and approved in the Cabinet of Ministers 12 August, 2014). The author of the Thesis has been able to apply her research findings in the meetings under the Latvian Presidency of the EU Council – in discussions with European public administrators and social partners. The author has also participated in the drafting the “Riga Conclusions” – a European level document determining the mid-term deliverables for European VET developments till 2020, as well as in drafting the document on guiding principles for apprenticeships in European VET - thus contributing to theoretical and strategic developments of public administration in Europe.

CHAPTER 1. THEORETICAL JUSTIFICATION ON THE NEW TASKS FOR PUBLIC ADMINISTRATIONS IN THE DEVELOPMENT OF COMPETITIVE LABOUR FORCE

In this chapter the theoretical basis justifying the need for public administrations in VET to introduce new approaches in the training of modern labour force will be presented. The author's studies and analysis of the academic research on the operation and challenges for public administrations in implementing VET developments and reforms in relation to improved training of the labour force has allowed the author of the thesis to obtain a comprehensive panorama of the VET research topicalities, which in its turn has allowed the author to present her own vision on the most important tendencies in the work of public administrations to address the VET development challenges in Europe. Enriched by the analysis of EU VET strategic priorities in relation to the tasks for European public administrations implementing the national VET systems and reforms, the theoretical study performed by the author has proved to be a valuable framework for the subsequent in-depth analysis of the activities of the Latvian public administrations in VET, as well as the institutional mechanisms and co-operation networks (schemes) the public administrations in VET are implementing or potentially need to implement in order to develop a competitive labour force under the new social, economic and demographic situation.

The latest academic research shows – the public administrations are increasingly becoming aware of the need for innovative solutions in human resource development, including new approaches in VET administration and governance. The most recent research by Workman, Armsby, Durrant, and Frame²¹, Schomberg²², Sharif²³, Metsamuuronen, Kuosa and Laukkanen²⁴, Dawe²⁵, Hynninen, Ojala and Pehkonen²⁶, as well as McGrath²⁷ put a particular

²¹ Workman, B., Armsby, P., Durrant, A., Frame, P. (2011). CETL for Work – Based Learning: Enhancing Innovation and Creativity in Teaching and Learning. *Higher Education, Skills and Work-Based Learning*, 1(3), pp. 132-144.

²² Schomberg, Von R. (2012). Prospects for Technology Assessment in a Framework of responsible research and Innovation. In M.Dusseldorp & R.Beecroft (eds). *Technikfolgen abschätzen lehren: Bildungspotenziale transdisziplinärer Methoden* Wiesbaden: Vs Verlag. pp. 39-61.

²³ Sharif, M.N. (2012). Technological innovation governance for winning the future. *Technological Forecasting and Social Change*, 79(3), pp. 595–604.

²⁴ Metsamuuronen, J.; Kuosa, T.; Laukkanen, R. (2013). Sustainable Leadership and Future-Oriented Decision Making in the Educational Governance – a Finnish case, *International Journal of Educational Management*, 27(4), pp. 402-424.

²⁵ Dawe, S. Ed. *Vocational Education and Training and Innovation. Research Readings*, National Centre for Vocational Education Research (NCVER), 228 pp.

²⁶ Hynninen, S.-M., Ojala, J., Pehkonen, J. (2013). Technological change and Wage Premiums: Historical Evidence from Linked Employer – Employee Data. *Labour Economics*, 24, pp. 1-11.

²⁷ McGrath, S. (2012). Building new approaches to thinking about vocational education and training and development: Policy, theory and evidence, *International Journal of Educational Development*, 32, pp. 619-622.

emphasis on innovation in VET administration and governance, as well as the need and role of technological innovation in VET and human resource development. This is determined by the need to ensure closer links between the education and training processes and the actual work environment - already from early years of education and training - for better future labour force compliance with the actual labour market needs, as pointed out by Draycott and Rae²⁸, Ellström and Ellström²⁹, Thomas and Qiu³⁰, Workman, Armsby, Durrant and Frame³¹, Nikandrou, Brinia and Bereri³², Paisey, and Paysey³³, Haines, Rosseau, Brotheridge and Saint_Onge³⁴ and many other scholars. The both processes – promotion of work-based training and the implementation of innovation and technological competence, as well as entrepreneurial attitudes are often being addressed as a complex set of measures in the modern labour force developed by VET systems. Thus, also in the training of the medium level labour force, innovation and technological competence is becoming an inherent characteristic of the competitiveness of the labour force – in relation to the ability to adapt to various new situations, the ability to independently solve new or non-typical situations, to offer and implement new solutions, as well as be competent in the implementation (diffusion) of technological innovation. Due to this reason, in the present research the notion of competitiveness will simply not only general correspondence to the labour market demands but also aspects of innovation and technological competence – as a new task and challenge for VET public administrations in developing new systemic approaches in VET implementation.

Another topical issue in the recent academic research on VET is the issues of skills and the increasing role of various stakeholders in labour market relevant skills' provision, with a growing emphasis on regional and local stakeholders. This has been extensively studied by such researchers as Kothari, Kraker, Cörvers, Valkering, Hermans and Rikers³⁵, by Kuijpers, Meijers

²⁸ Draycott, M. & Rae, D. (2011). Enterprise education in schools and the role of competence frameworks, *International Journal of Entrepreneurial Behaviour & Research*, Vol. 17, Issue 2, 127-145.

²⁹ Ellström, E., Ellström, P.E. (2014). Learning Outcomes of a Work – Based Training Programme. *European Journal of Training and Development*, 28(1), 180-197.

³⁰ Thomas, H., Qiu, T. (2012). Work – Related Continuing Education and Training: Participation and Effectiveness. *Journal of Workplace Learning*, 24(3), pp. 157-176.

³¹ Workman, B., Armsby, P., Durrant, A., Frame, P. (2011). CETL for Work – Based Learning: Enhancing Innovation and Creativity in Teaching and Learning. *Higher Education, Skills and Work-Based Learning*, 1(3), pp. 132-144.

³² Nikandrou, I., Brinia, V., Bereri, E. (2009). Trainee Perceptions of Training Transfer: an Empirical Analysis. *Journal of European Industrial Training*, 33(4), pp. 255-270.

³³ Paisey, C. & Paysey, N.J. (2010). Developing Skills via Work Placements in Accounting: Student and Employer Views. *Accounting Forum*, 34, 89-108.

³⁴ Haines III, V.Y., Rosseau, V., Brotheridge, C.M, Saint_Onge, E. (2012). A Qualitative Investigation of Employee Business Awareness. *Personnel Review*, 11(1), 73-87.

³⁵ Kothari, A., Kraker, J. Cörvers, R. Valkering, P. Hermans, M. Rikers, J. (2013). Learning for sustainable regional development: towards learning networks 2.0? *Journal of Cleaner Production*, 49, pp. 114-122.

and Gundy³⁶, by Lansu, Boon, Sloep, and Van der Dam-Mieras³⁷, by Maurer and Cook³⁸, by Maxwell, Scott, Macfarlane and Williamson³⁹, by Plump⁴⁰ and many other.

In the present research innovative approaches in the public administration of VET, as well as ensuring innovation as part of the modern labour force trained by the VET system will have a particular focus, it being also a growing EU strategic VET priority. According to the author's research - different approaches have been accepted in various countries in VET regarding innovation at VET institutions' level⁴¹, e.g. on different frameworks for vocational education⁴², on interactive method use in vocational education⁴³, on closer co-operation with technological enterprises. Given regard to the numerous existing definitions and interpretations of the term 'innovation', it should be noted that generally the term represents doing something new or doing existing things in a new way. In the context of the present work the term 'innovation' will be used in several meanings, depending on the actual context.

The analysis of academic research show that public administrators are continuously attempting to give answer to the question - what is innovation in VET and what kind of innovation in VET they are aiming at as part of the modern tendencies in the labour market development. Innovation being closely related to knowledge management theory indicates to the new tendencies in VET administration as well – related to the growing need for increased intellectualisation of the VET systems. There are authors that use the word 'innovation' as synonymous to 'technology'⁴⁴, seeing the key role of VET in innovation (technology) diffusion which in itself requires comparatively advanced intellectual processes. With the very essence of the innovation concept remaining rather consistent, its contextual meaning and implications, according to the author's observations, are undergoing a substantial change in modern education and training context. The raised awareness that innovation has become a key factor

³⁶ Kuijpers, M., Meijers, F., Gundy, C. (2011). The Relationship between Learning Environment and Career Competencies of Students in Vocational Education, *Journal of Vocational Behavior*, 78, pp. 21-30.

³⁷ Lansu, A. Boon, J. Sloep, P.B. and Van der Dam-Mieras, R. (2013). Changing professional demands in sustainable regional development: a curriculum design process to meet transboundary competence, *Journal of Cleaner Production*, 49, pp. 123-133.

³⁸ Maurer, S.D. & Cook, D.P. (2011). Using Company Web Sites to E – Recruit Qualified Applicants: A Job Marketing Based Review of Theory Based Research. *Computers in Human Behaviour*, 27, 106-117.

³⁹ Maxwell, G., Scott, B., Macfarlane, D., Williamson, E. (2009). Employers as Stakeholders in Postgraduate Employability Skills Development. *International Journal of Management Education*, 8(2), pp. 1-12.

⁴⁰ Plump, C.M. (2010). Dealing with Problem Employees: a Legal Guide for Employers. *Business Horizons*, 53, pp. 607-618.

⁴¹ Haelermans, C., De Witte, K. (2012). The role of innovations in secondary school performance – Evidence from a conditional efficiency model. *European Journal of Operational Research*, Volume 223, Issue 2, pp. 541-549.

⁴² Lee, S.F., Lo, K.K. (2003). E – Enterprise and Management Course Development using Strategy Formulation Framework for Vocational Education, *Journal of Materials Processing Technology*, Volume 139, pp. 604 – 612.

⁴³ Karahoca, D., Dulda, I., Karahoca, A., Yucel, A., Gulluoglu, B., Arifoglu, E. (2010). Interactive E – Content Development for Vocational and Technical Education, *Procedia Social and Behavioral Sciences*, Volume 2, pp. 5842 – 5849.

⁴⁴ Rogers, E.M. (2003). *Diffusion of innovation* (5th ed.). New York: Free Press.

for securing the competitiveness of national economies, this by default refers to the education and training systems at all levels, the VET system including. Therefore, it is not surprising that challenges for VET systems are now equally being reflected in both, academic discussions and the national and European policy discourse. This academic and policy discourse in relation to the tasks of public administration for the development of competitive labour force will be presented further on.

For clarification purposes a few more paragraphs will be devoted to the interpretation of the term 'innovation', as it has implications also for the term 'competitiveness of the labour force', competitiveness, in its turn, being closely related to the notion of 'employability'. According to the definition presented by the terminology glossary of the Academy of Sciences of Latvia - innovation⁴⁵ (in Latvian 'jauninājums, inovācija, jaunievedums) implies: an article or goods of new construction, a variety of an existing article (goods), new and effective technological process, production method, a new or improved management method etc. Innovation is related to the research development, it helps enterprises to preserve and strengthen their position in the market, be competitive, to increase their turn-over, as well creates other preferences.

According to Innovation Union - A Europe 2020 initiative⁴⁶ - there is no one single definition. Innovation as described in the Innovation Union plan broadly means change that speeds up and improves the way we conceive, develop, produce and access new products, industrial processes and services. Changes that create more jobs, improve people's lives and build greener and better societies. According to knowledge management theory - effective management of knowledge requires joint human and technology activity solutions. Knowledge management is at the basis of knowledge creation, obtaining, accumulation, analysis and effective use, comprising also collective (joint), use of knowledge by an organisation, with the aim of creating added value to the organisation. As argued by knowledge management theoreticians - the knowledge-creation process starts with socialization, in which the tacit knowledge is acquired 'through the creation of a dense field of interactions', then it is externalized, or conceptualized, through dialogue into explicit knowledge to be shared with others; afterwards, being in a form appropriate for diffusion throughout an organization, and being combined with other existing explicit knowledge it forms a more complete and practical set of knowledge, subsequently to be internalised by organizational members as a created

⁴⁵ According to the terminology glossary of the Academy of Sciences of Latvia – the presented translations in other languages are - EN innovation, LV jauninājums; inovācija; jaunievedums; DE Innovation; Neuerung; FR innovation, see <http://termini.lza.lv/term.php?term=inov%C4%81cija&list=&lang=LV&h=yes> (accessed 10.02.103)

⁴⁶ Innovation Union, http://ec.europa.eu/research/innovation-union/index_en.cfm (viewed 14.12.2014)

complex set of explicit knowledge through application and action⁴⁷. This bears relevance also to innovation and its diffusion mechanisms relevant to our study in relation to the development of competitive labour force by the stakeholders involved in the process⁴⁸.

Based on the definitions and interpretation of terms offered by these authoritative sources, within the context of the present research the word ‘innovation’ separately and in collocations contextually will primarily be used in several meanings

1. *Innovation* as a *general concept* referring to the creation of new approaches or the application of the previous approaches in new contexts;
2. *Innovation* in VET as *innovative approaches* in the development of VET policies and administrative procedures, in reforming the VET systems with the aim of creating a modern VET system;
3. *Innovation* as a *constituent part of the study process and schemes promoted by VET public administrations* - to improve the competitiveness (and also the innovation competence) of the labour force developed by VET systems;
4. *Innovation* as *innovative and creative activities* of VET learners and the labour force, to a great extent possible due to a respective innovation oriented study process within an innovation oriented VET system;
5. Innovation(s) as a commercialised product.

In addition, according to OECD/CERI study - a systemic innovation approach is “any kind of dynamic, system-wide change that is intended to add value to the education process and outcomes”⁴⁹. This definition is of particular importance to our research.

The above mentioned contextual meanings of the term *innovation* are closely linked, especially given the fact that the public administrations, especially today, should implement an innovative administrative approach. Although academic research indicates to the inherently conservative and self-preserving nature of the public administrations (for example, Bresnesun Burrell⁵⁰ when arguing about Mode 1 and Mode 2 characteristics), nevertheless, the current economic and employment processes demand further developments and research on the possibilities for overcoming the inherent inertia of public administrations in implementing the

⁴⁷ Magnier-Watanabe, R., Benton, C. & Senoo, D. A study of knowledge management enablers across countries. *Knowledge Management Research & Practice* (2011) **9**, 17–28.

⁴⁸ With reference to the Merriam Webster dictionary – being an authoritative linguistic source - the word ‘innovation’ means 1) the introduction of something new; 2) a new idea, method, or device. The ‘Merriam – Webster Learners’ Dictionary’ in addition to this, offers a definition: the act or process of introducing new ideas, devices, or methods. Merriam Webster online dictionary, <http://www.merriam-webster.com/dictionary/innovation> (viewed 25.02.2013).

⁴⁹ OECD/CERI Study of Systemic Innovation in VET. Systemic Innovation in the Danish VET System. Country case study report – 3. OECD 2008.

⁵⁰ Bresnes, M. & Burrell. (2012), Journals a la mode? Twenty years of living alongside Mode 2 and the new production of knowledge, *Organisation* 20(I) pp.25-37.

needed reforms for improved competitiveness of the labour force – with parallel development and implementation of new institutional mechanisms and co-operation schemes to overcome the barriers to these new challenges..

At the same time it should be noted that the aim of the present work **is not** to perform an in-depth analysis of the characteristic features of competitive labour force and the innovation capacity of it. It should be noted that primarily the term ‘competitive labour force’ will be used with an implication that under modern labour market circumstances competitiveness often by default means innovation and technological competence. The term ‘institutional mechanisms’ in the context of the present work means: formalised structures or processes, as well as the normative basis (framework) enabling the public administration to perform certain tasks and developments.

Further on the author’s analysis of the theoretical approaches and, academic and policy analysis are presented in relation to the role and tasks of public administrations in providing for the training of competitive labour force by VET systems.

1.1. Theoretical framework to the studies on the role of public administrations

From the point of view of theoretical approaches and academic discussions on the topic of the present work, the research interest was to examine primarily the more recent VET research, as a response to the current global and societal developments. The VET systems as the major ‘producers’ of workforce today cannot be viewed in an isolated way but, on the contrary, have to be studied as complex systems of global developments. For this reason also research questions of the dissertation on the role of VET public administrations for the development of competitive labour force has to be implicitly linked to a broad range of issues - such as the increased linkage of the world of education with the world of work, involvement of new stakeholders and creating of new co-operation and governance mechanisms, promoting circumstances for new modes of VET delivery, including the promotion of partnerships at regional level, overtaking and adapting the best practice, implementing innovation in relation to industry and partners from the world of employers, as well as many other factors discussed further on. All these aspects were seen as relevant to the defence of the theses of the present work and for the development of the best (potential) co-operation scheme among stakeholders – as part of the tasks of the present work.

The ongoing academic discussions on the issue of skills development, competitiveness and employability of VET labour force represent the key theoretical perspectives on the issue

of innovative approaches in VET. In several other parts of the world, for example, in Australia⁵¹, discussions on innovative VET approaches have been high in political and academic agenda already since long, but is a relatively recent development in Europe, according to the results of the textual analysis and observation by the author. One reason for this previously limited policy perspective of innovation in VET may be the existing tradition to linked innovation to higher education and research domain, with the involvement of high profile scientific discoveries. Therefore, in the context of the present research it is important once again to note - innovation is not necessarily only science and technology, or research and development, as pointed out by Kearny (Kearny, 2004)⁵². He shares the opinion that innovation is doing something new or differently which adds value or is useful (Kearny, 2004), and this theoretical perspective serves as a useful background approach for our research on innovation in VET.

Since technological challenges and innovation go beyond the field of science and technology and refer also to the policy making and administrative processes, various stakeholders need to be involved in the process. As pointed out by Simon McGrath from Nottingham University (UK) and Rosemarie Lugg from Cambridge Educators: “much of VET policy internationally draws on a toolkit that does not work”. Policymakers need both to be more modest and reflexive in their expectations of what knowledge can be mobilised for policy purposes and more serious in their commitment to supporting the generation of the types of knowledge that they claim to value. International and comparative educators need to be clearer in seeking to shape research agendas; more rigorous in our approaches to research; and better in our external communication of our findings. There is a particular challenge of reawakening research on VET-for-development from twenty years of slumbers⁵³. It should be kept in mind also, that growth is not exclusively related to economic factors only, but has meaningful links with the job satisfaction as well, as pointed out by several authors, e.g. in recent research by Keller and Semmer⁵⁴, thus bearing links to personal development as well. Therefore, for successful policy making, the results of empirical studies on the views of various stakeholders and from different perspectives should be taken into consideration much more than it traditionally is.

⁵¹ NCVER, Australia’s National Centre for Vocational Education Research, available also at <http://www.ncver.edu.au/>(observed 24.01.2014)

⁵² Kearney, G., 2004, “How Businesses Innovate Today and What that Means for the Workforce”, in Vocational Education and Training. Research Readings, S. Dawe, Ed. Australian National Training Authority, pp. 58-67.

⁵³ McGrath, S., Vocational education and training for development: A policy in need of a theory? *International Journal of Educational Development*, Volume 32, Issue 5, September 2012, 623-631.

⁵⁴ Keller, A., Semmer, N.K. Changes in Situational and Dispositional Factors as Predictors of Job Satisfaction, *Journal of Vocational Behavior*, Volume 83, Issue 1, August 2013, 88-98.

Bennett et al⁵⁵ claim that the VET systems need to be flexible and innovative, capable of addressing the needs through the innovative design and delivery of training programs. According to research by Ruth & Deitmer⁵⁶ there exists a multifaceted relationship between the actual learning environment and its capability to educate skilled workforces, and these authors link it to the specific ability to get involved in the innovation process. Billett⁵⁷ discusses and shows the relationship between the workplace experiences and the engagement of workers, Baartman and de Bruijn⁵⁸ point to the links of knowledge, skills and attitudes and the development of competence. Kearny⁵⁹ stresses that the capacity of workers to contribute to the intellectual capital of the company becomes increasingly important, and thus also the VET programs that develop corresponding skills. Regarding the question of the effectiveness and benefits of dual learning – various authors develop on this, e.g. Tynjala⁶⁰ points out the benefits of workplace learning. However, Koudahl⁶¹ points to the possible problems in the implementation of the dual system in VET during the time of crisis, due to increasing lack of motivation and benefit for employers who are important subjects in the dual work-based learning system. Consequently, the existing academic and policy discourse explicitly indicate to the need of change of paradigm in VET systems, and public administrations should take this into consideration when implementing and reforming their VET systems. Clearly, as the commercialisation and introduction of pioneering ideas require implementation, workforce with respective skills is needed. As stated by Guthrie and Dawe, “innovation, especially process and incremental, depends on a skilled workforce, and this will be doubly so in the future”⁶². Emerging strategies for the implementation of workplace learning is ‘often heiled’ as an all-positive innovation⁶³. The skilled workforce is required at all levels, and finally it is being more and more recognized also academically that VET has to play a role in the training of such

⁵⁵ Bennett, B., Bruncker, D. & Hodges, R., 2004. Innovation, Economic Growth and Vocational Education and Training. In: S. Dawe, ed. Vocational Education and Training. Research Readings, Australian National Training Authority, 68-83.

⁵⁶ Ruth, K. and Deitmer, L. (2010). The Relationship between Technical and Vocational Education and Training and Innovation. *International Encyclopedia of Education* (Third Edition), 423-428.

⁵⁷ Billett, S. Learning through Work: Exploring Instances of Relational Interdependencies, *International Journal of Educational Research*, Volume 47, Issue 4, 2008, 232-240.

⁵⁸ Baartman, L.K.J, de Bruijn, E. Integrating Knowledge, Skills and Attitudes: Conceptualising Learning Processes towards Vocational Competence, *Educational Research Review*, Volume 6, Issue 2, 2011, pp. 125-134.

⁵⁹ Kearny, G., (2004). “How Businesses Innovate Today and What that Means for the Workforce”, in Vocational Education and Training. Research Readings, S. Dawe, Ed. Australian National Training Authority, 58-67.

⁶⁰ Tynjala, P. (2008). Perspectives into learning at the workplace, *Educational Research Review* 3, 130-154.

⁶¹ Koudahl, P.D., Vocational Education and Training: (VET): Dual Education and Economic Crises, *Procedia – Social and Behavioral Sciences*, Vol. 9, 2010, 1900 – 1905.

⁶² Gurthrie, L. & Dawe, S. (2004). In “Vocational Education and Training and Innovation”. Research readings. Edited by Susan Dawe. Publishes by Australian National Training Authority, 10-19.

⁶³ Lindell, M. & Stenstrom, M.L. 2005. Between Policy and Practice – Structuring Workplace Learning in Higher Vocational education in Sweden and Finland, *Journal of Workplace Learning*, 17(3), pp. 194-211.

workforce. The implementation of innovation depends on people, and “innovation may range from high profile scientific discoveries to low profile changes and practices”, as pointed out by Guthrie and Dawe; the culture of innovation is dependent on “fostering problem solving, creativity, entrepreneurship, initiative and drive”⁶⁴. More holistic and dynamic approaches to the learning management role his research is being attributed by Dealtry, while Guthrie and Dawe claim many people in the labour market have developed such abilities outside the higher education system – their skills and knowledge have been developed within the VET system⁶⁵. Quality management principles are increasingly being attributed to the work by public authorities, with an emphasis on continuous improvement and modernisation⁶⁶. Moreover, Guthrie and Dawe urge the public authorities” to move from the ‘scientific discovery’ notion of innovation to one which sees it as a continuous learning process”, as well as to realise the role of VET in diffusion of technology throughout the workforce⁶⁷.

This is also the independent opinion of the author of the research - through her long term experience of work in public administration of the education sector (including higher education and VET). Public policies much depend on the tradition, however, at times when paradigms globally change (and the recent turn of the centuries undoubtedly is a time of major changes), the revision of the approaches to the national policy making may be advisable – if not as an immediate reform initiative, then at least as an intellectual exercise to generate grounds for further targeted discussion. The same refers to the much discussed issue of innovation, as “over time, as the players in the innovation system and their specific objectives evolve, the portfolio of policy design also evolves”⁶⁸, according to Bodas Freitas and von Tunzelmann.

For the above discussed reasons the concept of innovation is in the centre of attention of the present work – and the focus is on the role and tasks of public administrations in the development of ‘innovation competent’ labour force primarily by the VET system and in the context of the operation of public administrations – via various institutional and governance mechanisms at their disposal. Thus, from the theoretical perspective the research interest of the present work lies in the scientific thought (academic discourse) on the issues of the research problem of the work – linked to the administrative approaches, procedures and mechanisms for

⁶⁴ Gurthrie, L. & Dawe, S. (2004). In “Vocational Education and Training and Innovation”. Research readings. Edited by Susan Dawe. Publishes by Australian National Training Authority, 10-19.

⁶⁵ Ibid

⁶⁶ Navaratnam, K.K., Harris, B. (1995). Quality process analysis: a technique for management in the public sector, *International Journal of Public Sector Management*, 8(1), pp. 11 – 19.

⁶⁷ Gurthrie, L. & Dawe, S. (2004). In “Vocational Education and Training and Innovation”. Research readings. Edited by Susan Dawe. Publishes by Australian National Training Authority, 10-19.

⁶⁸ Bodas Freitas I.M. & von Tunzelmann, N. (2008). Mapping public support for innovation: A comparison of policy alignment in the UK and France. *Research Policy*, 3, 1446–1464.

the training of skilled and competitive labour force, and implicitly addressing also innovation issues in VET as viewed by leading academic researchers.

In the analysis of relevant scientific literature the key studies and dominating opinions regarding the role of public administrations in the development of innovation competent modern labour force have been identified. In this part of the work the key scholarly approaches will be analysed, also serving as a background for the subsequent analysis of the actual situation in public administrations in the implementing the VET innovation in Latvia. It is also necessary to introduce the notion of national innovation systems (NIS) which from a certain perspective represents a synthesis of policy/administrative and academic perspectives regarding innovation. The NIS notion appeared in the 80ties of the previous century and since then is broadly being used in academic and policy/administrative discourse. Further on some dominating scholarly findings regarding the role of public administrations and their co-operation partners will be identified and analysed – as a result of the studies of the author of the work. The grouping (clustering) of the domination themes in academic research has been done by the author of the present work. This has enabled the author to view her research problem from a broad perspective, and construct her empirical research respectively.

Innovation as leader in societal progress and research on innovation systems. This concept is not new, however, the specific features of the technological progress of the 21st century inserts new content into this notion. The relationship between innovation and productivity growth is at the centre of continuing interest in academic and policy-oriented research⁶⁹. According to Kwon, the government “continuously maintains national priorities of higher productivity and development of new technology that are crucial to nurture strategic industries and secure global competitiveness”⁷⁰. This has clear implications for the tasks of public administrations. Thus, Sharif argues that nowadays technological innovation has emerged as a leader of desired societal progress and „there now seems to be universal awareness that technological innovation is indeed the engine for economic prosperity of a country... and technological innovations provide limitless opportunities for all people to do: more things, newer things, better things, and things faster than ever-before”⁷¹. Appropriate research in innovation systems is needed for the respective development of public policy. Bogliacino & Pianta⁷² are arguing that “research in innovation systems, especially at the national level, is

⁶⁹ Bogliacino, F. & Pianta, M. (2011). Engines of growth. Innovation and productivity in industry groups. *Structural Change and Economic Dynamics*, Volume 22, Issue 1, 41-5.3.

⁷⁰ Kwon, Y. (2011). The developmental history of labor education in South Korea from a sociopolitical and economic perspective. *International Journal of Educational Development*. Volume 31, Issue 5, 524-531.

⁷¹ Sharif, M.N. (2012). Technological innovation governance for winning the future. *Technological Forecasting and Social Change*, Volume 79, Issue 3, 595–604.

⁷² Bogliacino, F. & Pianta, M. (2011). Engines of growth. Innovation and productivity in industry groups. *Structural Change and Economic Dynamics*, Volume 22, Issue 1, February 2011, pp. 41-5.3.

valuable and necessary for developing appropriate policies and understanding a particular actor's behaviour".

The role of tradition in public administration. Tradition can be viewed as a 'double edged sword'. On the one hand it is needed to preserve the existing values; on the other hand it might hinder acceptance of new ideas and approaches which is vital for the implementation of innovation. Under the new globally changing circumstances, also the nationally existing tradition may be becoming a double-edged sword. As argued by Bodas Freitas⁷³, the national pattern of alignment of objectives of national players towards innovation, as undertaken by policy-makers, depends on the present and past specificities and characteristics of the national innovation systems and of the innovation support networks. Hoskisson⁷⁴ expresses concern on the 'path dependence' implying that "institutions create path dependence that shapes new institutions that favour the consequences of the pre-existing institutions. This is another issue stimulating further discussion how far and in what direction institutional co-operation (experience and practice transfer) should go, and how to determine the potential positive synergy effects it may cause.

Flexibility needed to address new global challenges. On the one hand, the existing tradition secures stability, on the other hand, it may be hindering the needed flexibility in addressing the new global challenges. Hobdaya⁷⁵, however, reflects on the need for specific innovation policy design and argues that innovation policy makers and analysts have traditionally paid little attention to design policy. He differentiates between five generation models for innovation and claims that design policies tend to reflect on some previously popular approaches, rather than systems or network based fifth generation systems. According to Hobdaya, 5th generation systems' integration and networking model is typical during post-1990ties and represents fully integrated parallel development supported by advanced information technology and with emphasis on corporate flexibility and speed of development (time-based strategy). Policies focus on improving system and market conditions and infrastructure (e.g., supply of human resources) and addressing market and system failures which impact business innovation. According to Hobdaya, within the field of innovation, the

⁷² Bodas Freitas I.M. & von Tunzelmann, N. (2008). Mapping public support for innovation: A comparison of policy alignment in the UK and France. *Research Policy*, 3, 1446–1464.

⁷³ Ibid.

⁷⁴ Hoskisson, R.E., Yiu, D. & Kim, H. (2004). Corporate governance systems: Effects of capital and labor market congruency on corporate innovation and global competitiveness. *The Journal of High Technology Management Research*. Volume 15, Issue 2, 293-315.

⁷⁵ Hobdaya, M., Boddington, A. & Grantham, A. (2012) Policies for design and policies for innovation: Contrasting perspectives and remaining challenges. *Technovation*, Available online 11 January 2012.

lack of attention to design and design policies applies both to academic studies and to policy reporting and policy making⁷⁶.

Interdependencies between different policies and the role of the state. The tendency of the interdependency of various policies is increasing – as we can see from the EU and national policy documents and the actual implementation of these policies (among other things it also links us to the issue of good and responsible governance which is an important responsibility of public administrations). Flanagan⁷⁷ favours the recent emergence, take-up and use of the term ‘policy mix’ by innovation policy makers and by policy analysts and scholars alike, implying the focus on interactions and interdependencies between different policies, as they affect the extent to which policy goals are realised. Flanagan also argues that the innovation policy debate has changed in recent years - policy makers, scholars and analysts alike increasingly focus on challenges stemming from policy complexity. According to Flanagan, “policy prescriptions often explicitly or implicitly assume that policy action is confined to the selection of discrete and well-defined instruments – or the development of new ones – by a single, purposive, (boundedly) rational and disinterested ‘policy maker’ – often implicitly synonymous with national government or ‘the state’”⁷⁸. Much of the research supports the idea that the investing in the effective functioning and co-operation among the existing institutional mechanisms is to be supported, and the investment in labour force training cannot be overestimated. According to Freitas⁷⁹, public programmes are understood as coordinating and rewarding individual and collective learning for a determined period of time in order to accomplish specific objectives. Boom raises the issue of the incentive to train and claims that the incentive is still not sufficient from a social welfare point of view. According to Boom the inefficiency problem would become even more severe, if there was free entry on the skilled labour market and training resources were not ‘wasted’, because of unemployed skilled workers. He claims that only if workers are able to pay for their general training without any limits, and if perfect markets for training can be established, then efficient levels of training can be achieved⁸⁰.

Need of public opinion in responsible governance. National strategic priorities cannot be implemented without good governance, and this is another challenge for implementing

⁷⁶ Hobdaya, M., Boddingtonb, A. & Grantham, A. (2012). Policies for design and policies for innovation: Contrasting perspectives and remaining challenges. *Technovation*, Available online 11 January 2012.

⁷⁷ Flanagan, K. Uyarraa, E. & Laranjab, M. (2011) Reconceptualising the ‘policy mix’ for innovation. *Research Policy*, Volume 40, Issue 5, 702–713.

⁷⁸ Ibid

⁷⁹ Freitas I.M. & von Tunzelmannb, N. (2008). Mapping public support for innovation: A comparison of policy alignment in the UK and France. *Research Policy*, 3, 1446–1464.

⁸⁰ Boom, A. (2005). Firms' investments in general training and the skilled labour market. *Labour Economics*, Volume 12, Issue 6, 781–805.

responsible innovation. Such linkages between national governance systems and innovation systems indicate that a country is more likely to gain global competitiveness in markets whose innovation requirements are well supported by its national governance system⁸¹. According to Von Schomber, the challenge is “to arrive at a more responsive, adaptive and integrated management of the innovation process”, pointing out that “the involvement of stakeholders and other interested parties should lead to an inclusive innovation process whereby technical innovators become responsive to societal needs”⁸². At the same time, as pointed out by Von Schomberg, on-going public debate and monitoring public opinion is needed for the legitimacy of research funding and particular scientific and technological advance⁸³. This concerns also technological innovation, and principles of good governance apply here, if research and innovation is to be responsible. To address this, “public debate, ideally, should have a moderating impact on the “Technology Push” and “Policy Pull” of new technologies”⁸⁴.

The roles and responsibilities of strategic partnerships. In the implementation of public policies the role of various stakeholders and strategic partners is increasing, and this is true also with regard to labour force training (the public administration, for example, can secure adequate labour force training in close co-operation with the employers’ organisations that are competent regarding the actual skills needs). The present academic research implies - the speed with which modern technologies are innovated seems to be accelerating, and there appears to be some consensus that faster technological change is likely to create substantial problems for public policy makers⁸⁵. This relates also to the issue of the co-ordination of public investment. The strength of each institution arises not just from its own productivity, but also from its ability to make other institutions more productive⁸⁶. Thus, various strategic partnerships are becoming increasingly important, and the conscious involvement of various stakeholders (social partners) needed to enhance the overall ‘productivity’ in the broader understanding of the word. Evidently, a good and realistic balance should be sought by relevant stakeholders to secure the right proportion of the ‘push’ and ‘pull’ impacts.

⁸¹ Hoskisson, R.E., Yiu, D. & Kim, H. (2004). Corporate governance systems: Effects of capital and labor market congruency on corporate innovation and global competitiveness. *The Journal of High Technology Management Research*. Volume 15, Issue 2, 293-315.

⁸² Von Schomberg, R. (2012). Prospects for Technology Assessment in a Framework of responsible research and Innovation. In M.Dusseldorp & R.Beecroft (eds). *Technikfolgen abschätzen lehren: Bildungspotenziale transdisziplinärer Methoden*, 39-61. Wiesbaden: Vs Verlag.

⁸³ Ibid

⁸⁴ Ibid

⁸⁵ Rycroft, R.W. (2006). Time and technological innovation: Implications for public policy. *Technology in Society*. Volume 28, Issue 3, 281–301.

⁸⁶ Hoskisson, R.E., Yiu, D. & Kim, H. (2004). Corporate governance systems: Effects of capital and labor market congruency on corporate innovation and global competitiveness. *The Journal of High Technology Management Research*. Volume 15, Issue 2, 293-315.

The interaction of innovation with organisational change. The implementation of innovation is also linked to the issue of organisational behaviour and organisational change. The need ‘to devote more analytical efforts examining how technical innovation interacts with organisational change’ has been pointed out by Lundvall and Borrás, when seeking answers on how organisational change affects innovation processes in the economy⁸⁷. At the same time, it has been argued by Liu & White that “the central issue in...economies is not the need to establish new organizational actors” but instead the activity should be focused on “changes in organizational boundaries around activities comprising the innovation system, as well as the incentive structure and capabilities of actors to undertake these activities and perform well⁸⁸. In this respect Rycroft points to the organizational and technological changes as the focus of the continuous change model highlighting the development of flexible structures, featuring extensive interaction, learning, and freedom to adapt⁸⁹.

Approaches to innovation - creation vs overtaking of innovation. Each economy needs to make strategic decisions on the path to be taken to implement innovation. Thus, Saint-Paula distinguishes between ‘primary innovation’, which is the introduction of a new good, and ‘secondary innovation’, which is a cost reduction in an existing good, discussing the ‘home bias’ assumption that it is cheaper to produce a good in the country where the innovation has taken place⁹⁰. Clearly, each national economy has to take responsible decisions on the choice of the path to implement innovation, for example, considering the claim that technology policy means different things to different countries from the point of view of their level of income and size, as argued by Lundvall and Borrás. According to Lundvall and Borrás, in big income countries the focus will be on “establishing capacity in producing the most recent science-based technologies, as well as apply these innovations”, whereas in smaller countries it might be a question about “being able to absorb and use these technologies as they come on the market”⁹¹.

The responsibility of public authorities for absorption of innovation. Although these may be arguable approaches, nevertheless, the absorption and adequate use of new technologies is a challenge, and absorption is impossible without adequately trained labour force. The training of the labour force primarily is the responsibility of the public sector administration.

⁸⁷ Lundvall, B.A., Borrás, S. (2005). Science, Technology and Innovation Policy. In J.Fagerberg, D.C.Mowery & R.Richard (Eds.), Oxford: Oxford University Press. pp. 599-631.

⁸⁸ Liu, X. & White, S. (2010). Comparing innovation systems: a framework and application to China’s transitional context. *Research Policy*, Volume 30, Issue 7, 1091-1114.

⁸⁹ Rycroft, R.W. (2006). Time and technological innovation: Implications for public policy. *Technology in Society*. Volume 28, Issue 3, 281–301.

⁹⁰ Saint-Paula, G. (2002) Employment protection, international specialization, and innovation, *European Economic Review*, Volume 46, Issue 2, 375–395.

⁹¹ Lundvall, B.A., Borrás, S. (2005). Science, Technology and Innovation Policy. In J.Fagerberg, D.C.Mowery & R.Richard (Eds.), Oxford: Oxford University Press. 599-631.

According to Kwon, the development of labour education is driven not only by workers' needs but also by the state's policy to increase productivity while keeping the labour movement and political expression under control⁹². Thus, the role of public authorities should not be underestimated.

Policy transfer and overtaking best practice. Policy transfer and overtaking best practice are important instruments in keeping the national innovations systems up-to-date and in compliance with latest tendencies and developments worldwide. Marsdena⁹³ stresses the importance of policy transfer regarding innovation, claiming that such understandings should help to promote and accelerate the uptake of effective and well matched policies. Marsdena et al point out that the governance structure regarding policy transfer in the European cases varies widely, and also different institutional frameworks exist. Hobdaya⁹⁴ argues that policies for innovation rarely concern themselves with theories, since understandably, the policy makers focus on the main task at addressing problems and challenges. Mere policy transfer in itself is rarely a solution. Although policy transfer (closely related to the issue of best practice), is frequently recommended in policy making, it should be treated with care. According to Marsdena⁹⁵, for example, the principal motivation in policy transfer might be not only 'strategic need' but also 'curiosity'.

The role of skilled labour force to implement innovation. However, no public policy regarding innovation can be implemented without an adequately trained labour force. Continuous training of the labour force is needed even under the conditions of the existence of unemployed skilled labour force, and therefore incentive for training the labour forces should be increased even under such circumstances. As argued and proved by Boom, failure to do this will cause the problem to become even more severe, and only if perfect markets for training can be established, then efficient levels of training can be achieved⁹⁶. Proceeding from the Boom's argumentation, in the current global situation with the unprecedented increase of unemployment, the continuous training of skilled labour force remains of paramount importance. At the same time, Kwon puts an emphasis to stable labour - management relationship as a prerequisite to achieving these priorities and notes that government-led labour

⁹² Kwon, Y. (2011). The developmental history of labor education in South Korea from a sociopolitical and economic perspective. *International Journal of Educational Development*. Volume 31, Issue 5, 524-531.

⁹³ Marsdena, G., Frick, K.T., Maya, A.D. & Deakinc, E. (2011). How do cities approach policy innovation and policy learning? A study of 30 policies in Northern Europe and North America. *Transport Policy*, 18(3), 501-512.

⁹⁴ Hobdaya, M., Boddingtonb, A. & Grantham, A. (2012) Policies for design and policies for innovation: Contrasting perspectives and remaining challenges. *Technovation*, Available online 11 January 2012.

⁹⁵ Marsdena, G., Frick, K.T., Maya, A.D. & Deakinc, E. (2011). How do cities approach policy innovation and policy learning? A study of 30 policies in Northern Europe and North America. *Transport Policy*, 18(3), 501-512.

⁹⁶ Boom, A. (2005) Firms' investments in general training and the skilled labour market. *Labour Economics*, 12(6), 781-805.

education must be carefully planned and implemented to foster this relationship⁹⁷. Public programmes should ideally be geared towards “coordinating and rewarding individual and collective learning for a determined period of time in order to accomplish specific objectives”⁹⁸. When stressing the role of qualified labour force, Doms points out that policies “promoting and retaining a highly educated workforce could be at least, if not more, important than policies that attempt to more directly assist new businesses”⁹⁹. For this reason it is important to understand how social context under a specific political regime is related to a certain type of educational implementation and expansion¹⁰⁰.

Along somewhat similar lines Hermann claims that “the combination of employee skills and scientific knowledge seems to facilitate different strategies not in an *additive* but in a *multiplicative* manner”¹⁰¹. The implication here by Hermann¹⁰² is that various parties (here specifically employees and scientists) alike have important innovative potentials, and this innovative potential is multiplied whenever employees and scientists do not act in isolation but collaborate and, possibly, learn from each other. Our assumption, however, is that the same phenomenon can be attributed to various stakeholders in innovation policy making and implementation.

Bridging skills’ gap and upskilling the labour force. Technological changes that rapidly alter the productive structure of firms have strong influence on the labour force, and creates a potential skills gap. According to Lamo¹⁰³, when workers have adaptable skills, the gains from trade liberalization and technological change are rapidly realized. Still, when the skills do not comply with the new economic environment, shortages of workers with adequate skills might become a long-lasting phenomenon. At the same time, in a way of precaution, when evaluating the skills of the work force, Elia¹⁰⁴ points out that the existing empirical studies on the influence of globalisation on the demand for skilled labour force often use approaches that measure skill upgrading only indirectly. Elia et al claim that the most popular proxy, i.e., the share of high

⁹⁷ Kwon, Y. (2011). The developmental history of labor education in South Korea from a sociopolitical and economic perspective. *International Journal of Educational Development*. Volume 31, Issue 5, 524-531.

⁹⁸ Bodas Freitas I.M. & von Tunzelmann, N. (2008). Mapping public support for innovation: A comparison of policy alignment in the UK and France. *Research Policy*, 3, 1446–1464.

⁹⁹ Doms, M., Lewis, E. & Robb, A. (2010). Local labor force education, new business characteristics, and firm performance. *Journal of Urban Economics*. Volume 67, Issue 1, 61-77.

¹⁰⁰ Kwon, Y. (2011). The developmental history of labor education in South Korea from a sociopolitical and economic perspective. *International Journal of Educational Development*. Volume 31, Issue 5, 524-531.

¹⁰¹ Hermann, A.M. & Peine, A. (2011). When ‘national innovation system’ meet ‘varieties of capitalism’ arguments on labour qualifications: On the skill types and scientific knowledge needed for radical and incremental product innovations. *Research Policy*, Volume 40, Issue 5, 687–701.

¹⁰² Ibid.

¹⁰³ Lamo, A., Messina, J. & Wasmer, E. (2011). Are specific skills an obstacle to labor market adjustment? *Labour Economics*. Volume 18. Issue 2, 240-256.

¹⁰⁴ Elia, S., Mariotti, I. & Piscitello, L. (2009). The impact of outward FDI on the home country's labour demand and skill composition. *International Business Review*, volume 18, Issue 4, 357-372

skilled workers over total employment [high skilled/(high skilled + low skilled)], may lead to misleading conclusions as it may point to skill upgrading even when the high skilled component does not change at all. Further on it is being claimed that the ratio may increase because of the reduction of low skilled employment, as well as from the unbalanced decrease in both high and low skilled workers, but the latter decreases more than the former¹⁰⁵. The shifting of labour demand toward relatively more skilled workers has been a hot issue in the economic field since long, as claimed by Antonioli, and “a consolidated explanation for the upskilling phenomenon is that technological– organisational changes have driven the labour demand with detrimental consequences for less skilled workers (*skill-biased technological–organisational change*)”¹⁰⁶.

Clearly, the issue of a skilled and innovation competent workforce is one of the key questions both – in policy debates and also in academic discourse. Kearny claims that the capacity of workers to contribute to the intellectual capital of the company becomes increasingly important, and thus also the VET programs that develop corresponding skills. Some recent research by Ruth & Deitmer¹⁰⁷ indicate to the multifaceted relationship between the actual learning environment and its capability to educate skilled workforces, linking it to the ability to get involved in the innovation process. Ertl and Hayward¹⁰⁸ related the VET modernisation aspects to the issue of modularisation, concluding that these issues, in order to yield result, need to be viewed in close connection with the national VET systems and the existing tradition. Hughes M. and Hughes C.¹⁰⁹ emphasised the role of industries and employer led sector bodies for an effective VET functioning in relation to the training of modern workforce. Tynjala¹¹⁰ points out the benefits of workplace learning, while Winch¹¹¹ stresses the benefits of modern VET developments for both, the employers and employees.

Bennett et al¹¹² argued - the technologies and the dynamic and innovative global business environment means that the skills’ set required from the modern labour force are changing with an even greater rapidity; it is being claimed that the innovation is often an integral

¹⁰⁵ Elia, S., Mariotti, I. & Piscitello, L. (2009). The impact of outward FDI on the home country's labour demand and skill composition. *International Business Review*, volume 18, Issue 4, 357-372

¹⁰⁶ Antonioli, D., Manzalini, R. & Pini, P. (2011). Innovation, workers skills and industrial relations: Empirical evidence from firm-level Italian data. *Journal of Socio-Economics*, Volume 40, Issue 3, 312–326.

¹⁰⁷ Ruth, K. and Deitmer, L. (2010). The Relationship between Technical and Vocational Education and Training and Innovation. *International Encyclopedia of Education (Third Edition)*, 423-428

¹⁰⁸ Ertl, H., and Hayward, G., 2010, Modularization in Vocational Education and Training. *International Encyclopedia of Education (Third Edition)*, 383-390

¹⁰⁹ Hughes, M., Hughes, C. (2010). Industry Involvement in the Vocational Education and Training System *International Encyclopedia of Education (Third Edition)*, 455-462

¹¹⁰ Tynjala, P. (2008). Perspectives into learning at the workplace, *Educational Research Review* 3, pp. 130-154

¹¹¹ Winch, C. (2012). Research in Vocational Education and Training, *British Journal of Educational Studies*, 60(1), 53-63.

¹¹² Bennett, B., Bruncker, D. & Hodges, R. (2004). Innovation, Economic Growth and Vocational Education and Training. In: S. Dawe, ed. *Vocational Education and Training. Research Readings*, Australian National Training Authority, 68-83.

part of the production process and the associated skills thus commonly have not been part of the school curriculum. Additionally, Tanrısever and Erişen¹¹³ view the issue of skills in the context of globalisation (referring also to the issues of migration processes and a potentially skilled migrant workforce), thus also implying an additional challenge for national VET systems and their tasks for the training of a skilled workforce in a long-term perspective.

Uzunboylu et al¹¹⁴ provided evidence on the results and impact of open VET training systems which is a present day need and also a challenge, especially for young students but possibly not so much for adult students given the potential benefits of their experience. Similarly, Bennett et al¹¹⁵ claimed that the VET systems need to be flexible and innovative, capable of addressing the needs through the innovative design and delivery of training programs. Iatagan et al¹¹⁶ point to such present day challenges as expansion of open and distance learning, motivated by nowadays common human activities as innovation, creativity, team work, communication, cooperation and multi- disciplinarity. Nielsen¹¹⁷ pointed to the crucial role of teachers in training innovation competent workforce, acknowledging that there is a need for a creation of communities of practice among VET teachers in order to nurture innovation and creativity, while Rozendaal et al¹¹⁸ present arguments on the special role of motivation in the training of VET students.

Regarding the dual or work-based approaches which are specifically targeted issue of the present work – the role of public administrations is being viewed also in the context of the global and European economic downturn and as one of the possibilities to offer solutions to this. Clearly, no system can stay intact, and it refers also to the traditional work-based approaches which undergo transformation and further development. It is being claimed by Tynjala¹¹⁹ that the increasing co-operation between the world of education and work will change the nature of learning in both contexts, regardless of the seemingly considerable differences

¹¹³ Tanrısever, S., Erişen, Y. (2009). The evaluation of modular education programmes developed for the “modernization of vocational and technical education project”. *Procedia - Social and Behavioral Sciences*, Volume 1, Issue 1, 1384-1388.

¹¹⁴ Uzunboylu, H., Tolga Vuranok, T., Celik, B. and Bilgin, H. (2010). Using internet applications as a solution for vocational adult education. *Procedia - Social and Behavioral Sciences*, Volume 2, Issue 2, pp. 5720-5725.

¹¹⁵ Bennett, B., Brunker, D. & Hodges, R., 2004. Innovation, Economic Growth and Vocational Education and Training. In: S. Dawe, ed. Vocational Education and Training. Research Readings, Australian National Training Authority, 68-83.

¹¹⁶ Iatagana, M., Dinua, C. & Stoica A.M. (2010). Continuous training of human resources – a solution to crisis going out. *Procedia Social and Behavioral Sciences* 2, Spiru Harret University, 5139–5146.

¹¹⁷ Nielsen, S. (2010). Vocational Education and Training Teacher Training. *International Encyclopedia of Education (Third Edition)*, 503-512.

¹¹⁸ Rozendaal, J.S., Minnaert, A. and Boekaerts, M. (2001). Motivation and self-regulated learning in secondary vocational education: information-processing type and gender differences. *Learning and Individual Differences*, Volume 13, Issue 4, 273-289.

¹¹⁹ Tynjala, P. (2008). Perspectives into learning at the workplace, *Educational Research Review*, Volume_3, 130–154.

between the two environments, as pointed out by J. Heyes¹²⁰. In the context of regional development the co-operation between the various actors is being seen as an important prerequisite for a successful economic development. It is becoming universally accepted, that the number and types of involved parties is widening and increasing. Thus, Sotarauta¹²¹ stresses that fragmented groups of actors are not in a position to influence the regional developments in a meaningful way, and only a coordinated ‘pulling together’ of actors, resources, competences, ideas and visions can create a new perception, also stressing the importance the awareness - not only the question *what is to be done* matters, but more importantly *how* and *why it is to be done*.

Various studies stress the local environments as the real sources of knowledge, expertise and potential solutions for successful and sustainable economic developments regionally, also stressing the new role of local governments. Much depends on the open-mindedness and preparedness of local governments to accept innovation in vocational education and training and in local labour market developments. Case studies have been presented on various innovative approaches as well, in attempts to address the issue of youth employment. For example, an innovative approach of travel (holidaymaking) with work-base destination has been presented and analysed by Jarvis and Peel¹²² emphasizing the benefits for both, the working travellers and the local (regional) economies. It is being suggested by the authors that for a sustainable regional development knowledge sharing is to be seen as an action of great potential both, at individual and group level, including the development of social network platforms - in order to arrive jointly to innovative solutions by integrating a diversity of perspectives, including of developing of vocational education networks. The authors increasingly tend to show the inherent importance of *linking learning with action* and stress the role of the mentoring process – thus securing a ‘tool’ for reflection, development, tackling change and giving the basis for the conversation with *the mentor* – which in its turn leads to reflection, learning and options for further action¹²³. At regional level the stakeholders involved will have to discover in mutual interaction what works and what action is needed, stressing that for sustainable regional development it is important to implement network learning among public, private and knowledge sectors¹²⁴.

¹²⁰ Heyes, J. (2013). Vocational training, employability and the post-2008 jobs crisis: Responses in the European Union”, in: *Economic and Industrial Democracy*, Volume 34, 34: 291.

¹²¹ Sotarauta, M. (2009). Power and influence tactics in the promotion of regional development: An empirical analysis of the work of Finnish regional development officers, *Geoforum*, Volume 40, 895–905.

¹²² Jarvis, H. and Peel, V. (2013). Tourists for hire: International working holidaymakers in a work based destination in regional Australia. *Tourism Management*, Volume 37, 114-124.

¹²³ Learmonth, A. and Pedler, M. (2004). Auto Action Learning: a tool for policy change. Building capacity across the developing regional system to improve health in the North East of England, *Health Policy*, 68, 169–181.

¹²⁴ Lansu, A. Boon, J. Sloep, P.B. and Van der Dam-Mieras, R. (2013). Changing professional demands in sustainable regional development: a curriculum design process to meet transboundary competence, *Journal of Cleaner Production*, Vol. 49, 123-133.

This approach is important also in the context of the present Doctoral Thesis - through the empirical research based on a study at the Iecava region of Latvia „Research of Needs of Iecava Municipality for Realisation of EU and other Financial Institutions Co–Financed Projects and Activities” - carried out by a group of researchers, including the author herself. Results of empirical research on European Social Fund project „Research of Needs of Iecava Municipality for Realisation of EU and other Financial Institutions Co – Financed Projects and Activities” are available on Iecava municipality webpage¹²⁵. During the study the role of local governments, entrepreneurs, educators and other stakeholders was analysed from different perspectives including the role of local governments coordinated activities with the local entrepreneurs in promoting and supporting innovative approaches in vocational education and training. The study was based on a pre-prepared and tested questionnaire.

The research on academic studies has led to the idea that the well-known Triple Helix approach could be attributed also to the VET system (the Triple Helix approach is well known in HE and research, implying co-operation between education institutions, public administrations and enterprises).

Academic research worldwide has studied new approaches to Triple Helix, including production – based education, e.g. Ilyas and Semiawan¹²⁶, on labour market flexicurity and the quality of life through better education and training, e.g. Chenic, Angelescu and Gheorghita¹²⁷. In the USA the effect of triple helix system and influence on regional entrepreneurship are covered in several researches, e.g. by Kim, Kim and Yang¹²⁸, the results being studied and compared in different parts of the USA. Detailed analysis of the *Triple Helix* approach has been evaluated in Norway, e.g. by Strand and Leydesdorff¹²⁹ where special attention has been paid to innovation systems and the relations among technology, organisation and geography in Norwegian PV manufacturing industry¹³⁰. In the Netherlands the transformation of innovation systems in a *Triple Helix* of university – industry government relations are researched for many years involving also colleagues from other countries and comparing with other countries¹³¹ e.g.

¹²⁵ Iecava municipality webpage <http://www.iecava.lv/page/621> (Accessed September 1, 2013).

¹²⁶ Ilyas, I.P., Semiawan, T. (2012). Production-Based Education (PBE): The Future Perspective of Education on Manufacturing Excellent. *Procedia Social and Behavioral Sciences*, Volume 52, 5 -14.

¹²⁷ Chenic, A.S., Angelescu, C., Gheorghita, A.R. (2012). Providing Labor Market Flexicurity and Quality of Life through Better Education and Professional Training. *Procedia - Social and Behavioral Sciences*, 46, 4560 – 4566.

¹²⁸ Kim Y., Kim, W., Yang, T. (2012). The Effect of the Triple Helix System and Habitat on Regional Entrepreneurship: Empirical Evidence from the US, *Research Policy*, Volume 41, 154 – 166.

¹²⁹ Strand O., Leydesdorff, L. (2013). Where is Synergy Indicated in the Norwegian Innovation System? Tripple – Helix Relations among Technology, Organisation, and Geography, *Technological Forecasting & Social Change*, Volume 80, 471 – 484.

¹³⁰ Klitkou, A., Godoe, H. (2013). The Norwegian PV Manufacturing Industry in a Triple Helix Perspective, *Energy Policy*, Volume 61, 1586 – 1594.

¹³¹ Leydesdorff, L., Fritsch, M. (2006). Measuring the Knowledge Base of Regional Innovation Systems in Germany in Terms of a Triple Helix Dynamics, *Research Policy*, Volume 35, 1538 – 1553.

with Germany, as by Leydesdorff and Fritsch¹³² and with applications of different mathematical models.

In Germany several researchers, e.g. Erosa¹³³ have paid attention to cultural issues in the Triple Helix Model implementation, and comparison has been made among government, university and business culture. The need for hybrid approach has been supported by research results of Triple Helix network analysis of collaboration at regional, county and institutional levels in South Korea by Khan and Park¹³⁴. In Thailand detailed analysis of triple helix model – case study of poultry industry in Thailand has been performed in details by Klomklieng, Ratanapane, Tanchareon and Meesap¹³⁵, different approaches and experience in various countries have been evaluated, e.g. by Muravska and Prause¹³⁶. Quadruple helix to design strategies for the green economy has been introduced involving also consumers, e.g. by Gouvea, Kassicie and Montoya¹³⁷. Researches on those issues are going deeper and wider around the globe giving new challenges for researchers.

It can be concluded that in the the last decade the issue of innovation in VET as part of systemic approaches to VET governance and administration for the training of competitive labour forces is becoming increasingly visible in the world research on VET, despite the fact that the question has explicitly emerged on the political agenda relatively recently. The researchers are addressing the VET innovation and labour force competitiveness issue from multiple perspectives, for example, the role of skills in implementing innovation, the role of innovation to foster productivity, the importance of co-operation between VET providers and the employers and the benefits of work based training, the importance of the quality of VET programs in compliance with labour market demands, as well as the role of the mode of delivery and teacher competence.

At the same time it should be noted that researchers in Latvia are also increasingly paying attention to the training of competitive labour force in VET context, and this is being

¹³² Ivanova, I., Leydesdorff, L. (2014). Rotational Symmetry and the Transformation of Innovation Systems in a Triple Helix of University – Industry – Government Relations, *Technological Forecasting & Social Change*, 86 pp. 146-156.

¹³³ Erosa, V.E. (2012). Dealing with Cultural Issues in the Triple Helix Model Implementation: a Comparison among Government, University and Business Culture, *Procedia – Social and Behavioural Sciences*, Volume 52, 25 – 34.

¹³⁴ Khan, G.F., Park, H.W. (2013). The E – Government Research Domain: A Triple Helix Network Analysis of Collaboration at the Regional, Country, and Institutional Levels, *Government Information Quarterly*, Volume 10, 182 – 193.

¹³⁵ Klomklieng, W., Ratanapane, P., Tanchareon, S., Meesap, K. (2012). Strengthening a Research Cooperation Using a Triple Helix Model: Case Study of Poultry Industry in Thailand, *Procedia Social and Behavioral Sciences*, Volume 52, 120 -129.

¹³⁶ Muravska, T., Prause, G. (2012). *European Integration and Baltic Sea Region Studies: University – Business Partnership through the Triple Helix Approach*, Berliner Wissenschafts – Verlag, 336 p.

¹³⁷ Gouvea, R., Kassicieh, S., Montoya, M.J.R. (2013). Using the Quadruple Helix to Design Strategies for the Green Economy. *Technological Forecasting & Social Change*, Volume 80, 221 – 230.

done from multiple perspectives. Doctoral thesis on various aspects of professional development, vocational education and training and human resources' development have been devended both, in recent and former years. For example, Brence has studied the issue of the relationship between employers and employees and the optimal use of resources in the human resource management process¹³⁸. Jaunzeme has investigated the role of carrier guidance and counselling as part of short and long-term goals in relation to the labour market developments and the society¹³⁹. Kalvāns has researched the role of learned centered approaches for effective education and training systems¹⁴⁰. Kalve has laid emphasis on the importance of qualitative and quantitative aspects in the process of economic and social growth, especially about new counties, which face specific challenges, and with regard to their education systems¹⁴¹.

Moreover, Kantāne has researched the corporate climate in small enterprises and the factors influencing this climate, with a particular emphasis on the role of knowledge management¹⁴². Kinta has stressed the importance of learning outcomes based education processes¹⁴³. Kulberga addresses the issue of the role of various elements in the management process in relation to the actual and needed professional competence¹⁴⁴. Furthermore, Landzmane is concerned with the negative tendencies in the functioning of public administrations that face severe criticism, and studies the possibilities for improving the situation¹⁴⁵. Peiseniece has studied the importance of human resources' development and the tools for the evaluation of the process¹⁴⁶.

¹³⁸ Brence, I. Darba tirgu regulējošo faktoru piemērošana uzņēmējdarbības attīstības veicināšanai Latvijā (Implementation of Labour Market Regulating Factors for Promoting Entrepreneurship Development in Latvia), Riga, 2010. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of *Dr.habil.oec.*, professor Valērijs Praude

¹³⁹ Jaunzeme, I. Karjeras vadības un atbalsta sistēmas pilnveidošanas problēmas augstākajā izglītībā Latvijā, 2011. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of *Dr. habil.oec.*, Professor Juris Krūmiņš

¹⁴⁰ Kalvāns, R. Izglītības iestādes vadītāja loma izglītības kvalitātes nodrošināšanā Latvijā, Riga, 2012. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Professor, *Dr.phys.* Andris Kangro.

¹⁴¹ Kalve, I. Vadības izglītība mūsdienu sabiedrībā, Riga, 2008. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of *Dr. phys.*, Assoc. Professor Andris Broks

¹⁴² Kantāne, I. Latvijas mazo uzņēmumu vadīšanas īpatnības, Riga, 2013. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of *Dr. oec.*, Professor Biruta Sloka

¹⁴³ Kinta, G. Mācīšanās rezultātu nozīme profesionālās vidējās izglītības vadībā (The role of learning outcomes in the vocational education and training governance), Riga, 2013. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Professor, *Dr.chem* Andrejs Rauhvargers

¹⁴⁴ Kulberga, I. Uzņēmējdarbības vadītāja profesionālās kompetences pilnveidošana Latvijā, 2013. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Professor emerit. *Dr.habil.paed.*, *Dr.oec.*, Rasma Garleja

¹⁴⁵ Landzmane, L. Valsts pārvaldes speciālistu profesionālās veikspējas attīstības vadība: Mediācijas institucionalizācijas konteksts, 2014. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Professor *Dr.phys.*, professor Andris Kangro

¹⁴⁶ Peiseniece, L. Cilvēkresursu vadīšanas novērtēšanas metodes un to pilnveidošanas virzieni Latvijas lielajos uzņēmumos (Methods of Human Resource Management Evaluation and Directions for Their Improvement in Large Enterprises of Latvia), Riga, 2010. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of professor *Dr. oec.* Tatjana Volkova.

In broader contexts, Rivera has studied the issues of leadership-oriented cultures in the long term of the development of societies¹⁴⁷. Similarly, Tauriņa has viewed education processes in diverse cultural, economic and social contexts¹⁴⁸. Romele has dealt with the investments in human capital and the diverse possibilities for it in various contexts¹⁴⁹. Rusakova has studied the problem of the role of co-operation among stakeholders in relation to quality assurance systems¹⁵⁰. Upenieks has stressed the role of education managers at all levels to ensure effective functioning of education institutions¹⁵¹. Vasiļevska has analysed the problem of relationship between the training providers and the society¹⁵². Vilka has studied the interrelation between and the role of national and local governments in relation to societal needs, including education¹⁵³. Relevantly to our research, Zaļaiskalne has analysed the role of thinking paradigms as crucial for the development of the VET systems¹⁵⁴, and Lapiņa has addressed the issue of innovation in education and training in relation to the labour market needs, the training process itself, as well as regarding the organisational issues¹⁵⁵. In this relation, Zeibarte has studied the importance of knowledge creation, preservation, application and management¹⁵⁶. Thus, there are many scholars that have addressed the issue of human resources' development in various contexts allowing to view the research problem of the present thesis also against the background of the specific Latvian contexts.

¹⁴⁷ Rivera, C.A. Building a model of leadership development for times of change, Riga, 2010. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Dr. oec., professor Inesa Vorončuka

¹⁴⁸ Tauriņa, Ž. Jauniešu sasniegumu novērtēšanas procesa vadība vidējā izglītībā Latvijā, 2011. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Professor Dr. paed. Ilze Ivanova

¹⁴⁹ Romele, L. Izglītības privātās un sociālās atdeves novērtējums Latvijā, Riga, 2014. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Professor Dr. oec. Māris Purgailis

¹⁵⁰ Rusakova, A. Recognition of Prior Learning within Higher Education in the Context of Lifelong Learning (Iepriekšējās izglītības atzīšana augstākajā izglītībā mūžizglītības kontekstā), Riga, 2011. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Dr. chem., professors A. Rauhvargers

¹⁵¹ Upenieks, A. Jauno izglītības iestāžu vadītāju sagatavošana un adaptācija darbam izglītības iestādēs, 2008. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Professor, Dr. paed. Oskars Zīds

¹⁵² Vasiļevska, D. Sociāli ekonomiskie faktori augstākās izglītības pieejamības nodrošinājumam Latvijā, Riga, 2014. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Professor Dr. phys. Andris Grīnfelds

¹⁵³ Vilka, I. Pašvaldību reformas un reģionālā attīstība Latvijā, Riga, 2004. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Dr. habil. oec., professor Edvīns Vanags

¹⁵⁴ Zaļaiskalne, A. Pārmaiņu vadība profesionālās izglītības satura pilnveidošanā Latvijā (Change management in the improvement of the vocational education and training content in Latvia), Riga, 2013. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Professor, Dr. phys. Andris Grīnfelds

¹⁵⁵ Lapiņa, G. Inovācijas pedagoģiskā izpratne augstskolā, Rīga, 2007. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Professor, Dr. habil. paed., Tatjana Koķe

¹⁵⁶ Zeibarte, L. Pedagogu tālākizglītības pārvaldība nepārtrauktas profesionālās pilnveides nodrošināšanā, Riga, 2011. Thesis for the acquisition of the Doctoral scientific degree in administrative sciences under the supervision of Dr. paed. Professor Dainuvīte Blūma

This sets a theoretical background for our empirical survey – regarding both, the role of public administrations in the training of modern competitive labour force by developing new institutional mechanisms and collaboration schemes, as well as on the ability of public administrations to reflect on their own aptitude to address these new challenges.

1.2. The role of public administrations - policy discourse analysis

In this chapter the issue of the role of public administration in the development of competitive labour force will be analysed from the policy and strategic perspective, by evaluating the EU strategic framework, as well as the strategic and legal framework in Latvia in the context of the research problem. As already pointed out, the analysis of these aspects have been widely investigated in academic research of M.Kuijpers, F.Meijers and C.Gundy from Hague University, the Netherlands¹⁵⁷, by Elly de Bruijn and Yvonne Leeman from Utrecht University, the Netherlands¹⁵⁸, and it is important to study links with the actual strategic framework. According to the report “Taking European Knowledge Society Seriously”¹⁵⁹, “an important change in the governance of innovation would be strategic development of improved European institutional capacity to deliberate and resolve normative questions concerning the prior shaping of science and innovation”, recommending structured ways of appraising the projected benefits of innovation, implying a shift from expert-dominated to more open deliberative science-informed institutions on ethics, risk and innovation. In this respect the Innovation Union European Innovation Partnerships, announced by the Europe 2020 Flagship Initiative, should be considered as an important initiative, since it calls for “mobilising actors across the innovation cycle and across sectors around an overarching target in order to speed up innovative solutions to societal challenges”¹⁶⁰. Thus, the challenge ‘to develop new curricula addressing innovation skills gaps’¹⁶¹ are clearly at the centre of overall EU strategic approaches regarding innovation. This aspect is especially important for the present research, since our attention is being focused on relatively new forms of alliances and approaches in public administration to facilitate innovation in VET, especially in regard to the training of competitive and innovation competent labour force. At the same time it should be noted that the above

¹⁵⁷ Kuijpers, M., Meijers, F., Gundy, C. (2011). The Relationship between Learning Environment and Career Competencies of Students in Vocational Education, *Journal of Vocational Behavior*, Volume 78, 21-30.

¹⁵⁸ Bruijn, E., Leeman Y. (2011). Authentic and Self – Directed Learning in Vocational Education: Challenges to Vocational Educators, *Teaching and Teacher Education*, Volume 27, 694 – 702.

¹⁵⁹ Taking European Knowledge Society Seriously”. Report of expert group on science and governance to the Science, Economy and society Directorate of the Directorate-General for Research, European Commission. Luxembourg, 2007.

¹⁶⁰ Europe 2020 Flagship Initiative. Innovation Union. Communication from the European Commission of 6 October 2010.

¹⁶¹ The European Commission is supporting business-academia collaborations through the creation of "Knowledge Alliances" between education and business to develop new curricula addressing innovation skills gaps, see <http://i3s.ec.europa.eu/commitment/3.html>

indicated policy initiatives clearly refer to such notions as ‘actors’, ‘innovation cycle’, ‘sectors’, ‘societal challenges’, ‘new curricula’, ‘skills’ gaps’ which is relevant in the context of our research as important key words for the governance of innovation in present day society.

As pointed out by the EU policy makers and administrators, the majority of Member States are ‘in the process of improving their governance structures and strategic guidance for research and innovation...however, very few countries are explicitly targeting societal challenges as their main priority’¹⁶². Moreover, “in the European Union ... beliefs are often surveyed via empirical analysis, in order to identify the views held by citizens”, as pointed out in the General Report on the Activities of the European Group on Ethics in Science and New Technologies to the European Commission 2005 – 2010¹⁶³, simultaneously stressing that “the results of such empirical research are sometimes used as a basis for political decision making procedures, without the intermediate step of ... analysis based on values”.

Consequently, the issue of good and responsible governance and sustainability cannot be overlooked in national innovation policies, and scholarly approaches for seeking solutions today might become of greater importance than before. According to conclusions of high level European policy research, countries should be increasingly aware of the contribution socioeconomic sciences and humanities can make in addressing the key challenges of our age and of the capacity of these disciplines to stimulate stakeholder synergy and cultivate sustainable approaches¹⁶⁴.

This is not surprising, since societal challenges imply change of thinking paradigms, both, for the ‘governors’ and the ‘governed’ - public administration and society at large, and this has never been an easy task. This also comprises implications regarding the real interests of the society, related also to potential risks and the needed precaution in the drafting and implementation of innovation policies at national and European level. Research on these issues has been implemented by the author within the EU 7th Framework project EGAIS¹⁶⁵, and research results presented and published at several international conferences. These factors, although not being the main focus of our research, cannot be overlooked in dealing with the issue of innovation in the context of the operation of public administrations.

Much policy discussion has been devoted to the ‘demand-side’ and ‘supply side’ innovation policies. It has been noted that a growing awareness amongst policy makers for the

¹⁶² State of the Innovation Union 2011. Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels, 2.12.2011, COM(2011) 849 final

¹⁶³ General Report on the Activities of the European Group on Ethics in Science and New Technologies to the European Commission 2005 – 2010. European Union, 2010.

¹⁶⁴ Strengthening the participation of research teams in science, economy and society in an enlarged Europe. Summary of the sessions at the research connection conference, Prague, 7-8 May, 2009. European Communities.

¹⁶⁵ Information on the EU 7th Framework project EGAIS available at <http://www.egais-project.eu/>

need to better exploit the power of public spending for innovation and the emerged focus on searching solutions to societal challenges is a promising sign for the future spread of demand-side innovation policies¹⁶⁶. However, the key issue arising from these policy discussions imply that our thinking paradigms towards innovation are undergoing a substantial change, and public administrations have to deal with this challenge accordingly.

These issues have continually and increasingly been on the European Union and national states' political agenda already since the end of the previous century, with the awareness that stable growth within the global economic system implies factors such as skill and education levels, effective institutions and administrations, a modern infrastructure and innovative industrial base¹⁶⁷. Clearly, a well-trained labour force is being highly prioritised among other relevant factors, and the role of public administrations for the training of such labour force in the context of the implementation of innovation strategies should be promoted.

Thus, as discussed above, the implementation of the research and development policies and innovation goes hand in hand with the respective and adequate training of the labour forces – not only within higher education but increasingly so, in the VET system, as we will show further on in the analysis of most recent education and training policy initiatives. A systemic innovation approach for this is needed, and, as indicated in the OECD/ CERI study of systemic innovation in VET, a systemic innovation approach is “any kind of dynamic, system-wide change that is intended to add value to the education process and outcomes” (OECD/ CERI study, 2008)¹⁶⁸.

Indeed, until recently the EU education policy has been highly oriented towards the training of high level and innovation competent workforce within the higher education system. Only the latest EU policy developments indicate that there is an increasing need for high level innovation competent specialists and medium level managers prepared by the VET system. Economic development today will increasingly depend on skilled and innovation competent labour force at all levels, requiring new approaches to labour force training, especially since the fast technological development continuously causes skills' shortage and skills' mismatch. This is partly rooted in the traditional approaches, where the higher education system and the VET system have been functioning relatively separately. However, today when the technological processes require highly skilled labour force at all levels, new approaches and an enhanced

¹⁶⁶ Trends and Challenges in Demand-Side Innovation Policies in Europe. Thematic Report 2011 under Specific Contract for the Integration of INNO Policy TrendChart with ERAWATCH (2011-2012), technopolis [group], 26 October 2011 Authors: Kincsö Izsak & Jakob Edler

¹⁶⁷ Building the Knowledge Society. Report to the Government. Information Society Commission, Republic of Ireland. Dublin, December, 2002.

¹⁶⁸ OECD/CERI Study of Systemic Innovation in VET. Systemic Innovation in the Danish VET System. Country case study report – 3. OECD 2008.

dialogue have to be considered also for strengthening the link between the two systems – higher education (HE) and VET. It is not surprising, as the learning outcomes (LO) approach highly promoted in the VET system is increasingly being attributed also to the higher education system as a response for an objective needs to evaluate the actual knowledge, skills and competences instead the number of academic hours spent. In higher education by the Bologna process the European Credit Transfer System (ECTS) has been implemented. In vocational education and training efforts are being made to introduce European Credit Transfer System (ECVET) at European level, so far with limited success.

Our research has shown that establishing closer links between HE and VET systems is not an easy task, among other things due to the long established *tradition* to view these systems (or even philosophies) separately. Consequently, this concerns values. Moreover, in the society and among specialists the prestige of higher education has always been high, whereas the prestige and attractiveness of VET in many countries, including Latvia, has been a contradictory issue. There exist two relatively distinct ‘societies’ – that of higher education and that of VET, both having their own philosophies, strategies, values, pools of experts and other highly significant issues. These factors determine the complicated and sometimes also politically sensitive nature of the issue – as we will show in our initial survey implemented among key experts, policy makers and administrators at the beginning of 2012 – regarding the role and place of innovation in the overall education system, with a particular emphasis on VET. Innovation in Europe is a top level priority, given the strong economic and technological competition from the other parts of the world. For this reason, the EU innovation policy is undergoing a radical change. This change implies relating innovation not only to the domain of research but also to the field of education. This implies the need to reconsider the existing approaches to innovation, regardless of the long established tradition or perhaps political or administrative sensitivities that might arise in the process.

The former President of the European Commission J.M Barroso, when discussing ‘what’s wrong in Europe’, has pointed to the weakness of public education and innovation systems¹⁶⁹. Furthermore, the present President of the European Commission Juncker has stated that the new Commission will pursue the modernisation of education systems through the European Semester of economic policy coordination, with a view to progressing towards the education targets set in the Europe 2020 strategy, and the Juncker Commission when taking office has pledged an ambitious *Jobs, Growth and Investment Package* focused, with an

¹⁶⁹ Innovation Priorities for Europe. Presentation by J.M.Barroso to the European Council of 4 February, 2011.

emphasis on education, research and innovation. The Education and Training Monitor 2014¹⁷⁰ which has been released on the eve of the Juncker Commission taking office represents the need for a more marked shift towards jobs and growth in the context of education and training.

To this end, practical steps have been already taken by the new European Commission – by transferring the political responsibility for VET under the governance of the Directorate General for Employment. Thus, one of the key areas of the present research is the study of the role and attitudes of relevant stakeholders (primarily public administration) towards implementing innovation in VET systems for the training of competitive modern labour force, as well as towards possible change of institutional approaches to address challenges in the training of such labour force, including the need for innovation. This, according to our research, is a ‘double edged sword’, since in order to implement innovation, the public administration itself has to be or become innovation oriented. For this reason the first empirical survey performed in 2012 among public administrators in education and research was aimed at finding out how flexible in its attitudes towards innovation and VET was the public administration itself. The results of the survey clearly indicated to a traditional and rather conservative approaches regarding to links between innovation and VET, thus underlying the existence of an actual problem – if measured against the analysed leading academic research and EU policy priorities.

Thus, as shown by the analysis of the latest EU education and training policy documents and as already indicated above in the analysis of academic research, there is an increasing tendency to explicitly link VET policies with innovation, underlying the role of innovation in the training of skilled labour force as a driving force for competitive economies, as pointed out in the Annual Growth Survey 2013¹⁷¹. Regarding the general policy framework, the Communication from the Commission. Europe 2020¹⁷² which is one of the key strategic framework documents for the present decade, sets a new agenda for skills and jobs, in order to modernise labour markets - by facilitating the development of skills throughout the lifecycle with a view to better matching labour supply and demand. In addition, the Council conclusions of 12 May 2009¹⁷³ names enhancing creativity and innovation, including entrepreneurship, at

¹⁷⁰ Education and Training Monitor 2014, available also at http://ec.europa.eu/education/library/publications/monitor14_en.pdf (accessed 17.12. 2014)

¹⁷¹ Communication from the Commission, Annual Growth Survey 2013, Brussels, 28.11.2012, COM(2012) 750 final, available also at http://ec.europa.eu/europe2020/pdf/ags2013_en.pdf.

¹⁷² Communication from the Commission. Europe 2020. A strategy for smart, sustainable and inclusive growth, Brussels, 3.3.2010, COM(2010) 2020 final, available also at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF>, accessed 7.02.2013

¹⁷³ Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training (‘ET 2020’), (2009/C 119/02), also available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:119:0002:0010:en:PDF>, accessed 7.02.2013

all levels of education and training as one of its main strategic objectives. The Europe 2020 Flagship Initiative. Innovation Union¹⁷⁴ of 6 October 2010 in its turn claims that the starting point for further successful economic developments is to create excellent and modern education systems in all Member States.

As already stated above – the new processes in the VET system started with the so called Copenhagen process when it has been explicitly recognised that innovation and VET are and have to be linked. The Copenhagen process called for an increased role of the social partners in VET, as well as closer links between the world of education and the world of work, if compared to previous periods of time. According to the Bruges Communiqué¹⁷⁵ (which is the most recent key VET policy planning document of the European Commission), the member States have been invited to enhance co-operation, develop creativity, innovation and entrepreneurship within VET¹⁷⁶. The Copenhagen process being an inherent part of the Strategic framework „Education and Training (ET2020)“ is contributing to achieving the education-related targets of the Europe 2020 strategy and thus being linked to strategic developments of the overall EU economic competitiveness. The Copenhagen process aims to improve the performance, quality and attractiveness of VET through enhanced cooperation at European level based on mutually agreed and periodically reviewed priorities. With these in mind, the global vision for VET calls for European VET systems that are more attractive, inclusive, relevant, accessible, career-oriented, flexible and innovative by 2020¹⁷⁷. The adaptability and employability of young people and adults, including older workers, depend strongly on access to high-quality initial education and training and the opportunity to update and acquire new skills throughout working life and VET systems play a key role in providing competences and qualifications thus developing a knowledge-based Europe¹⁷⁸.

The author of the thesis is the member of two EU level strategic groups in VET, and over the past two years is actively involved in reviewing the European level VET within the framework of the ET2020 strategy and Copenhagen process. For this reason it has been possible for the author not only to benefit from other EU member state expertise but also actively contribute to EU strategic approaches by using her expertise from the performed research.

¹⁷⁴ Europe 2020 Flagship Initiative. Innovation Union. Communication from the European Commission of 6 October 2010.

¹⁷⁵ The Bruges Communiqué on Enhanced European Co-operation in Vocational Education and Training for the Period 2011-2020, 2011. European Union. Available at http://ec.europa.eu/education/vocational-education/doc/bruges_en.pdf, accessed 7.02.2013

¹⁷⁶ Ibid

¹⁷⁷ The European Commission reference on Copenhagen process, http://europa.eu/legislation_summaries/education_training_youth/vocational_training/ef0018_en.htm

¹⁷⁸ Betz, N.E. Borgen, F.H., Rottinghaus, P. Paulsen, A. Halper, C.R. Harmon, L.W. “The Expanded Skills Confidence Inventory: Measuring Basic Dimensions of Vocational Activity”, in *Journal of Vocational Behavior*, Vol. 62, 2003, pp. 76 – 100.

Currently the present agreed short-term deliverables for VET in Europe for the period 2011-2014 (calling for concrete actions at national level for: the strengthening of the quality and efficiency as well as the attractiveness and relevance of VET; the realisation of LLL and mobility; the development of creativity, innovation and entrepreneurship; the promotion of equity, social cohesion and active citizenship¹⁷⁹) are being reconsidered, and the author of the thesis is taking an active role in it, also in relation to the tasks of the Latvian presidency in the EU Council and the new VET developments at European level that have to be agreed among member states, the social partners and other relevant stakeholders. Currently the process is being revised through mid-term stock taking leading to the joint report by the European Commission and the EU Council – in the light of the new socio-economic challenges, and these processes will potentially be finalised during the EU Council presidencies of Latvia and Luxembourg towards the end of 2015.

It should be noted that the Copenhagen process which started in 2002 implies a range of consecutive policy actions with the adoption of relevant policy documents in the field of VET: the Copenhagen declaration of 2002¹⁸⁰, the Maastricht Communiqué of 2004¹⁸¹, the Helsinki Communiqué of 2006¹⁸², the Bordeaux Communiqué of 2008¹⁸³ and finally the above mentioned Bruges Communiqué of 2010 which more specifically than any other previous VET policy state new and ambitious goals – to improve VET activities, quality and attractiveness by increasing VET co-operation at European level within the framework of mutually co-ordinated and regularly monitored activities¹⁸⁴. The Bruges Communiqué being a specifically VET oriented strategic document for the period 2010 to 2020 points out that nowadays even those occupations that formerly used to require low-level skills, are increasingly requiring medium or even high level qualifications, and that the VET systems need to improve their capacity to respond to the changing requirements of the labour market. Among other things it also points to the inherent potential of work based learning.

¹⁷⁹ Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training ('ET 2020'), (2009/C 119/02), available also at http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/107622.pdf

¹⁸⁰ The Copenhagen Declaration. 2002. Declaration of the European Ministers of Vocational Education and Training, and the European Commission, convened in Copenhagen on 29 and 30 November 2002, on enhanced European cooperation in vocational education and training. available also at http://ec.europa.eu/education/pdf/doc125_en.pdf

¹⁸¹ Maastricht Communiqué of 2004, available also at http://ec.europa.eu/education/news/ip/docs/maastricht_com_en.pdf

¹⁸² Helsinki Communiqué of 2006, available also at http://www.cedefop.europa.eu/EN/Files/helsinkicom_en.pdf

¹⁸³ Bordeaux Communiqué of 2008, available also at http://ec.europa.eu/education/lifelong-learning-policy/doc/bordeaux_en.pdf

¹⁸⁴ The European Commission reference on Copenhagen process, http://europa.eu/legislation_summaries/education_training_youth/vocational_training/ef0018_en.htm

Most recently, however, Communication from the Commission, Rethinking Education¹⁸⁵ of 20 November, 2012, already explicitly points out the crucial role of VET systems in ensuring the competitiveness of EU economies and stresses the role of skilled workforce at all levels. Its accompanying document - the working document on vocational education and training for better skills, growth and jobs¹⁸⁶ - already refers to creativity and innovation in VET as driving forces for new ideas in business and industry that support competitiveness through the development of new technologies, processes, and services, with an ultimate impact on growth and prosperity. Currently the mid term priorities of the Bruges communique are being re-evaluated by the EU member states for their better compliance with the new labour market developments.

Moreover, as stated by the European Commission in comments on Innovation Union: “Innovation is as essential to sustainable growth and jobs as water are to life. Economies that do not innovate will wither away. The European Commission is asking Member States to act on it in their Europe 2020 National Reform Programmes, by building on strengths and addressing weaknesses. The Innovation Union Competitiveness report provides them economic evidence and analysis to underpin EU and national policy making in support of Innovation Union. Public and private stakeholders will also get in a single compendium valuable insights to design winning innovation strategies within Europe and for the global market”¹⁸⁷. Thus, explicitly or implicitly, these most recent EU policy developments are stressing the importance of high level skills for all the workforce and linking the VET system to the issue of innovation - which had not been the case previously, as innovation was primarily being related to the domain of higher education and research. These policy shifts have determined our research interest into the opinions of responsible public administrations and experts regarding the relevance of VET in the training of competitive and innovation competent labour force. Another focus of our research is on the mode of training such workforces, and namely – on the importance of training the workforce at workplace. To carry out the research the existing theoretical perspectives were examined, with strong emphasis on recent research – in order to present the overall background on the latest developments in the academic thought. Another important policy shift is towards increasing links between education and employment

¹⁸⁵ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Rethinking Education: Investing in skills for better socio-economic outcomes, Strasbourg, 20.11.2012, COM(2012) 669 final, also available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:119:0002:0010:en:PDF>, accessed 7.02.2013

¹⁸⁶ Commission staff working document. Vocational education and training for better skills, growth and jobs. Accompanying the document Communication from the Commission Rethinking Education: Investing in skills for better socio-economic outcomes, Strasbourg, 20.11.2012, SWD(2012) 375 final, also available at http://ec.europa.eu/education/news/rethinking/sw375_en.pdf, accessed 07.02.2013

¹⁸⁷ The comment of the European Commission <http://i3s.ec.europa.eu/commitment/3.html>

strategies, thus, integration of young people into the labour market is an issue of inevitably high priority in the whole European Union (EU) and in Latvia, too.

The youth unemployment level in Latvia is as high as 23,2% according to EUROSTAT data in 2013. Education and training, as well as the first job experience for young people are considered to be crucial to start their employment career. Getting off to a good start facilitates youth integration into the world of work and lays the foundation for a good career, while it can be difficult to catch up after an initial failure¹⁸⁸. The public administrations need to seek solutions at both, national and regional level in order to address the problem in a systemic manner¹⁸⁹. The importance of this issue is strongly emphasized in the EU and member states' national strategic planning documents, e.g. flagship initiative of the EU-2020 strategy Youth on the Move - a comprehensive package of policy initiatives on education and employment for young people in Europe¹⁹⁰. Narrowing down to ministries, active labour market policy measures by Latvian Ministry of Welfare are set to promote youth employment and to provide opportunities to young unemployed. The issues have been studied also world - wide in academic research^{191, 192, 193} where the findings could be useful for policy makers on different aspects including regional development^{194, 195} and for promoting various branches in national economies¹⁹⁶. Experience of decades (thirty years) in changing of approaches¹⁹⁷ and different fields¹⁹⁸ in vocational education have been observed in academic research. Quality assurance

¹⁸⁸ A. Sonnet, "Off to a Good Start? Jobs for Youth". OECD Publishing, December 15, 2010.

¹⁸⁹ Bubany, S. T., Hansen, J.I. C. (2011). Birth Cohort Change in the Vocational Interests of Female and Male College Students, *Journal of Vocational Behaviour*, Vol. 78, pp. 59 – 67.

¹⁹⁰ European Commission (2010). Youth on the Move. An initiative to unleash the potential of young people to achieve smart, sustainable and inclusive growth in the European Union. Brussels, 15.9.2010. COM(2010) 477 final.

¹⁹¹ McGrath, S. Building New Approaches to Thinking about Vocational Education and Training and Development: Policy, Theory and Evidence, *International Journal of Educational Development*, Vol. 32, 2012, pp. 619 – 622.

¹⁹² Deisinger, T. "Dual System", in *International Encyclopedia in Education*, 3rd. edit., 2010, pp. 448 – 454.

¹⁹³ Van Uden, J.M. Ritzen, H, Pieters, J.M. Engaging Students: The Role of Teacher Beliefs and Interpersonal Teacher Behavior in Fostering Student Engagement in Vocational Education, *Teaching and Teacher Education*, Vol. 37, 2014, pp. 21 – 32.

¹⁹⁴ Editorial, Building New Approaches to Thinking about Vocational Education and Training and Development: Policy, Theory and Evidence, *International Journal of Education Development*, Vol. 32, 2012, pp. 619 – 622.

¹⁹⁵ Dlouha, J., Barton, A. Janouškova, S. Social Learning Indicators in Sustainability – Oriented Regional Learning Networks, *Journal of Cleaner Production*, Vol. 49, 2013, pp. 64 – 73.

¹⁹⁶ McMahon, W.W. Hwa, J. Brediono, J. Vocational and Technical Education in Development: Theoretical Analysis of Strategic Affects on Rates of Return, *Economics of Education Review*, Vol. 11, iss., 3, 1992, pp. 181 – 194.

¹⁹⁷ McGrath, S. Education and Development: Thirty Years of Continuity and Change, *International Journal of Educational Development*, Vol. 30, 2010, 537 – 543.

¹⁹⁸ Fidgeon, P.R. Tourism Education and Curriculum Design: A Time for Consolidation and Review? *Tourism Management*, Vol. 31, 2010, pp. 699 – 723.

has great importance in vocational education¹⁹⁹, as well as issues of employability²⁰⁰, on aspects of importance and different approaches of cooperation of vocational schools and industry²⁰¹.

The youth unemployment problem has explicit links to the VET system where lower and medium qualification specialists are being prepared for the labour market²⁰². Since 2009 there is an ongoing reform in Latvian VET system aiming at training workforce in compliance with labour market needs and economic development trends. A current proposed innovation is the adaption of dual system elements for piloting work-based learning approaches in cooperation with local employers. Recent research indicates to the multifaceted relationship between the actual learning environment and its capability to educate skilled workforces, linking it to the ability to get involved in the innovation process²⁰³.

During the recent years the European Commission has carried out the analysis of member states involvement in work-based learning, as well, pointing out the differences in the approaches of the member states and the effectiveness of the various solutions²⁰⁴. The issue of introducing work-based learning elements in Latvian VET should be viewed in close contact with the system regional development, national strategic planning, youth integration, VET and their connections. Analysing the legislative and strategic framework, as well as supranational and national-level long-term and medium-term planning documents and specific programmes of activities is relevant, in connection with the results of academic research on the problem of implementation of innovation in relation to public policies.

The EU youth employment initiatives have an impact on the implementation of VET policies of the EU member states. Although these initiatives are not at the focus of our research interest, the background analysis of these key initiatives will contribute to the overall framework of our research. Youth on the Move analysis is relevant for its connection also to the regional development through examining of how to support youth employment, educational opportunities and higher education infrastructure, issues addressed also in academic research²⁰⁵.

¹⁹⁹ Gunning, D. Quality Assurance in Vocational Education and Training, *International Encyclopedia of Education* (3rd edition), 2010, pp. 482 – 488.

²⁰⁰ Hyghes, M. Hyghes, C. Industry involvement in the Vocational Education and Training System, *International Encyclopedia of Education* (3rd edition), 2010, pp. 455 – 462.

²⁰¹ Isgoren, N.C. Cinar, A. Tektas, N. Oral, B. Buyukpehlivan, G. Ulusman, L. Oznaz, D. Polat, Z. Uzmanoglu, S. The Importance of Cooperation between Vocational Schools and Industry, *Procedia and Behavioural Sciences*, Vol. 1, 2009, pp. 1313 – 1317.

²⁰² Stern, D. Finkelstein, N. Urquila, M. Caganpang, H. What Difference Does it Make if School and Work are Connected? Evidence on Co-operative Education in United States, *Economics of Education Review*, Vol. 16, Iss. 2, 1967, pp. 213 – 229.

²⁰³ Ruth, K. and Deitmer, L. The Relationship between Technical and Vocational Education and Training and Innovation. *International Encyclopedia of Education* (3rd Edition), 2010, pp. 423-428.

²⁰⁴ European Commission, Apprenticeship supply in the Member States of the European Union. Final Report. 2012, available also at http://ec.europa.eu/education/vocational-education/doc/forum12/supply_en.pdf [Accessed September 2, 2013].

²⁰⁵ Karatzoglou, B. An In – Depth Literature Review of the Envolving Roles and Contributions of Universities to Education for Sustainable Development, *Journal of Cleaner Production*, Vol. 49, 2013, pp. 44 – 53.

The development and integration of young people concerns also making no different approach based on gender²⁰⁶, different vocational education levels as well as payment systems²⁰⁷. Another cross-dimensional aspect for interconnectivity of regional development and VET is defined in the communication from the European Commission “A new impetus for European cooperation in Vocational Education and Training to support the Europe 2020 strategy”²⁰⁸ promoting international cooperation in the area of VET²⁰⁹. This cooperation in its turn is linked to the potential to contribute to extended transnational collaboration and regional development, while equipping young learners already during initial VET with skills directly relevant to evolving labour markets is crucial²¹⁰.

Also the Agenda for new skills and jobs²¹¹ emphasizes the need to improve the attractiveness of initial VET and encourages employers to co-invest and participate in the activities of education, particularly in VET to facilitate the provision of work-based learning, to provide the possibility to obtain “the right mix of skill”, pointing to the necessity and effectiveness of partnerships, involvements and co-operations also on a regional and interregional level. The call to action from the European Commission “Working together for Europe's young people: A call to action on youth unemployment.”²¹² contains country-specific recommendations for better employment, in particular, that of young people. The European Commission has recommended to 16 Member States, including Latvia, to focus on VET programmes by increasing their labour market relevance through a stronger work-based learning component and accelerating the reform of apprenticeships with the help of the EU budget. Among other recommendations the European Commission suggests Latvia to tackle long-term and youth unemployment by increasing coverage and effectiveness of active labour market policies, improve the employability of young people through a Youth Guarantee (European Youth Guarantee is a guarantee that ensures that every young person in Europe is offered a job, further education or work-focused training at the latest four months after leaving

²⁰⁶ Asselt, R.V. The First Large Scale CAI Experiment in the Higher and Advanced Vocational Education (HBO) in the Netherlands, *Higher Education and New Technologies*, 1989, pp. 263 – 268.

²⁰⁷ Betz, N.E. Borgen, F.H. Rottinghaus, P. Paulsen, A. Halper, C.R. Harmon, L.W. The Expanded Skills Confidence Inventory: Measuring Basic Dimensions of Vocational Activity, *Journal of Vocational Behavior*, Vol. 62, 2003, pp. 76 – 100.

²⁰⁸ European Commission (2010). A new impetus for European cooperation in Vocational Education and Training to support the Europe 2020 strategy. Brussels, 9.6.2010. COM(2010) 296 final.

²⁰⁹ Editorial, Building New Approaches to Thinking about Vocational Education and Training and Development: Policy, Theory and Evidence, *International Journal of Education Development*, Vol. 32, 2012, pp. 619 – 622.

²¹⁰ Council of the EU Resolution of 19 December 2002 on the promotion of enhanced European cooperation in vocational education and training (2003/C 13/02). *Official Journal of the European Communities*. C 13/2. 18.1.2003.

²¹¹ European Commission (2010). An Agenda for new skills and jobs: A European contribution towards full employment. Strasbourg, 23.11.2010. COM(2010) 682 final.

²¹² European Commission (2010). Working together for Europe's young people. A call to action on youth unemployment. Brussels, 19.6.2013. COM(2013) 447 final.

education or after becoming unemployed)²¹³ and implement reforms in the field of VET. Furthermore, the Youth employment framework initiative ²¹⁴ established by European Social Partners²¹⁵ features the need of regional involvement and primarily highlights the challenges and the potential of young people integration into labour market, in particular, promoting and identifying Social Partners' short- and long-term actions for the development and wider use of vocational education and training using also work-based learning models.

National Reform Programme of Latvia for the Implementation of the “Europe 2020” Strategy can be considered as EU level strategic planning documents` breakdown to national level. Within regional development dimension of the Programme the main focus is given to regional mobility that is one of the measures for reducing the risk of structural unemployment in Latvia as well as for strengthening the capacity of municipalities to attract investments. Young people are targeted as one of the most vulnerable social groups for integration into labour market, and new measures targeted at young unemployed for a practical work trial and for voluntary work under active labour market policy measures are promoted. Structural changes in VET are planned by differentiating the types and optimising the number and location of VET institutions in the regions (from 56 institutions in 2010 to 29 in 2015), thus developing material-technical supply for VET that conforms to the current requirements and improving quality of VET. An important dimension is the call for strengthening the cooperation with social partners to further improve and develop VET, thus ensuring the increase of the share of qualified labour – as one of the priority measures set in the Programme²¹⁶. National Development Plan of Latvia 2014–2020 (NDP) and Sustainable Development Strategy of Latvia until 2030 provides a further breakdown of the provisions set in the EU level strategic planning documents and identifies national priorities regarding interconnectivity of regional development, youth involvement and VET. Emphasis is laid on the potential of regions, particularly in the sector of small and medium enterprises that provide jobs to the local population. This is a relevant aspect also in our research, among other issues, regarding work-based learning developments. Also youth employment and youth education is one of the strongest priorities of National Development Plan stating that compulsory secondary education, both general and vocational, is instrumental to achieving an “economic breakthrough” and a high standard of overall well-being in 2020.

²¹³ European Commission (2012). Proposal for a COUNCIL RECOMMENDATION On Establishing a Youth Guarantee. Brussels, 5.12.2012. COM(2012) 729 final. 2012/0351 (NLE).

²¹⁴ European Social Partners (2013). Framework of Actions on Youth Employment.

²¹⁵ The European Trade Union Confederation, The Confederation Of European Business, European Association Of Small And Medium-Sized Enterprises, and The European Centre Of Employers And Enterprises Providing Public Services.

²¹⁶ National Reform Programme of Latvia for Implementation of the “Europe 2020” Strategy. Approved by a Decision of the Cabinet of Ministers, April 2011.

One of the goals of NDP is based on international trends and labour market projections - to create an adaptive and competitive VET system and to achieve by 2020 the ratio of students in general secondary education and VET programmes (after completing elementary education) as 50/50 - in 2014 the ratio being 60/40, according to the data by the Ministry of Education and Science of Latvia. Among the individual measures of NDP there are such as integration of young people into the labour market following the completion of vocational or higher education, including business start-ups, improvement of the infrastructure and facilities of VET institutions. At the same time NDP admits that major improvements are needed in VET, creating more employment opportunities for enhancing the structure of the national economy. Also the improvement of the competencies of the teachers and trainers involved in VET in accordance with the trends of the labour market, as well as the capacity building of vocational education institutions (including teachers) with respect to adult education is envisaged in the Latvian NDP²¹⁷.

Similarly as the EU Agenda for new skills and jobs on the EU level, the Sustainable Development Strategy of Latvia until 2030 (Latvia2030) on national level stresses the need for cooperation between education and regional entrepreneurship. The educational institutions in co-operation with regional entrepreneurs should be aware of local and global tendencies in the national economy in order to be able to foresee and offer such content and format of studies that would promote regional development and the competitiveness of individuals and organizations in economy of tomorrow. Latvia 2030 also foresees the promotion of the culture of lifelong education in the society, and the role of VET institutions should be increased in this respect. Latvia has also the necessary potential in order to develop exportable creative industry on the basis of culture (festivals, movie production, computer games, music records etc.), as well as to create design products with high added value. Latvia has relatively good opportunities to export also vocational secondary and higher education in cultural and creative professions. The Strategy also stresses the need to increase the prestige of vocational education and training and to continuously improve skills and competences throughout the work life by adult education and education at work places²¹⁸.

Also Active labour market policy measures (ALMPM) in Latvia within *regional development* dimension focuses on regional mobility of employees in order to tackle long-term unemployment in Latvia's regions. On a large scale of ALMPM, the VET is being offered to

²¹⁷ National Development Plan of Latvia for 2014–2020, Cross-Sectoral Coordination Centre. Approved by a Decision of the Saeima on 20 December 2012.

²¹⁸ Sustainable Development Strategy of Latvia until 2030 (Latvia2030). Approved by a Decision of the Saeima on 10 June 2010.

the unemployed that includes various training programmes²¹⁹. Overall the strategic, legal and programming framework of VET in Latvia is well developed and goes strongly in compliance with the provisions contained in EU level strategic document for VET development. At the same there is much space left for further practical improvements and developments, as well as challenges that Latvia is facing to increase the role and prestige of VET in the labour market. According to the study by Maliranta, M. et al.²²⁰, employability is a great challenge to the initial VET. The findings for local business conditions give support to the opinion that measures of education policy do not suffice but need to be complemented with those of regional or employment policy, for example, policies aiming to increase regional mobility of the labour force²²¹.

It is also visible that Latvia follows the trend showed by comparative studies, i.e., vocational trainings have tended to focus on initial training and to a lesser extent on continuing VET undertaken by employed workers. Insofar as pre-employment education and training activities are addressed, the focus of enquiry has tended to be restricted to the schooling and training of young people and different aspects of their transition from education to employment²²². The new approach of dual education – work based learning - has been developed. In many countries training of the unemployed is an important component of active labour market policies and tends to account for the largest share of overall state expenditure on activation measures²²³, being a challenge also for Latvia.

However, in the context of the present paper the focus is on the integration of the issue of the employment of young people into the overall development activities at national and regional level. This implies that also the local governments become an important stakeholder which alongside (and in co-operation) with the local employers are a key information source on the needs and priorities of that particular region. Being aware of the challenging nature of this task which implies also the change of the existing attitudes and the introduction of innovative approaches to the current VET reform, our aim was both, to study the relevant academic and policy discourse and carry out a corresponding empirical study. A special focus was on work-based learning approaches – an innovative measure in the Latvian context.

²¹⁹ Ministry of Welfare, Latvia. Active labour market policy measures 2012.

²²⁰ Maliranta, M. Nurmi S. and Virtanen, H. Resources in vocational education and post-schooling outcomes. *International Journal of Manpower*, Vol. 31, Iss. 5, 2010, 520-544.

²²¹ Koundahl, P.D. Vocational Education and Training: Dual Education and Economic Crises, *Procedia Social and Behavioral Sciences*, Vol. 9, 2010, 1900 – 1905.

²²² King, K. Skills and Education for All: from Jontiem (1990) to the GMR (2012) – A Policy History. *International Journal of Training Research*, Vol. 9, 2011, 16 – 34.

²²³ Heyes, J. Vocational training, employability and the post-2008 jobs crisis: Responses in the European Union, *Economic and Industrial Democracy*, Vol. 34, 2013, 34: 291.

Based on the results of the analysis of the academic research and strategic documents and reports, the current VET reform in Latvia can be analysed and presented against this background, with the focus on the research problem of the present thesis on the attitudes, opinions and activities of the public administrations and the existing and potentially needed institutional mechanism for the training of competitive labour force by the VET system in Latvia. In the present chapter the overall theoretical framework, as well as academic and policy/administrative discourse on the role of public administrations in providing for the training of competitive labour force in the VET system was presented. Further on, based on the analysis of Chapter 1, the specific context for VET reforms in Latvia and the key challenges for VET public administrations relevant to the research problem will be presented.

CHAPTER 2. THE FRAMEWORK FOR VET DEVELOPMENTS AND THE CHALLENGES FOR PUBLIC ADMINISTRATIONS IN LATVIA

2.1. Relevant aspect of the social and economic developments in Europe

The world of economy is changing in an unprecedented way, and there are numerous economic, social and employment indicators, as well as sociological research to support it. Although the statistical data cannot be considered as the only major source of information, the clearly evident tendencies in statistical data analysis allow to conclude that in EU economies unemployment and insufficient competitiveness of the labour force are major challenges. The marked EU youth unemployment of the recent decade tells us something about the changing social paradigms, as well – that the old and well established mechanisms are failing, and there are no alternative mechanisms and approaches yet to amend the situation. The low skilled and other risk groups of young people are a particular target group. The alarmingly high youth unemployment rates call the national governments to set new national targets and take new focused measures. Some countries still succeed even under the situation of the present economic crisis to preserve relatively low youth unemployment rates.

Thus, as indicated by Figure 1, in 2013 the lowest youth unemployment rate has been in Japan, only in five EU countries (Germany, Austria, the Netherlands, Denmark and Malta) the youth unemployment has been lower than in the USA. At the same time, the overall youth unemployment level is unprecedentedly high in the whole of the world, implying that today there is no universal solution available for this problem, but at least one can learn from these more successful countries, and parallel to this, attempt to develop and start testing own models and solutions.

The data represented in Figure 1 may turn out to be meaningful for Latvian public administrations in VET also regarding the recent new initiatives in work-based learning (WBL). In the the European countries with the lowest youth unemployment rated the dual VET sytems (work-based VET) is an inherent part of the VET system. A thorough analysis of the experience and best practice from these countries may serve as a material for informed decision making by Latvian VET public administrations, especially in developing the Latvian model for work-based learning. Each country has to take into consideration its typical features, including the structure of the national economy, but the success of the dual VET systems in other countries may promote revision of the former approaches.

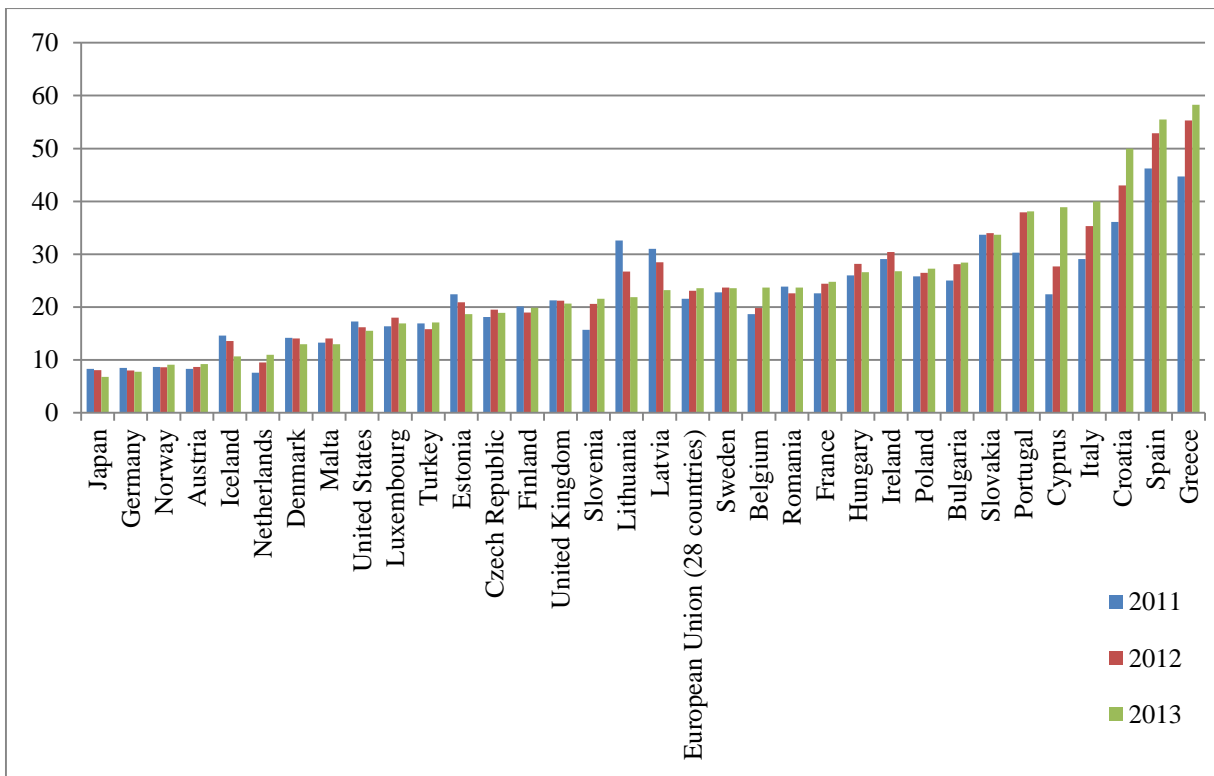


Figure 1. The youth up to 25 years unemployment (%) in 2011, 2012 and 2013

Source: European Statistics Bureau EUROSTAT, viewed 15.12.2014

Also the situation with the long-term unemployed is creating a high level of concern. Regarding the numbers of the long-term unemployed in Europe, there are marked differences among European countries, with the one extreme, e.g. very low rate in Norway. Iceland, Austria, Sweden, Finland, also Denmark, Luxembourg, Germany, the Netherlands, United Kingdom (from 1 to 2,7%) and very high rates, as e.g. in Spain and Greece, reaching the unprecedentedly high level of 13% and 18,5% respectively. In the case of Latvia the level is 5,8% which is medium level, but still higher than in the other two Baltic states (see Figure 2).

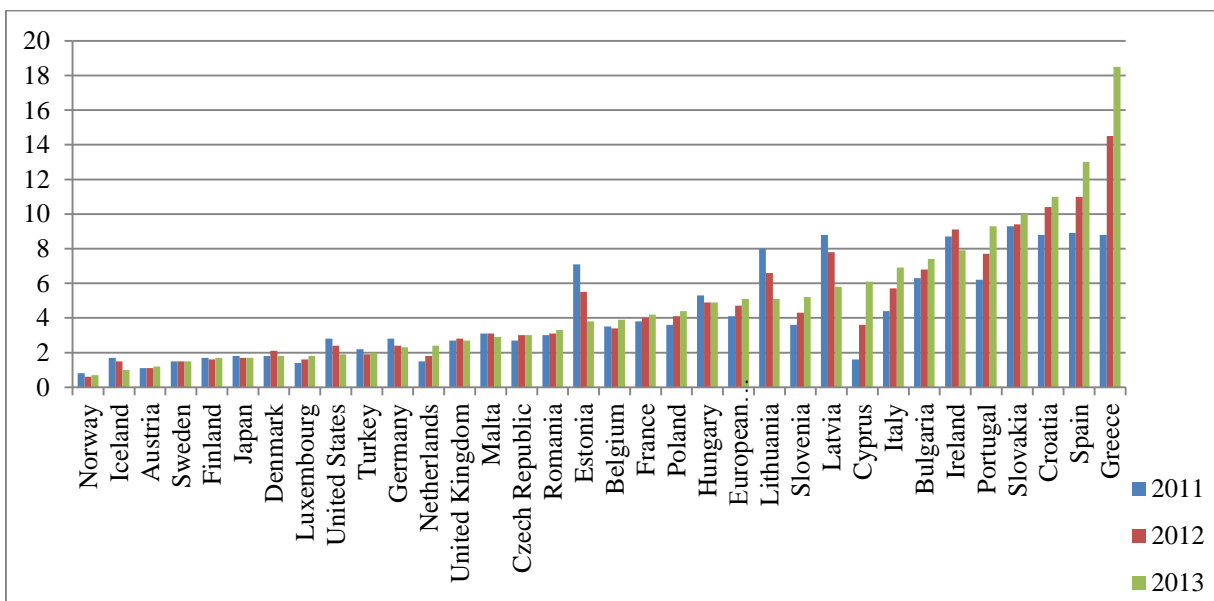


Figure 2. Long-term unemployed (%) in 2011, 2012 and 2013

Source: European Statistics Bureau EUROSTAT, viewed 15.12.2014

The overall figures are extremely high, and the particularly unfavourable situation for Latvia creates concern. Moreover, for several years running Latvia lags behind the other countries in the implementation of innovation occupying the 70th place among world's 144 countries involved in the study for global Competitiveness Report (see Figure 3). Estonia and Lithuania occupies the 30th and 44th place respectively. In our opinion, this implies certain systemic problems in the case of Latvia, since the three Baltic countries on the average have had a similar situation as a starting point in 1990ies. As the implementation of innovation is strongly linked with both, education and research, there are implications for public administrators in education sector, as well. Not only HE is concerned, but increasingly also the VET system with respective administrative structures. At the same time such countries as Finland, Germany, Sweden, the Netherlands, Denmark, United Kingdom, and Belgium occupy the highest places among the European countries.

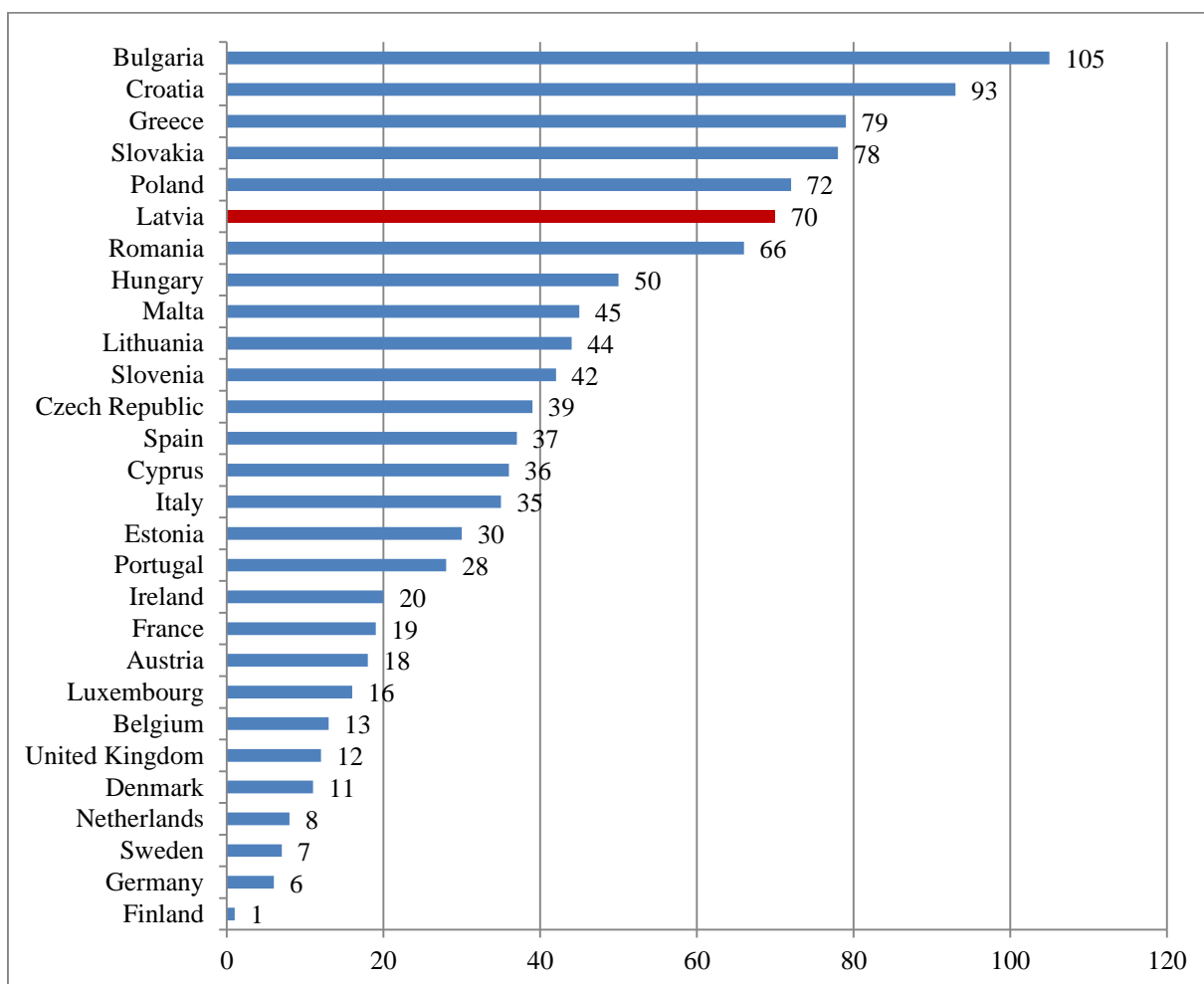


Figure 3. The evaluation of innovation in European countries – among 144 countries of the world in 2013

Ranks out of 144 economies measured on a 1-to-7 scale

Source: *The Global Competitiveness Report 2014–2015*, World Economic Forum, Geneva, 2014, (565p.) pp.36

The same unfavourable situation can be observed concerning the investment in research and development in 2013 and 2014, as represented in Figure 4. In a 1-7 points scale Latvia earns

only 3,1 points (with Estonia and Lithuania receiving 3,6 and 3,1 points respectively – which is not too different evaluation in comparison to Latvia in this case). The highest evaluation has been given to the Switzerland (5,9 points), Finland, Germany, Sweden, Austria, Belgium, United Kingdom, Denmark, and (ranging from 4,8 to 5,7 points in the evaluation) (see Figure 4). It is interesting to note the direct correlation between the investment of companies in research and development in European countries and the achievements in innovation in European countries – almost the same countries occupy the top of the list. Thus, the public administrations should put effort not only in investing in research to promote innovation but also in developing incentives to promote investment in research and development by companies.

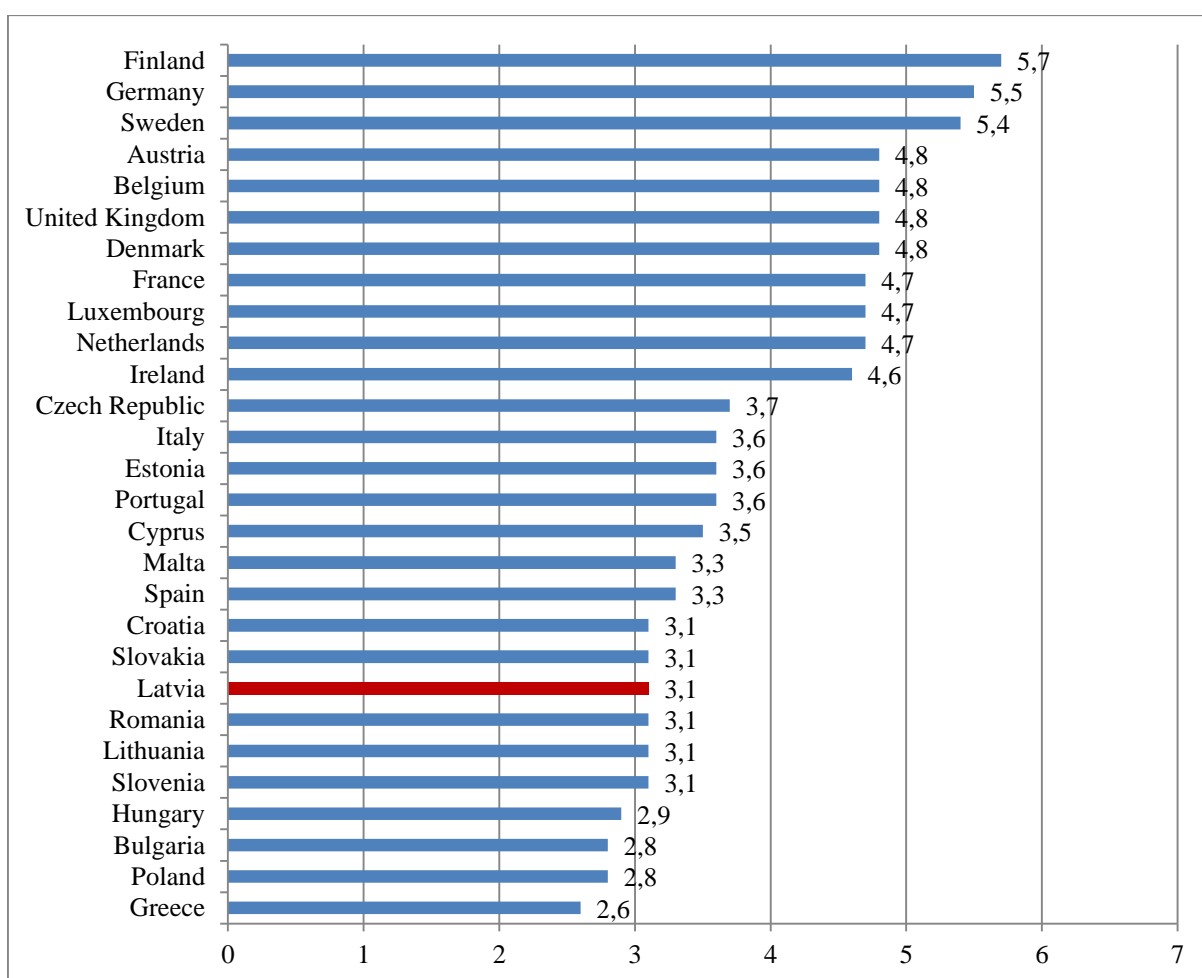


Figure 4. The evaluation of investment of companies in research and development in European countries in 2013 - 2014, weighted average

Evaluation scale: 1 - 7, where 1 = do not spend; 7 = spend heavily

Source: The Global Competitiveness Report 2014–2015, World Economic Forum, Geneva, 2014, (565p.) pp.532

Also the level of the export of goods and services serves as an important indicator of the competitiveness of the countries. With the top scores in 1–7 point evaluation system being earned by such European countries as Germany, United Kingdom, the Netherlands, France, Italy, Belgium and also Spain (ranging from 5,8 – 6,5 points), Latvia occupies a markedly low

position with only 4,1 points (see Figure 5). At the same time, as will be discussed further on in the work, the Ministry of Economy of Latvia in its annual Report²²⁴ has indicated to the necessary investments in the export goods and services as a priority are for a speeded economic recovery and development.

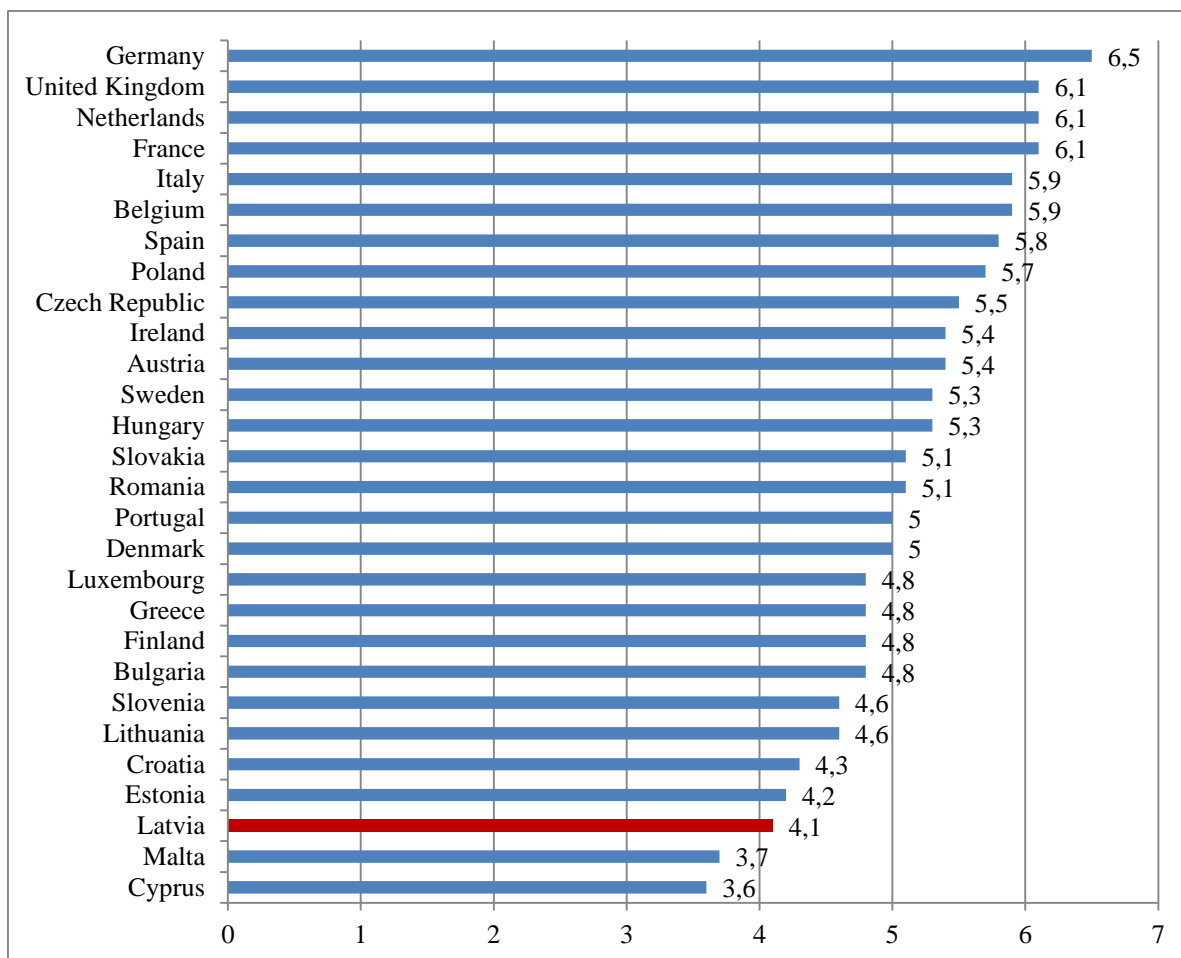


Figure 5. Value of exports of goods and services in European countries in 2013, normalized on a 1–7 (best) scale

Source: *The Global Competitiveness Report 2014–2015*, World Economic Forum, Geneva, 2014, (565p.) pp.515

In the present work apart from the above indicated statistical data and indicators, other statistical data have also been considered as important and relevant to the research and used as background data for the analysis of education developments, especially to the further developments in the VET system²²⁵.

²²⁴ Report by the Ministry of Economy on the Development of National Economy (December, 2012) http://www.em.gov.lv/images/modules/items/tsdep/zin_2012_2/2012_dec.pdf, viewed 20.08.2013

²²⁵ These data concern: Estimates of the goods and services in European countries in 2011; The evaluation of European countries on the level of innovation in 2011; The level of absorption of the new technologies in 2011–2012; The evaluation of investments research and development in European countries in 2011–2012; The evaluation of the competitive of the European enterprises in the international markets 2011 – 2012; The evaluation of the impact of foreign direct investment on the introduction (implementation) of new technologies in 2011; The evaluation of the relationship between the employees' productivity in European countries in 2011 – 2012; The level of unemployment (%) in 2012; The level of unemployment among young people (%) from 2004 to 2012; The long term unemployed (%) in 2011 and 2012.

As a result of the analysis it can be concluded that the EU VET reforms are being carried out under comparatively unfavourable economic, social and employment conditions, and in the case of Latvia these conditions are especially unfavourable. At the same time, these VET reforms must not be delayed, as the revival of the European and global economies are directly dependable on the highly skilled modern workforce at all levels. This workforce should be flexible and technology and innovation competent – since that is the demand from the modern society so different from any other society known to us before. This modern society is not any more based on the accumulated tradition and value which used to be a certain guarantee in the former centuries and even decades. Most of the modern developments are unpredictable and unpredicted, involving a high degree of uncertainty and risk²²⁶. Under these circumstances, also the public administrations should become more flexible, in order to be prepared to address the new conditions of unpredictability and fast change.

2.2. Implications for further development of VET systems

Although there are numerous researches criticising the traditional approaches to VET development by linking it primarily to economic development (e.g. McGrath, Vocational education and training for development: A policy in need of a theory?)²²⁷ and suggesting that VET development should be much more linked to overall human development, in our work we will adhere to these more traditional approaches in the development and offer of public VET. Following these traditional approaches – it is important to analyse economic achievements and successful labour force and employment policies in European countries. According to this approach, such countries as Germany, the Netherlands, Finland, Sweden, Denmark, Switzerland, Austria, also the Netherlands and Belgium and some other are among the most successful in economic and human resource development, as well as in the implementation of innovation.

Although at the first glance this could be – without much thought - directly linked to their overall successful economic and social developments through decades, one should seek also other implications, possibly linked to the education and training strategies, even under the situation of global crisis. In the case of Latvia, the former traditional approaches to economic and social processes are evidently failing (not yielding the expected results). The tasks of researchers, policy makers, public administrators and other relevant stakeholders are to seek innovative and untraditional solutions, including the solutions in education and training.

²²⁶ The author has carried out a study on this within a EU 7th framework project EGAIS, for more information on EGAIS project see: <http://www.egais-project.euo>

²²⁷ McGrath, S. Vocational education and training for development: A policy in need of a theory? *International Journal of Educational Development* 32 (2012) pp. 623-631

Especially it is true in regard to VET which has been a relatively neglected domain over years with a traditionally low prestige in Latvia, but objectively having a huge potential and major role for the revival of the national economy. This once again underlines the topicality of the present research – on the role of public administrations in promoting the development of competitive labour force through the VET system.

An interesting country to examine is Germany - not only in relation to the successful economic development of the country, but also due to the low levels of German unemployment at European level, especially youth unemployment which is a relevant aspect for our work. Another reason is the successful use of specific approaches to VET implementation - the well-known dual training approach which implies work-based learning (WBL). Currently in Latvia a pilot project on work-based learning with dual training elements has been started in the academic year 2013/2014 and is being continued throughout the academic year 2014/2015. The author of the thesis is directly involved in the implementation and monitoring of this project. The author of the thesis is also the author of the ministerial report on work-based learning in VET in Latvia - the report was accepted and well-referred to by the Cabinet of Ministers August 12, 2014.

The WBL that is a traditional and well-known system in several European countries, such as Germany, Austria, Switzerland, the Netherlands, Denmark and some other. The dual system implies that the trainee spends a much higher proportion of the study time in practical training at an enterprise, and a relatively small proportion of the overall program is being spent in the VET institution. For the dual training system it is typical that the responsibility for this training is being divided between the state and the employers. For the implementation of the dual system the existence of large enterprises is desirable, although many successful solutions have been found also for the involvement of smaller enterprises. For example, in Germany smaller enterprises unite in employers' chambers that have their own vocational training centres, and the practical training of the learners takes place in these centres. The reason for such uniting in chambers is the fact that the small enterprises have no access to the variety and amount of equipment that is needed for an appropriate and high quality training. Consequently the employers choose to pay a fee to the chamber that unites them for the development and maintenance of a VET training centre.

The work-based learning approaches are well-known in the crafts system in Latvia – as apprenticeship schemes implemented in Latvian crafts sector for many years running, but is a novelty in the Latvian VET system and therefore can be considered as an innovation. Besides, the crafts sector is being regulated by its own legal framework, different from the VET

legislation. In the subsequent chapters of the Thesis the work-based learning approaches will be considered and analysed as one of innovative approaches in the Latvian VET context.

In compliance with the information in the European Commission edition “Work-Based Learning in Europe. Practices and Policy Pointers”¹³ – in Germany and Austria every twentieth employed is a trainee (within the dual training system), while in the majority of other European countries these figures are much lower – even lower than every hundredth of the employed (see Figure 6).

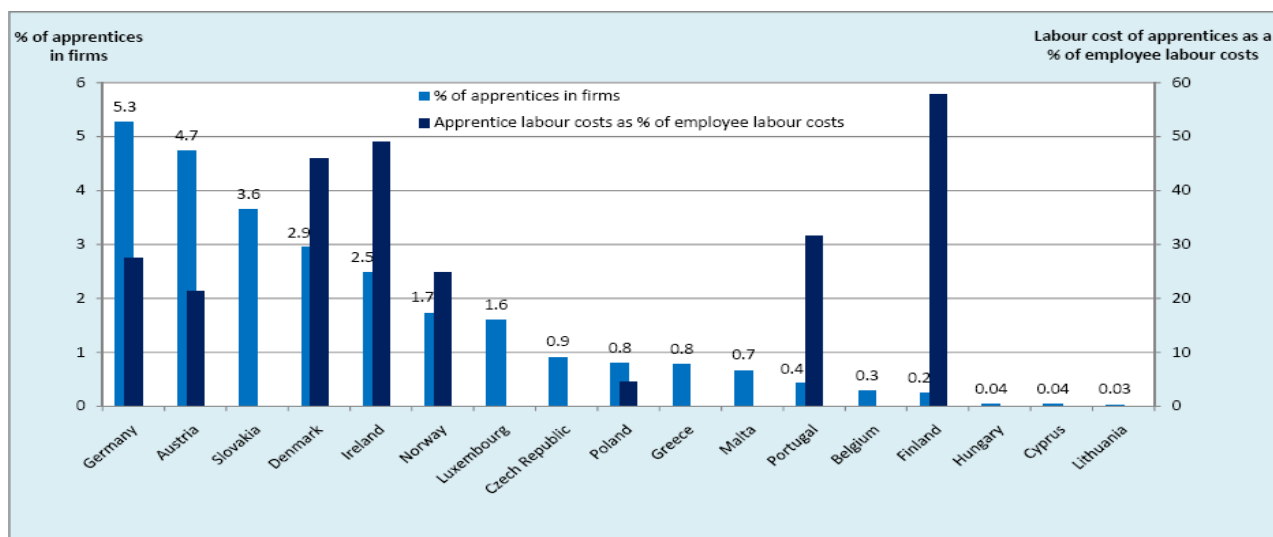


Figure 6. The numbers of trainees at enterprises (%) in different European countries (blue bars) and the costs of trainees’ job (%) against the costs of the permanently employed (purple)

Source: Cedefop calculations based on the Eurostat employment cost survey of 2008 (it is the latest information on February 19, 2014)

The comparatively low unemployment level in the above mentioned countries serves as the main argument on the advantages of the dual system. Thus, for example, in Germany the youth unemployment in 2011 and 2012 was only around 8,1%, in Austria respectively 8,7%, in the Netherlands 9,5%, in Denmark 14,1%. In Latvia the respective unemployment level constitutes 28,4%, which is a considerably higher indicator than in most of the European countries, including Lithuania and especially Estonia.

At the same time, in many places in Europe a sceptical attitude towards the dual training systems can be observed, not only in relation to the capacity of enterprises in the context of the global economic crises, but primarily concerning the somewhat limited scope of theoretical knowledge the trainee acquires in the training process. The labour market receives a ‘well-trained’ worker, especially for some particular operations to be performed, which often unfortunately implies lack of broader education, low levels of flexibility, somewhat low ability for innovative and creative thinking. As the modern labour market demands a competitive, innovative and flexible labour force, the implementation of the dual system might present an additional challenge for public administrations. It may cause the questioning of the universal

value of the dual VET systems, especially under the conditions of economic crisis with limited workplaces and increasingly emerging structural unemployment alongside with the growing overall unemployment in Europe. At the same time, it should be acknowledged that no system is perfect, and this leaves space for innovation in the national VET systems, by close co-operation of the involved parties. Especially the national public authorities should reflect on the possibility to overtake the best European practice, after its critical evaluation, and adjust it to the local environments. According to the European Commission, in Europe it is necessary to invest in building world-class VET systems with an increased amount of work-based learning²²⁸. This is again a material for thought for national education and training authorities.

Consequently, it is important to discuss by the Latvian public administrations and the involved stakeholders - to what extent it would be useful to overtake the German (and other relevant countries') dual system elements, and what innovative elements could be introduced in these approaches, specifically suited for the Latvian context. There had been initial concerns in Latvia that through increased practical training, the scope and quality of the theoretical part of the preparation could suffer (which historically has been a relative strength in the Latvian education system). There have also been concerns about the practical aspects – a new system cannot be introduced quickly, there is the issue of costs, also the attitudes of the entrepreneurs cannot be changed so quickly. There is a shortage of enterprises that are prepared to get involved in the WBL system, partly because the lack of information and also lack of incentives. The traditional approaches and ways of thinking may resist new concepts, there may be considerable organisational difficulties as well, not to speak about the existing administrative and legal barriers. There are also concerns regarding the effectiveness of the dual system under the conditions of the economic crisis²²⁹. The experience and practices of dual training of Germany and other countries has to be analysed further on, so that a well-considered and responsible decision can be taken in Latvia on the implementation of work-based learning on a larger scale. Some answers to the present challenges in Latvia in this regard have been produced by the result of the empirical research performed by the author. It should also be noted that the author of the thesis is involved in the implementation of the bi-lateral Latvian German co-operation agreement, has been the member of the interministerial working group on promoting incentives for employers to get involved in WBL, as well as is involved in the implementation of an EU Erasmus+ project on promoting WBL strategic approaches in the Baltic states. The experience

²²⁸ According to *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Rethinking Education: Investing in skills for better socio-economic outcomes, Strasbourg, 20.11.2012, COM(2012) 669 final, also available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:119:0002:0010:en:PDF>, accessed 7.02.2013*

²²⁹ This information has become prominent in interviews and focus group discussions.

gained in the above mentioned activities has proved to be beneficial for the present study, and vice versa, the performed research has enriched the authors' contribution to the strategic VET and WBL development in Latvia, the Baltic states and in the European context.

2.3. The tasks for public administrations in addressing new VET priorities

In this chapter the focus will be on the tasks of public administrations in ensuring the training of a competitive labour force by their VET systems. This analysis will be based on desk studies, the empirical research results, as well as on the professional experience of the author of the thesis – working on day-to day basis with the implementation of the EU and Latvian national VET policy.

In the EU the education policy is decentralized, and the EU policy documents in the field of education are not legally binding to the member states (except for those documents stipulating the regulated professions). At the same time, all the EU education policy initiatives in practice are considered as politically binding by Member States, and the Member states put much effort into implementing these policy initiatives, especially given the fact that agreement on these initiatives is being sought through respective committees in the Council of the European Union²³⁰ which is the highest representation body for the member states in the EU. The author of the theses has performed an in-depth study on these issues in 2009, when defending her qualification work on EU Education policy in the college of Law in Latvia, under the HE program “Law”. There exists a range of EU policy initiatives that have effect also on member states' (including Latvia) public administrations in VET. It should also be noted that nowadays the education administration issues are highly integrated with the economic and employment developments. For this reason one can hardly refer to EU education policy alone. Within the present research for the sake of convenience we will primarily refer to EU education administration which nevertheless is inherently linked to employment and economic policy implementation at administrative level. Moreover, alongside with the reorganisation of governance in the European Commission, the VET issues as of November 1 are being transferred under the political governance of DG Employment which is an implication in itself. The main task in this chapter thus is, based on the analysis of relevant academic discourse and EU policy initiatives (included in the previous chapters), to present the author's findings and opinion on the role, tasks and possibilities of public administrations for ensuring the training of competitive workforce in VET. This will in its turn provide basis for further analysis regarding the concrete policy initiatives and their implementation with a focus on Latvia.

²³⁰ E.g., in the Council of the European Union under the various Presidencies of the EU Countries the Presidency priorities are being discussed in several Council committees, as Education, Employment Committee and other.

It should be acknowledged that the analysis of European VET systems today by all means have to be performed against the background and taking into consideration the consequences of the recent economic crisis. This crisis has more than ever revealed the need for effective VET strategies in relation to the actual labour market demands. It has also revealed that the skills' mismatch in the labour market is greatly due to the inability of the member states' VET systems to respond to the fast changing labour market demands and developments. Moreover, in a situation of scarce or limited resources, the national public administrations have to review their VET systems critically and take the necessary steps to increase the effectiveness of the VET systems in all their aspects. This among other issues more than ever implies not only rational use of the available resources but also increased attention to innovative approaches to ensure modern, high quality and competitive VET for future. This also requires for coordinated activities at EU level, taking into consideration, among other things, also the EU rights on the free movement of persons, goods and services (free movement of persons, goods, services and capital are the cornerstones of the single market often referred to as the "four freedoms"; these freedoms are enshrined in the EC Treaty and form the basis of the single market framework).

Therefore it is not surprising that the Member States public administrations put much effort into keeping up with EU VET policy developments – not only for formal policy reasons but purely from the practical and pragmatic point of view – to secure benefit to their states from the offered EU opportunities and to stay competitive in Europe, in the least. In order to promote innovation, growth and competitiveness, excellence in national VET systems has been put highly on European VET agenda²³¹ implying 1) high quality work-based learning systems (or apprenticeship schemes); 2) aligning VET policies with regional or local economic and employment development strategies; 3) ensuring permeability with other education provisions, especially in the areas of identified skills' shortages and with potential for future growth; 4) strengthening the partnerships at local, national and international level between a wide range of stakeholders.

As the present work will show - in most EU countries the respective VET reforms are underway, and especially it refers to the domains highlighted by the recent EU VET policy initiatives addressed to all Member States²³². It is not surprising, since the EU strategic

²³¹ According to *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Rethinking Education: Investing in skills for better socio-economic outcomes, Strasbourg, 20.11.2012, COM(2012) 669 final, also available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:119:0002:0010:en:PDF>, accessed 7.02.2013*

²³² In compliance with the CEDEFOP skills needs forecast. Skills forecast - Employment trends, <http://www.cedefop.europa.eu/EN/about-cedefop/projects/forecasting-skill-demand-and-supply/skills-forecasts/main-results.aspx?CountryID=31&case=ETBQ> (accessed 10.01.2014)

approaches aim at radically increasing the EU competitiveness in the global markets, and this is possible only with a highly trained and skilful EU labour force. An important recent policy development is an explicit statement that the medium level workforce trained by the VET systems is becoming crucial, instead of the formerly prominent policies explicitly acknowledging only the crucial role of higher education, research and development to secure high level competitiveness of national economies²³³.

In order to provide a general framework for the main challenges that the EU member states' public administrations are facing in implementing the VET reforms in compliance with the modern EU policy priorities, it is important to analyse the key areas and directions of work indicated in EU policies - as a background for further analysis on the role and tasks of public administrations in this context. Being aware that skills²³⁴ and innovation²³⁵ are key notions for EU VET systems (in the framework of the EU 2020 and ET 2020), and in compliance with the performed desk research, the author has systemised the major areas for the work of VET public administrations in Europe, classifying them into domains (the classification into domains has been performed by the author of the thesis). It should be noted, however, that the domains do not have 'sharp' borderlines - they may overlap in some parts. However, such a division is convenient in the context of the present thesis – to avoid fragmentation of measures that would make the analysis of the role of public administrations in VET reforms complicated and hard to generalise. The domains can be represented in the following way:

1) Domain 1 - complex measures to assure linking education and training with the world of work; in the first place this implies promoting work based learning and dual training (apprenticeship) approaches²³⁶, improved quality of training praxes (traineeships), as well as implementing specifically targeted initiatives, e.g. the Youth Guarantee initiative (the Youth Guarantee is a new approach to tackling youth unemployment which ensures that all young people under 25 – whether registered with employment services or not – get a good-quality, concrete offer within 4 months of them leaving formal education or becoming unemployed.

²³³ CEDEFOP skills needs forecast. Skills forecast - Employment trends, <http://www.cedefop.europa.eu/EN/about-edefop/projects/forecasting-skill-demand-and-supply/skills-forecasts/main-results.aspx?CountryID=31&case=ETBQ> (accessed 10.01.2014)

²³⁴ Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training ('ET 2020'), (2009/C 119/02), also available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:119:0002:0010:en:PDF>

²³⁵ Bruges Communiqué, also available at http://ec.europa.eu/education/lifelong-learning-policy/doc/vocational/bruges_lv.pdf

²³⁶ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. *Rethinking Education: Investing in skills for better socio-economic outcomes*, Strasbourg, 20.11.2012, COM(2012) 669 final, also available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:119:0002:0010:en:PDF>, accessed 7.02.2013

The good-quality offer should be for a job, apprenticeship, traineeship, or continued education and be adapted to each individual need and situation);

2) Domain 2 - complex measures to increase the overall attractiveness, excellence and prestige of VET; being a very broad and general statement this may refer to practically any part of VET; at the same time, in the context of the present research by attractiveness and excellence we will primarily imply objective measures that allow to attract more students to the VET system through making these systems modern, qualitative and competitive (this traditionally implies improvement and modernizations of infrastructure and equipment; improvement of study content (programs) and the form of their delivery (modularization of programs, modern teaching methods, IT and digital study environments, social support measures, carrier guidance activities, innovation and creativity and other); additional contribution by the author of the thesis is her claiming that VET attractiveness is not identical with VET prestige, this issue has been underaddressed in EU VET context, and the author has attempted to study this issue through her empirical research; Innovation in VET belongs to this domain, and it should be much more brought into attention and spotlight.

3) Domain 3 - complex measures to implement EU instruments for the transparency and quality of European VET, as well as for its international comparability; here the key reference is being made to such key EU policy instruments as EQF for Lifelong Learning²³⁷, ECVET²³⁸ and EQAVET²³⁹ – also as a prerequisite for a genuine internationalisation of EU VET systems; as a key factor this implies improved geographical mobility, but also helps to implement horizontal and vertical mobility and permeability in national contexts; the key uniting element for this is the highly prioritized and much discussed concept of ‘learning outcomes’(LO)²⁴⁰, based on the notions of knowledge, skills and competencies (KSC); this relates also to the relatively recent EU education and training development – evaluation of the competencies acquired outside the formal education system²⁴¹ where Latvia has reached excellent results at European level; overall internationalisation of European VET systems with increased mobilities across Europe in order to secure exchange and acquisition of best experience; this can be

²³⁷ Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning [Official Journal C 111, 6.5.2008], viewed 1.12.2013

²³⁸ Recommendation of the European Parliament and of the Council of 18 June 2009 on the establishment of a European Credit System for Vocational Education and Training (ECVET), (2009/C 155/02), viewed 1.12.2013

²³⁹ Recommendation of the European Parliament and of the Council of 18 June 2009 on the establishment of a European Quality Assurance Reference Framework for Vocational Education and Training (2009/C 155/01).

²⁴⁰ Cedefop (2008) *The Shift to Learning Outcomes; Policies and Practices in Europe*.

²⁴¹ Recommendation of the Council of the European Union of 20 December 2012 on the validation of non-formal and informal learning (2012/C 398/01)

secured only if the EU quality and transparency instruments are put in place (introduced) in all EU countries according to basically uniform principles²⁴².

Domaine 4. Forming new strategic partnerships for VET governance at national, regional and local levels, with the involvement of a broad spectrum of relevant stakeholders for informed decision taking. This implies discourse and reflection, ‘information loops, feedback and monitoring. An important element promoted by the author of the thesis is the need for public administrations to reflect on their own mode of activity in order to provide critical perspective as a basis for self-improvement and innovation, to promote changing of mindsets and developing of new thinking paradigms, to challenge the traditional conservative nature of public administrations for improved and responsible governance. The author has carried out research on these issues and defended her Master’s thesis at Maastricht University in 2009, and finds it important to promote these ideas concerning public VET administration.

The above mentioned four domains are mutually linked and in some aspects may seem to overlap, however, each of them has a dominating idea. Therefore they can be viewed as four dominating blocks in the overall EU education and employment policy with reference to the tasks of public administrations in VET. The author has enriched the EU VET strategic building-blocks with her own perspective – rooted in the results of her research, as well as the professional experience from work in VET public administration at Latvian and European level. The author finds this kind of relatively rough systematisation convenient for the purpose of her study, since the research interest of the author primarily lies in the institutional mechanisms and co-operation networks and schemes implemented by public administrations for the training of competitive labour force and greater fragmentation would be interfering.

Regarding Domain 1 ‘linking education and training with the world of work (employment)’ – this is a very fresh EU policy initiative calling the Member States to reform their VET systems accordingly, by introducing work-based learning (WBL) approaches, double education or its elements and apprenticeship schemes (this being also one of the key messages of the Bruges Communiqué). In several EU countries, with some variations (e.g. Germany, Austria, Switzerland, Denmark, the Netherlands and some other) it is a long established system. However, for many EU countries, including Latvia, it is an innovation that needs to be piloted and analysed, in order to take a decision whether to introduce this innovation in their VET provisions at system level with the testing and introduction of respective institutional mechanisms and co-operation schemes.

²⁴² Practice shows that the actual practices in the member states differ. At the same time – the general European framework is helpful as a point of reference in discussions and in coming to mutually acceptable solutions

Regarding Domain 2 – the activities related to VET overall attractiveness is not in the centre of our attention, however, the issue on VET prestige and VET innovation are in a particular focus in the present research, as key elements to promote the role of VET for competitiveness and economic growth.

Regarding Domain 3 the European Qualifications Framework (EQF) for Lifelong Learning in relation to VET and in context with the quality and transparency tools EQAVET and ECVET, based on the highly prioritized learning outcomes approach – with the implied knowledge, skills and competencies and the introduction of the evaluation of competencies acquired outside the formal education system (validation of non-formal and informal learning) are relevant issues in modern VET systems. This is a tremendous challenge and demands a substantial change of mindsets – not only for the users and training providers but for the public administrations themselves in the first place when putting the system into practice. Consequently, new institutional mechanisms and co-operation schemes will have to be developed and put in place. When performing this task, key EU policy initiatives represented by a certain groups and types of EU policy documents can serve as a reference framework for addressing administrative challenges at national level. These are the key groups/types of policy documents and initiatives that have recently been adopted in EU relation to the VET priorities and new initiatives – those which according to the findings of the author create the framework for the work of public administrations in the Member States to introduce modern, innovative and competitive VET systems. This is not a comprehensive list of specific documents but the presentation of the overall ‘politically binding’ policy framework – as a reference point for further analysis on the tasks of public administrations against this framework. These are: EC Recommendations on competitiveness within the EU2020 strategy framework; EC monitoring activities, e.g. on the implementation of national reform plans (based on EU2020 strategy); EU monitoring activities on the introduction of structural reforms in education and training; Country Specific Recommendations (CSP) issued by the European Commission in the framework of the European semester – directed at each member state specifically; Various specific Recommendations of the European Parliament and the Council, e.g. on the introduction of European Qualification Framework (EQF) for Lifelong Learning, the European credit transfer system in VET (ECVET), the European Quality assurance system in VET (EQAVET), on the validation of non-formal and informal learning and other; EU Review on the implementation of innovation; Initiatives and monitoring activities by OECD; Initiatives and monitoring activities by CEDEFOP.

Regarding Domain 4 – key for our research, especially in relation to forming new strategic partnerships for VET governance at national, regional and local levels, with the

involvement of a broad spectrum of relevant stakeholders for informed decision taking. This implies discourse and reflection, ‘information loops, feedback and monitoring. A new potential development in this respect are the Convents of VET institutions involving a broad spectrum of stakeholders, including the social partners.

2.4. The framework for new approaches in VET development in Latvia

Through the desk research and the analysis of the obtained results the author of the work has defined the general framework for new approaches in the development of competitive labour force by public administrations in VET – within which the key problem areas and challenges for VET public administrations in relation to economic and human resource development become prominent. These are:

1. Parallel processes of centralisation and decentralisation and network optimisation in the Latvian VET system, with recognition of the increasing role of the local stakeholders in the VET developments and provision;
2. Gradual merging (coming closer) of the world of education and the world of work – arising from the objective labour market demand and consequently requiring the development and implementation of new types of institutional mechanisms;
3. Need for changes in the overall VET governance and governance of VET institutions – given the increasing number of stakeholders involved in the VET processes;
4. New demands for knowledge, skills and competencies development in VET – in the context of fast changing labour market demands, technological and innovation aspects for medium level specialists, need for continuous growth and development, and permeability horizontally and vertically (linkage between various types and levels education and training, with increasingly blurred borderlines between them), nationally and internationally; need and possibilities for analysing and overtaking/ adaption the best practice from other countries to address new challenges or situations.
5. Increasing need for a common operational reference structure in the context of the internationalisation of VET processes and need for international compatibility and comparability – implying also implementation of the EQF, EQAVET and ECVET as a translation device to make qualifications more readable and understandable across different countries and systems in Europe, and thus promote lifelong and life-wide learning, and the mobility of European citizens whether for studying or working.
6. With the future perspective in mind and under the situation of unprecedented uncertainty of social, economic, demographic and technological developments, and in relation to the accompanying risks of this uncertainty, flexible modes for changing the mindsets of the involved parties and stakeholders (including the public administrations themselves) need to

be continuously kept in mind, in order to be able to adjust to continuously emerging challenges and take the best possible decisions.

Another key challenge to be stressed is the relatively well developed linkage between activities implemented by various relevant ministries, e.g. the Ministry of Education and Science (MoES), the Ministry of Welfare (MoW), the Ministry of Economy (MoE) and the Ministry of Finance (MoF), Ministry of Environmental Protection and Regional Development and other - as response the various EU initiatives. This conclusion is based on the authors analysis of the various reports developed and promoted by these ministries At the same time there is lack of substantive evidence that the co-ordination of actual activities by these ministries for the development of competitive labour force is satisfactory. There is no clear evidence that the existing institutional mechanisms and the collaboration schemes function effectively and are capable of addressing all the new challenges of the social, economic and demographic situation. This determines the topicality and novelty of the present research – through analysing the existing and potentially necessary institutional mechanisms and co-operation schemes to implement new approaches in VET systems for the training of a competitive labour force.

It should also be mentioned that specifically there are several activities being implemented in the context of international agreements on co-operation in VET. These are: Memorandum on Co-operation in Vocational Education and Training in Europe signed with the Federal Ministry of Education and Research of the Federal Republic of Germany in 2012; Memorandum of Understanding on co-operation in Vocational Education and Training between Latvian and Estonian Ministries of Education and Science; Declaration of July 8, 2013 on co-operation in Vocational Education and Training between Latvia and Germany. These issues will be dealt with in great detail in the following chapters, being directly linked to our research topic. In order to present a comprehensive background for the tasks of public administrations in VET reform, analysis of the current economic and labour force developments will be presented in relation to the economic and labour force development forecasts.

2.4.1. Analysis of priority economic areas in relation to human resource development

Given the context of the VET reform and the priority for establishing closer links between the processes of education and the world of work, it is highly important to concentrate on such sectors of the national economy that have potential for growth. It has been recognised also by sectoral associations and Sector Expert Councils, and the opinions of the sector associations and councils are increasingly being taken into consideration by VET providers at all levels. In compliance with the medium and long-term forecasts by the Ministry of Economy, the highest development rates will potentially be in the processing industries (see Table 1).

Table 1. Growth rate in Republic of Latvia by sectors (% , annual average, target scenario)

Branch/ Sector	2010/2005	2015/2010	2020/2015	2025/2020	2030/2025
Agriculture	2,4	2,9	3,8	2,6	2,2
Processing industry	-1,2	8,0	5,5	3,9	3,7
The rest of the industry	4,1	2,2	2,8	3,0	2,5
Building	-5,5	9,7	7,2	3,7	3,5
Trade	-1,0	6,1	3,8	3,8	3,2
Transport	4,3	6,3	3,8	3,1	2,4
Commercial service	0,6	3,2	4,3	3,8	3,6
Public services	-2,0	1,5	3,8	4,5	3,1
GDP	-0,7	5,0	4,4	3,7	3,2

Source: Information report by MoES on the medium and long term labour market forecasts, 2012

In processing industry sectors there were by 5,2% occupied workplaces than a year before, according to ME Report²⁴³, with more information in table 2.

Table 2. The structure of the Latvia's processing industry in 2012* (%)

	By turnover	By the number of occupied workplaces	The ratio of export in the sector
Processing industry - total	100	100	63,6
Production of food and beverages	22,7	22,2	33,9
Light industry	4,2	11,1	84,6
Wood-processing	22,1	19,3	73,2
Paper production and printing	3,9	3,9	58,7
Chemical production and related sectors	7,9	6,3	77,3
The production of other non-metallic mineral goods	5,8	4,3	45,5
The production of metal and metal goods	15,5	11,0	77,3
The production of electric and optical equipment	5,5	3,6	89,5
The production of machinery and equipment	2,3	2,8	80,3
The production of transport vehicles	3,8	3,2	93,2
Other economic sectors	6,1	12,2	43,6

*Evaluation by the Ministry of Economy.

Source: Report by the Ministry of Economy on the Development of National Economy (December, 2012)

It is being indicated that the processing industry has the highest potential in the national economy for the creation of new work-places – the sector has secured 1/5 of the all new workplaces. The highest growth in 2012 has been due to the growth in metalworking, timber processing, production of electrical and optical appliances, the chemical production – forming around 60% of all the growth of the processing industry turnover. The issues on the importance of the processing industries have been extensively discussed also with the social partners and the Sector Expert Councils which alongside with the sector associations are becoming increasingly important players in the planning of VET provision in Latvia. Information on the structure of the processing industries regarding the turnover, the occupied workplaces and the export ratio in the sectors has been represented in Table 3.

²⁴³ Report by the Ministry of Economy on the Development of National Economy (December, 2012)

Table 3. Structure of manufacturing industry in Latvia in 2013 (percent)

	By output	By filled number of jobs	Share of exports in the sales of the sector
Manufacturing – total	100	100	61.7
Food and beverage industry	25.2	22.2	36.1
Light industry	4.3	11.0	84.5
Wood processing	23.1	19.9	73.3
Paper industry and publishing	4.5	4.0	58.6
Chemical industry and related industries	7.5	6.5	74.9
Production of other non-metallic minerals	6.5	4.2	43.9
Production of metals and metal articles	10.7	10.0	65.3
Production of electrical and optical equipment	6.2	3.9	88.5
Production of machinery and equipment	2.4	2.9	74.8
Production of vehicles	4.0	3.3	92.0
Other manufacturing industries	5.7	12.1	50.6

Source: Report by the Ministry of Economy on the Development of National Economy (June, 2014)

A similar forecast is being made regarding the change of the demand for the labour force dividend by branches (sectors). Through the information prepared by the ME, in Table 3 it can be seen that the greatest changes in the demand for the labour force (growth) can be expected in the processing industry and in social sector services.

It is important to note, also, that the Ministry of Education and Science, when discussing the plans with their social partners for the implementation of VET programs take into consideration the forecasts by the Ministry of Economy, regarding the middle and long term forecasts on the labour market demands. Also the role of Sector Expert Councils is increasing, and the decision on the enrolment of students in a particular VET program is being co-ordinated with these councils.

This is important also in the context of regional development – for the discussions among local stakeholders, including the local training providers. With joint effort the training programs of VET institutions can be co-ordinated with the local economic development and the actual need for work-places.

Table 4. Changes in the labour force demand by sector (aims, scenario, thousand) in Latvia

Sector	2011	2015	2020	2030	Growth 2020-2011	Growth 2030 -2011
Agriculture	77	77	75	73	-1	-4
Processing industries	114	125	132	141	18	26
Other industries	22	23	23	24	1	1
Construction	61	66	69	72	8	11
Trade	161	168	172	179	11	18
Transport	73	77	79	82	6	9
Commercial service	153	160	166	176	13	23
Public services	200	203	208	220	8	20
Total:	862	899	925	965	64	104

Source: Information report by MoES on the medium and long term labour market forecasts, 2012

It is being indicated that in medium term the growth of the Latvian national economy will greatly depend on the structural policy implemented by the Latvian government – with the aim of improving the competitiveness of the Latvian economy²⁴⁴. Export is being considered as the driving force of the Latvian economy and consequently the economy should shift to such a sustainable development model. The development possibilities of production branches are being determined as a key factor in changing the economic paradigm. The key aims of the structural policy of Latvian national economy are related to certain structural changes in the distribution of the economic resources - giving priority to the production of goods and services with higher added value, to branches with strong export component, to higher investments in new technologies, innovation and ICT, with parallel improvements in the education system and support for research.

The implementation of these policy activities will strengthen the potential of economic growth, by speeding up the increase in production thus increasing the economic productivity. It should be taken into account that in many professions the technological process becomes more and more complicated (the application of new equipment and innovative solutions in the production process, the automatisisation of various production cycles, increased use of computers and information technologies) - with this also for relatively low level qualification professions new demands are being set, and a respective labour force in compliance with the labour market demand has to be prepared.

The above discussed aspects are important in the context of the potential introduction of work-based learning approaches in Latvia, as well – also keeping in mind the existing sceptical comments on the limited possibilities of the dual system in preparing labour force with a sufficiently broad spectrum of competencies and with a sufficient degree of flexibility. Such multifunctional and flexible specialists are needed in Latvia in compliance with the mid and long term economic development forecasts. This is due to the concern on the ability of the dual system to train such flexible labour force – given the characteristic feature of the dual system to have a more focused approach in the training process.

Regarding the statistical data on the priority training of the jobseekers and the unemployed – in the fourth quarter of 2012, if compared to the fourth quarter of 2011, the changes in the GDP were determined by such branches as: trade (relative weight in the GDP structure – 16,3%) - by 8,8%, processing industries (13,5%) - by 6,2% and in the transport and communication industry (11,1%) - by 1,1%. In the construction sector the volume has increased

²⁴⁴ Report by the Ministry of Economy on the Development of National Economy (December, 2012)

by 9,3%, according to the Report by the MW on short term labour market forecasts²⁴⁵. It has also been concluded by the MW in their Report that (if compared to the GDP growth by sectors) the economic growth in the country taken together is based on the increase in productivity – and not in the increase in the numbers of the employed. In 2012 – if compared to the year 2011 almost in all the branches the increase in the GDP could be observed. The analysis of the occupied workplaces allows to conclude that in the labour market the most demanded are specialists with medium or high level of qualification (specialised education that is of somewhat higher level than the secondary education).

In order to ensure matching the labour force demand with the labour force offer, the secondary level VET should increase, the preparation of specialists in agriculture, metal processing, machinery and similar specialities, production equipment and machine operation specialists, specialists in certain specific branches, such as information processing, hotel, restaurant, and tourism branches and other – according to the Information Note by the MoES²⁴⁶. Requalification through VET is necessary in mid-term period - ~ 5% for specialists in relation to construction; ~ 20% for economically active inhabitants with elementary or lower education. Consequently, when planning new approaches in VET (including the WBL approaches, the following factors should be taken into account: –

- 1) The considerations and conclusions by the ME and on the short, medium and long-term development forecasts in economics and employment;
- 2) the interests and motivation of the involved parties (stakeholders) – the institutions of public administration, the local governments, the VET training providers, the enterprises, the employers' the sectoral associations;
- 3) the respective legal and financial framework;

There is a range of factors indicating that among the education policy makers and administrators, the representatives of public administrations at national and local levels, among educators and other key actors there is a comparatively high level of support regarding innovative approaches in VET and the promotion of new mechanisms and co-operation schemes. This regards also the increased interest in the work-based learning approaches. According to the authors research, the key involved stakeholders in these processes are: the Ministry of Welfare, the Ministry of Economics, the Ministry of Agriculture, the Ministry of Environmental Protection and Regional Development, the Ministry of Finance (within the range of its competence, the Latvian Employers' Confederation, the Latvian Chamber of Crafts

²⁴⁵ Report by the Ministry of Welfare „On the short-term labour market forecasts 2013 and the priority training fields for the unemployed and the jobseekers”

²⁴⁶ Report by the Ministry of Economy on the Development of National Economy (December, 2012)

and Commerce, the Latvian Free Trade Union Association, the Chamber of Crafts, the Local Governments' Association, the local government and their structural units, e.g. their Education Boards, the Sector Expert Councils and Sectoral Associations, as well as the various partners involved in the implementation of the work-based learning (dual education) – entrepreneurs, VET providers and other stakeholders. This information has been obtained by the author and confirmed through numerous discussions, participation in joint meetings and discussion groups in Latvia and abroad (e.g. in Germany, Belgium). Also the survey carried out by the author in June 2013 among the heads of the regional education boards (described in subsequent parts of the present work) testify to the comparatively high level of interest among relevant stakeholders.

For example, the Ministry of Welfare in co-operation with Ministry of Education has carried out activities on examining and overtaking the best practice on WBL, through peer learning visits to Austria. The Ministry of Agriculture has expressed its interest to co-operate with the MES on providing WBL in the agricultural sector (MES information to the media June 25, 2013). In the context of these issues several meetings between the two ministries have taken place in 2013 alone to discuss further co-operation. Discussions are ongoing also with ME regarding the implementation of country specific recommendations for Latvia. With the MF the key issue for discussion is the implementation of the EU structural funds, where in the next planning period also the WBL approaches will be included (the apprenticeship issues). In 2013 the exchange of visits between the Latvian and German Ministry of Education and Research delegations took place, and the key issues in these discussions have been the WML approaches within joint co-operation programs.

In the implementation of the VET reform and the WBL an active role is being taken by the Sectoral Expert Councils (SECs) sectoral associations, Latvian Employers' Confederation, the Latvian Chamber of Crafts and Commerce, - all of them contributing to the new VET developments. An important role is also being played by the German Baltic Trade Chamber, and in this Chamber in compliance with the Latvian German Declaration on co-operation in VET, with a financial support from Germany a consultant on WBL will be available for the participants of the WBL project.

In June 2013 a high level conference to apprenticeship issues took place in Brussels²⁴⁷ with participants from Latvian MoES, MoF, MoW, Latvian Chamber of Crafts and Commerce, Latvian Free Trade Union Association - with an active participation of the Latvian

²⁴⁷ Advice on apprenticeship schemes with ESF support <http://ec.europa.eu/social/youthtraining> (viewed 12.12.2014)

representatives in the discussions on the introduction of WBL in Europe²⁴⁸. Currently the key legal initiative is the amendments to the VET Law, with subsequent development of new regulations and planned changes in the present regulations concerning VET provision.

An increasingly important role in promoting VET developments is being occupied by the local governments. Given the fact that the overall role of the local governments regarding the issues of education and employment increases, and also the governance forms and functions for VET institutions change (e.g. the VET institutions are being handed over to local governments, the VET programs are being offered in schools of general education, the provision of adult education programs increases), the local governments have become highly relevant stakeholder also for the VET provision (which was not the case just a decade ago). Further on in the work the survey among the local government's representatives on VET reforms will be presented, as well.

4) other issues, including the so called 'human factors', traditions, thinking models etc.

2.4.2. Analysis of the legal framework and the existing institutional mechanisms

In Latvia since 2010 there is an on-going comprehensive VET reform. Such a reform is being carried out within the respective legal and policy framework, and in relation to several major projects and initiatives (also in relation to the implementation of the EU funds). Parallel to the reform new institutional mechanisms are being discussed for an improved implementation of modern VET provision. In the context of the present research *by institutional mechanisms should be understood any formalised legal, policy or administrative framework or resources and structures available to or created by the public administrations for the implementation of specific policy aims or administrative tasks*. Consequently, in the subsequent analysis of the policy and legal framework, the role of documents, instruments or tools will be presented bearing significance to the present research as functional institutional mechanisms.

In the legal and policy documents of general character – the Education Law²⁴⁹, the Conception of the Educational Development 2007 – 2013²⁵⁰, the Guidelines for lifelong learning policy for 2007-2013²⁵¹, Education Development Guidelines for the period of 2014-2020 (adopted by the Saeima (the Parliament)²⁵² the VET issues are addressed as part of the overall education system. For this reason our research interest has mainly been directed to more

²⁴⁸ The author herself has participated in the discussion of the conference, as well as in many other relevant events in Latvian and other countries

²⁴⁹ Education Law (Izglītības likums)

²⁵⁰ Education Development Guidelines (Izglītības attīstības pamatnostādnes 2007.-2013.gadam), Order of the Cabinet of Ministers of 7.09.2009 nr 742).

²⁵¹ IZM. Mūžizglītības politikas pamatnostādnes 2007.-2013.gadam, 2007.

²⁵² The Education Development Guidelines for 2014-2020 (Izglītības attīstības pamatnostādnes 2014.-2020.gadam)

specific VET policy and legal documents, especially the Vocational Education Law²⁵³ (currently under revision). It can be concluded that in the present form the Vocational Education Law lacks regulation to address the modern labour market challenges, as well as the common European VET policy priorities. For example, there is no regulation on the professional qualifications framework, on work based learning, on the quality assurance framework in VET and other emerging relevant issues. Lack of regulation on these issues has a negative impact on the ability of the Latvian VET system to ensure the needed links between the training in VET institutions and the needs by the real working environment. Also the present supervision and governance schemes are limited in their ability to address the training issues in compliance with new labour market situation, as the possibilities by social partners to influence the training process is not always optimal. At the same time it should be noted that the key VET policy documents - Guidelines for the Optimisation of the Network of Vocational Education Institutions 2010-2015²⁵⁴ and the Concept for Raising attractiveness of vocational education and involvement of social partners within vocational education quality assurance²⁵⁵ (2009) have been drafted with a clear vision for future VET developments under the fast changing economic and social situation and the changing paradigm of social partners' active involvement in VET governance.

It can be found that the general and specific legal and policy framework in Latvia is being successfully supplemented by the specific development projects, especially under the European Social Fund and the European Regional Development Fund. These development projects can also be formally considered as belonging to the legal framework, since the conditions for the implementation of these projects are being stipulated by specific Regulations of the Cabinet of Ministers in each particular case. In the context of the present research the ESF project "Development of sector qualifications' systems and increasing the effectiveness and quality of vocational education and training" (hereinafter – ESF sector qualifications' project)²⁵⁶ is especially relevant. The qualifications' project is concerned with a number of

²⁵³ Vocational Education Law (Profesionālās izglītības likums)

²⁵⁴ Guidelines "Optimisation of the Vocational Education Institutions' Network 2010 – 2015" (2015 (Profesionālās izglītības iestāžu tīkla optimizācijas pamatnostādnes 2010. – 2015. gadam), Order of the Cabinet of Ministers of 6.01.2010, Nr 5.

²⁵⁵ Concept „Improving the attractiveness of Vocational Education and Training and Involvement of Social Partners in the Securing the Quality in Vocational Education and Training" (Profesionālās izglītības pievilcības paaugstināšana un sociālo partneru līdzdalība profesionālās izglītības kvalitātes nodrošināšanā), (confirmed by the Order of the Cabinet of Ministers of 16.09.2009, Nr 629,

²⁵⁶ ESF 1.2.1.1.1. sub-activity project "The improvement of the national qualifications' system, the VET content and the co-operation between the involved stakeholders" (Nacionālās kvalifikāciju sistēmas pilnveide, profesionālās izglītības satura un profesionālajā izglītībā iesaistīto pušu sadarbības uzlabošana). The project is being implemented by the State Education Development Agency in co-operation with the Employers' Confederation of Latvia (LDDK), the Free Trade Union Confederation of Latvia (LBAS) and the National Centre for Education and State Education Quality Service (IKVD).

tasks, among these, the revision of vocational education standards, exams and programmes (including the introduction of modules for development and improvement of vocational education programmes), as well as reinforcement of cooperation with the SECs to improve the quality of VET content to make it more relevant for the needs in economic sectors. In this respect the qualifications' project can be evaluated as a major investment by Latvian public administrations into the modernisation of the VET system.

In the context of the present research also social partner' organisations or working groups involving various relevant stakeholders can be considered as institutional mechanisms is with a particular mandate or role in the VET reform. Here we will refer to the 12 Sector Expert Councils (SECs) established in 2011 within the framework of qualifications' project. However, according to our research the challenge for the public administrations in VET is to define more clearly the roles of SECs and the Tripartite Sub-Council in VET - TSCVET (co-ordinated by MoES), since there are signs of the overlap of functions of these institutional mechanisms. It should be acknowledged that the Committee for Training provision (in the context of employment), co-ordinated by the Ministry of Welfare (MoW) has a visible and clear function in updating the training programs for the unemployed, bearing also some links to the training provided by VET institutions to various target groups in the context of lifelong learning.

In this context it should be mentioned that the MoES has recently undertaken a major step towards upgrading the legal provision of VET in Latvia by drafting amendments to the VET Law, currently under discussion in the Saeima (the Parliament). There are several important proposals included, three of them bearing major significance to the present research. One of the amendments concerns the formalisation of the status of SECs. It can be seen as an important development due to the fact that the SECs represent the social partners (Sector Ministries, the Employers' Confederation of Latvia and the Free Trade Union Confederation of Latvia) and thus have the potential to influence the modernisation of the training processes in compliance with the actual labour market situation. The SECs include also representatives from all professional associations and sector crafts unions – with the aim to determine the requirements of the labour market and to introduce them into VET provision. Our desk research shows that the main tasks of SECs are to ensure VET with information on the particular sector, its demands for vocational qualifications and learning outcomes, to promote enterprises' collaboration with VET institutions when organizing qualification practices, to delegate experts in vocational qualification exam contents and procedure. However, alongside with the analysed positive aspects the concern remains on the clear distribution of functions among the SECs and the above mentioned Tripartite Sub-Council for Cooperation in Vocational Education and

Employment. Another important development in the amendments to the VET Law is the formulation of WBL as a form for the implementation of a VET program. Even though there are no Cabinet of Ministers Regulations regarding the actual implementation of WBL, the amendments to the VET Law in this respect can be considered as an important development for further work in this respect for ensuring conditions for linking closer the world of education with the world of work. The VET Law amendments also propose the development of Convents of VET institutions as a new form of VET governance. In the context of our research this can be considered as a progressive development for addressing the economic and social challenges by a joint stakeholders' decision on the best suited education and training design for the particular administrative territory and in compliance with the respective strategic development plans of that particular region or city, as the Convents envisage a comprehensive representation of key stakeholders in the particular VET institution's governance. This allows to make better decisions on the operation of each particular VET institution, and introduces certain elements of decentralisation in the actually centralised VET system in Latvia.

Thus, the analysis of the existing institutional mechanisms in Latvian VET system will serve as a background for further empirical research informed studies regarding the role of public administrations in VET for the development of competitive labour force under new social, economic and demographic situation.

2.5. Identified new challenges of public administration in Latvia

When implementing innovative approaches in VET, the following principle should be observed – each VET institution, especially in the local context, is a value in itself and therefore should be preserved and promoted in one way or another. This principle according to the author's opinion should be observed regardless of the potential scenarios in the VET reform – in actual fact, not contradicting the process of optimisation and differentiation of the VET institutions by MoES, including the approaches of the MoES Information note of 2 July²⁵⁷, 2012 on the change of governance in VET.

Regardless of the potential legal status of the VET institution (in the long run due to various subjective and objective reasons, substantial changes are possible in their status and organisation, e.g. reorganisation, merging etc.). At the same time, it is important to preserve the actual geographical place for the implementation of the training, since any educational establishment secures and promotes the social and intellectual activity of the particular

²⁵⁷ Order of the Cabinet of Ministers of 16.09.2009 Nr.629 "Increasing VET attractiveness and the involvement of social partners for securing the quality of VET".

community. With the closure of the educational establishment in a community, frequently the degradation of the community starts.

Latvia should avoid this by all possible means. The presence of an educational establishment implies also the presence of qualified teaching staff, and the possibility for this staff to continue their professional activities for the benefit of the community and the Latvian state. This implies also the possibility for the local inhabitants to acquire a profession or to re-qualify close to their place of residence regardless of the legal status of that particular educational institution. Therefore, in the author's opinion, this is one of the key tasks for public administrations to secure the sustainability of the existing VET and other educational institutions, especially at local and regional level.

At the same time, this may not be an aim in itself. Measures should be taken for a meaningful development and productive functioning of any existing VET institution. This implies both, preserving the successful work and initiatives of the present moment, and searching of new forms and types of activities, especially in the context of the local economic, social and employment processes.

With this principle in mind – that every educational institution is a value in itself and plays a very important role in the social, economic, and intellectual life of the community/region, it is possible and feasible to develop various complex development scenarios for each VET or other kind of educational institution. Regarding the present situation in Latvia, in the author's opinion the following 3 objectives should be promoted

1. Every VE institution in Latvia aspires to become the provider of educational and training services in the community – addressing the target groups of varying age and type. The entrepreneurial skills and attitudes of the staff should be promoted as well, to potentially improve the VET institutions financial situation and economic stability.

2. Every VET institution in Latvia implements multi-dimensional co-operation with a wide network of co-operation partners in Latvia and abroad – other educational establishments, NGOs, local governments, employers and various social partners – thus securing the variety, recognition and broad geography of the offered services.

3. Every VET institution in Latvia becomes as a 'centre for excellence' (have a specialisation) in one or several domains, complying with high principles of quality standards, including the development of high quality labour force.

The above mentioned goals (developed by the author on the bases on research and analysis) are in general lines in compliance with the approaches promoted by the ME that Latvia's future competitiveness should be associated with the production of goods with high added value. Keeping in mind export as one of the priority areas in Latvian economy, it is

important to preserve and further develop the local products and production. This implies important tasks for public administrations – in forming and implementing networks that develop and promote the local labour force in compliance with the local labour market needs. Thus, also in local contexts the above described factor on the need for closer links between the world of education and the world of work becomes evident. With the joint efforts of local stakeholders (public administrations including), the local production should be made innovative and competitive also in broader contexts. At the same time, maintaining the local labour force (and promoting their sense of pride and real benefit of belonging to that particular local community) serves as a precondition for maintaining the viability and sustainability of every community and the local markets. By improving the local capacity, the local players might further on aim at broader contexts, especially by further developing the Latvian typical niche products, successfully integrating them also into the tourism and service sectors, as well (for example, glass textiles produced by the Valmiera glass textile company have numerous applications, including high-tech material for yacht design and many other which can facilitate the development of high added value products not only for export but also for local tourism and service sector, attracting international clients, as well). These are just a few examples of the role of public administrations in national, regional and local networks – for the development and maintenance of competitive labour force at all levels. Further on – as a result of analysis and synthesis from the textual and empirical research (analysed in greater detail in Chapter 3 of the work), the following challenges for the VET public administrations for the development of competitive labour force have been identified by the author.

At a conceptual level the challenges for the public administrations are:

1. How to secure balanced centralisation and decentralisation VET governance processes for an effective functioning of labour market oriented VET systems.
2. How to implement the national VET network so that it both - promotes the excellence of the larger VET competence centres (VET CC) in the capital and regionally, as well as facilitates the niche excellence of smaller VET institutions, especially at local community level. Awareness should be raised that every education institution is a value in itself, and it promotes the social, intellectual and spiritual viability of the particular community. It is vital for Latvian communities, especially at local levels. Not to speak about the new role of VET institutions for promoting employability of the local workforce, especially in the context of continuing VET (CVET) provision.
3. How to integrate the VET systems into the regional and respective regional sectoral economic, employment and general social contexts with effective and integrated co-ordination and decision taking mechanisms at local level. This implies a close coordination between the

education, training and employment processes also at local level, with the local administrations potentially taking the lead (acting as the driving force); this implies also the development of diverse local governance models in compliance with the local characteristics;

4. How to secure an integrated approach towards the work of all the education institutions of the particular region or community – i.e. the schools of general education, the VET institutions and HE institutions – to secure youth employability, permeability in education, and joint platform for training innovation competent labour force.

5. How to implement new approaches to the qualification frameworks – with respect to the EQF and the national qualification frameworks, keeping in mind the overall LO approach, keeping in mind the need to comply with quality frameworks, e.g. the EQAVET and the credit systems, in relation to ECTS and possibly ECVET, to secure the respective transparency and portability in the context of the labour market developments, including the internationalisation processes. This implies also further development for the evaluation of competence acquired outside the formal education system where currently the Latvian public administrators are at the forefront at European level.

6. How to change the overall thinking paradigms in relation to the role and place of VET in the education, employment and innovation systems – not only in the society and professional circles but also within the public administration itself. The issue of social mobility via VET should be brought to the agenda for discussion, thus promoting the attractiveness and prestige of VET; the potential of the ‘higher VET’ should be reconsidered.

7. How to invent new specific innovative approaches and implementing pilot projects in VET, e.g. in work based learning, in entrepreneurship etc., including also experimental joint enterprises among VET institutions and employers on cross-border cooperation basis, implementation of ECVET and EQAVET schemes for testing /piloting purposes; The experience from existing pilot projects should be used more efficiently, e.g. the EU Baltic Training Program BTP project HansaVET „Hansa Traditions in promoting entrepreneurship” with a tested coaching system (in mobilities with entrepreneurship coaching around 300 Latvian VET teachers and many learners have been involved), the tested methodologies have been recognized as successful for promoting entrepreneurship and entrepreneurial attitudes. This may serve as a basis for introducing the approach at VET system level.

8. How to put on new grounds the co-operation with the social partners and other relevant stakeholders, e.g. the Sectoral Expert Councils (SECs) – more promoting the sectoral approach, especially in regional and local contexts, avoiding fragmentation of local strategic planning. New approaches are needed for the involvement of small and micro enterprises in the VET provision and training of competitive a labour force. A specifically Latvian model for this

should be continually discussed and promoted by the key stakeholders, with the co-ordinating role of the public administrations at national and local levels. More far reaching strategic goals for VET and VET competence export should be developed by public administrations – looking at further off markets in the East to Latvia, including also far-off destinations, as the analysis of the successful operation and internationalisation of the Finnish VET system shows. Thus, the public administrations need to look at the internationalisation strategies for the overall Latvian VET system – with far reaching aims in mind on the competitiveness of the Latvian VET system. Possibly establishing also Baltic Sea Region level strategic VET development centres should be considered, using the best VET competences as a basis, implementing extensive co-operation networks and schemes. This would promote also the regionalisation policy of the European Union, e.g. the implementation of the Baltic Sea Countries strategy.

9. How to implement new approaches to the development and delivery of the VET content should be implemented – based on the LO, the modularisation of VET programs, broader use of ICT possibilities – here differentiating between the simulation programs and tools for skills and competence developments, as well as for reasonable level of the digitalization of the learning environments with the specificity of the VET system.

10 How to put on new grounds the training of teachers and mentors – especially in the new situation when the worlds of education and work are coming closer and becoming somewhat blurred. The role and expertise of teaches and trainers change, and mechanisms still need to be sought by public administrators how to address this.

11. How to document and promote the best VET experience in Latvia – with a wider involvement of mass media, success stories by public celebrities etc., which is a powerful tool for raising the attractiveness and prestige of VET.

12. How to strengthen the overall capacity, interest and motivation of the (VET) public administrations themselves to promote innovation in VET. Not only to the inherent traditional inertia of the system (the above mentioned Mode 1 and Mode 2 regarding the retention of the system in its previous state), but also regarding the way the public administration operates, often leaving little space for reflection and discourse on innovation. Therefore resources should be planned to form small units or teams of people directly involved in system innovation issues, as for the training of innovation competent labour force the VET system and its administration (mechanisms) should be innovation oriented, as well as the administrators themselves open to innovation. This requires new forms of governance and management, that allow the public administrations reflect on the system, in this case, the VET system, as well as that encourages the public administration to implement ‘second order reflection’, i.e. reflect on their own reflection processes.

CHAPTER 3. THE TASKS OF PUBLIC ADMINISTRATIONS IN VET FOR IMPROVED LABOUR FORCE COMPETITIVENESS IN LATVIA

In order to define the tasks for the public administrations in Latvia for improved decision making in regard to the training of competitive labour force through the national VET system, an empirical study was performed. The empirical study was prepared and carried out taking into account the results of the analysis of the academic research and policy discussions in relation to the research problem and in the context of the determined reference framework within which the new tasks and challenges for public administrations in the development of competitive labour force by the VET system evolve. The determined framework relates to the strategic tasks of public administration in seeking innovative solutions under the new social, economic, demographic and technological conditions.

The determined framework is being characterised by the following identified present and emerging circumstances and challenges: the growing investments in VET to promote VET attractiveness with yet undetermined effect of these measures towards the growth of VET prestige in Latvia; the parallel centralisation and decentralisation processes in VET in Latvia with the increasing and widening role of the VET competence centres in the life-long learning perspective and a need to identify the role and potential of smaller VET institutions; the relatively limited role of VET in regard to innovation and excellence with traditionally weak links between VET and HE and research; the increasing need for coming closer of the world of education and the world of work (including the work-based learning approaches) for better labour market compliance - demanding for new forms in VET governance with closer links among diverse co-operation partners and stakeholders at national, regional and local levels; the need for the overall changing of thinking paradigms for all the involved stakeholders, also arising from the gradually blurring borderlines between various types and levels of education and training; the increasing need for international comparability and internationalisation of VET with growing needs and possibilities to overtake the best practice from other countries in order to stay competitive in wider contexts; the challenges for the public administrations themselves to be responsive to the new development trends and become pro-active and flexible in the fast changing global situation regarding labour force training issues.

As our empirical research has shown – the traditional approaches implemented by the public administrations are under the risk of becoming out-dated and non-effective under the new circumstances. Through the empirical study within the presented reference framework - developed by the author of the thesis - the aim was to identify the actual challenges and the possible new tasks, approaches, tools and mechanisms by public administrations in Latvia for improved labour force training through the VET system. Based on the theoretical framework

of the thesis, the author prepared, organised and implemented nine surveys for high level public administrators in the field of education, research, employment, economics, regional development and finances (at national and local level), for sector experts and employers, representatives of Sector Expert Councils, employers' and employees' organisations in the period from 2012 to 2015:

- 1) a survey in 2014 and 2015 among top and medium level administrators at the Ministry of Education and Science, the Ministry of Welfare, the Ministry of Economics, the Ministry of Finance, the Ministry of Environmental Protection and Regional Development, among the agencies of these ministries – the State Education Development Agency (SEDA), the National Education Centre (NEC), the State Education Quality Service (SEQS), the State Employment Service (SES), the Latvian Investment Development Agency (LIDA), as well as among top level administrators of the VET institutions that are under the supervision of the Ministry of Education and Science, relevant VET institutions under local governments' supervision and colleges implementing VET programs alongside with college level programs;
- 2) a joint survey in 2014 and 2015 with the Latvian Employers' Confederation (LEC) among large, medium, small and micro size enterprises – members of the Latvian Employers' Confederation, among representatives of employers' and employees' organisations, sectoral associations and sector expert councils (SECs), as well as among enterprises that are co-operation partners (in providing practical training and qualification praxis for learners) for VET institutions under the supervision of the Ministry of Education and Science, relevant VET institutions under local governments' supervision and the colleges implementing VET programs alongside with college level programs; the aim was to address 'organised employers' who are either aware of the strategic employment issues or related to the training process through their links to VET institutions;
- 3) in-depth interviews in 2014 with top-level administrators of the Ministry of Education and Science – having competence for strategic VET development and implementation;
- 4) a survey in 2013 among medium level administrators of local governments' – the heads of the Education boards – regarding new developments in VET in Latvia;
- 5) an initial survey in 2012 among top and medium level public administrators and experts in education and research;
- 6) a survey among local employers of the Kurzeme region;
- 7) a survey among local employers of at the Iecava district;
- 8) a minor survey among promoters of innovative EU VET projects – regarding internationalisation and comparability of VET competences;

9) minor surveys during 2013 – 2015 among VET institutions under the supervision of the Ministry of Education and Science, several VET institutions under local governments' supervision and several colleges implementing VET programs alongside with college level programs.

Additionally it should be noted that: 1) In 2010 the author carried out a preparatory research at the Namur University in Belgium that contributed to her prospective doctoral studies. The preparatory research was related to the role of public administrations in promoting technological innovation and concerned the new challenges facing the public administrations under the growing global risks and uncertainties. The research was carried out as part of the 7th Framework project EGAIS, and the empirical research included more than ten interviews with high and medium level officials of the European Commission and European level experts in education, training and research; 2) In 2009 the author performed research on the EU education and training policy issues working towards her qualification in legal science. Both these studies have contributed to the development of the research interests of the author regarding the role and challenges of modern public administrations for a competitive Europe, and have allowed to identify research problems that are relevant for public administration in education and training in Latvia and beyond.

The surveys within the present research were planned and implemented with a definite research focus – to investigate the opinions of relevant stakeholders over time and at several levels - at national, regional and local level. As some of the surveys were carried out within specific research projects, the author was not planning identical questionnaires for all the surveys but instead used the rich pool of data in a mutually complementary way.

Consequently, the initial survey among national level top and medium level public administrators and experts in education and research was carried out at a very early stage of the research in 2012 – in order to provide a platform for analysis of the dynamics of the development of the opinions of public administrations on the relevant VET issues (enabling to compare the obtained results to those obtained during national level surveys carried out at later stages of the research in 2014 and 2015). The number of the involved administrators during 2012 survey was limited, as only the opinions of the available top level administrators were surveyed (the questionnaire was sent out to 35 top level administrators and experts - with 22 having filled out questionnaires and returned the questionnaires).

The survey of 2014 and 2015 among top level administrators and experts at national level was carried out a) to learn how the opinions on specific questions had evolved in two years time and to investigate their opinions on new challenges; b) to compare the opinions of national level administrators with the opinions of entrepreneurs regarding the same or similar

issues on VET development (as a parallel survey was being carried out 2014-2015 among entrepreneurs, as described in the next point); the interviews among top level administrators in 2014 were carried out to obtain an understanding more profoundly the reasons and underlining causes for strategic decision taking in VET reforms in Latvia.

The survey in co-operation with the Latvian Employers' Confederation among entrepreneurs was carried out in 2014-2015 in order to learn the employers' independent opinion, as well as for comparison reasons with the opinions of public administrators at national level.

The survey among regional top-level public administrators in 2013 was carried out in order to learn their independent opinion and for the reason of comparison – with the opinions of public administrators at national level.

The two surveys during 2013 were carried out at regional and district level among local employers of the Kurzeme region and the Iecava district to identify the key challenges for public administrations at non-national level from the perspective of local employers.

Several minor surveys were carried out in 2013-2015 among the heads of education and training institutions and the promoters of innovative EU VET projects – regarding internationalisation and comparability of VET competencies, as well as regarding the innovative approaches of work-based learning in VET in Latvia – to provide insight into the role and potential of concrete policy and strategic measures for the operation of VET public administrations in Latvia.

The minor researches proved to be a valuable component of the overall empirical study, through providing data on the gradual development of the administrative thought on VET developments at several levels and aspects - in relation to the economic and employment processes in Latvia, as well as in relation to the links and correlations between local, regional and national developments in the public administration of VET. Especially these studies have been relevant regarding the introduction of work – based learning approaches as an innovative VET measure by the Ministry of Education and Science via a pilot project to promote the development of competitive and labour market oriented work force with an increased potential for innovation. The analysis of the results of the above described surveys during the period 2012 – 2015 has provided the basis for the development of the possible best suited operational scheme for Latvian public administrations and their co-operation partners for the training of a competitive labour force by the VET system in Latvia.

3.1. Governance related to the VET labour market relevance and innovation

There is a continuous challenge to the public administrations in education and training concerning the compliance of the trained specialists to the actual labour market needs. The employers claim that the training systems do not turn out specialists with adequate knowledge, skills and competences and that enterprises frequently have to re-train them. For this reason the starting point for the empirical research was to find out the opinions of public administrators and employers regarding the present and future labour force competence in relation to the labour market demands. In this part of the work the analysis will be provided on the the following issues: evaluation regarding the training of specialists at various levels in compliance with the labour market demands; the role of innovation; the need for the involvement of various stakeholders in the VET governance to ensure improved training for the labour market; the needed levels and mode for cooperation among various stakeholders. The analysis of the results has enabled to determine the key tasks for public administrations.

Regarding the need for innovation competence in the modern labour force, the focus was on the training at various levels – VET, college education and HE. The answers did not differ statistically significantly, however, as anticipated, the lowest scores were attributes to the results of the training of specialists by the VET system. The survey has repeatedly shown that the employers are not particularly satisfied with the labour force they receive from the education system. However, it had not been anticipated before the survey that the differences in the evaluation of the specialist coming from the different systems (HE and VET) will be so insignificant, given the traditionally higher status and public image of HE in this respect.

Regarding the statement “Specialists with secondary vocational education, college education, higher education are well prepared for work at an enterprise” the average evaluation for higher education being generally slightly higher, and for VET slightly lower scores (in 10 point system). At the same time there is a progress in the opinions on VET potential if compared to the results of the 2012 survey.

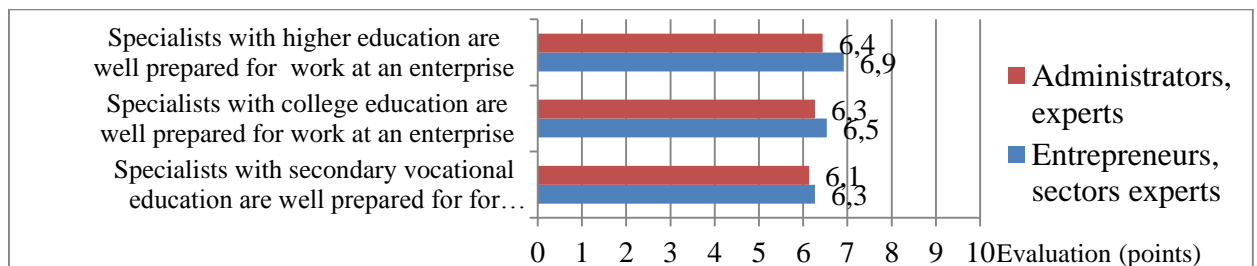


Fig 7. Arithmetic mean of evaluations of administrators, experts and entrepreneurs, sectors experts on statements “Specialists with secondary vocational education, college education, higher education are well prepared for work at an enterprise”

Source: Author’s performed survey in 2014 – 2015, n=368

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “Specialists with secondary vocational education are well prepared for work at an enterprise” didn’t differ statistically significant (Mann-Whitney test: $z = -0,758$, $p = 0,448$).

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “Specialists with college education are well prepared for work at an enterprise” did not differ statistically significant (Mann-Whitney test: $z = -1,195$, $p = 0,232$).

The evaluations of administrators, experts and entrepreneurs, sectors experts on the statement “Specialists with higher education are well prepared for work at an enterprise” differed statistically significantly with a high probability (Mann-Whitney test: $z = -2,486$, $p = 0,013$).

If compare the opinions on the same question between entrepreneurs and public administrators as a group (see Figure 8), the differences are not significant which indicate to gradual change of opinion regarding the turnout of specialists in relation to the labour market needs – with improved absolute and relative evaluation for VET – if compared to the opinions to similar questions in 2012 (see figure 9)

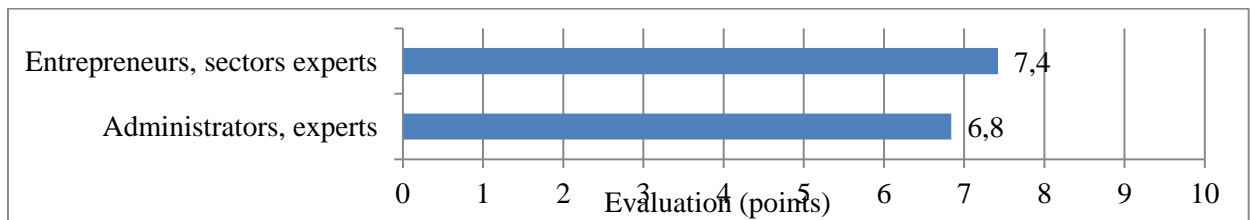


Figure 8. Arithmetic means of evaluations of administrators, experts and entrepreneurs, sectors experts on statement “The training by enterprises is more effective than training by VET institutions”

Source: Author’s performed survey in 2014 – 2015, $n=368$

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The evaluations of administrators, experts and entrepreneurs, sectors experts on the statement “The training by enterprises is more effective than training by VET institutions” differed statistically significant with a high probability (Mann-Whitney test: $z = -2,857$, $p = 0,004$).

According to our research, in 2012 survey the administrators much higher evaluated the results of the training at enterprises, comparatively lower the training in colleges, and much lower the training by VET institutions. Thus, it can be concluded that the opinions on the training by the VET system have generally improved (see figure 9).

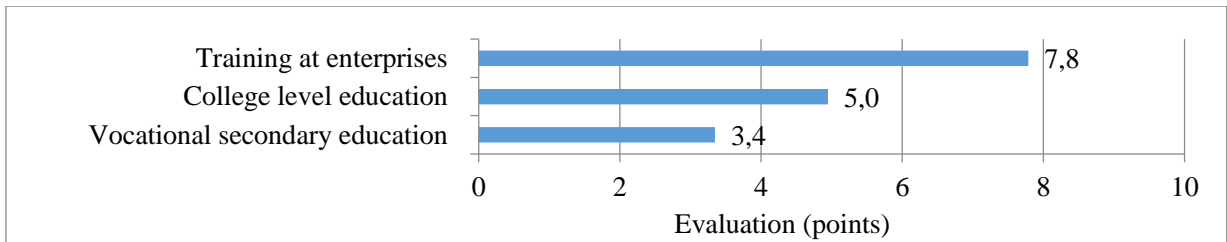


Figure .9 Average expert evaluations on issues related to innovations for professional education in Republic of Latvia

Source: Author's performed expert survey in 2012, n=21

Evaluation scale 1 – 10, where 0- no opinion, 1 – do not agree, 10 fully agree

Further on it was relevant to learn if administrators and entrepreneurs considered innovation as an important aspect in the labour force training at all levels. It should be remarked that the need for innovation competence for specialists trained by the VET system was unexpectedly high as estimated by the public administrators, if measured against the result from the 2012 survey. The data of the 2014 – 2015 survey show that higher scores are being given to the specialists with college and higher (second level) education, less for VET level, however, even these scores are comparatively high.

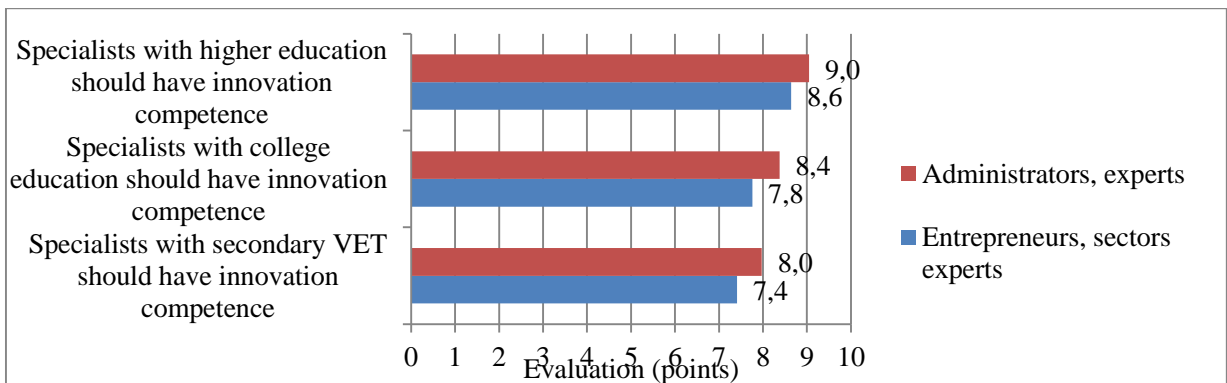


Fig 10. Arithmetic mean of evaluations of administrators, experts and entrepreneurs, sectors experts on statements “Specialists with higher education should have innovation competence”, “Specialists with college education should have innovation competence”, “Specialists with secondary VET should have innovation competence”

Source: Author's performed survey in 2014 – 2015, n=368

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

At the same time entrepreneurs, when asked to respond to the statement “Specialists with higher education, college education, secondary VET education should have innovation competence” explicitly indicate that specialists at all levels, VET including, should have fairly high innovation competence.

It is important to note that already in the survey performed among public administrators in education and research in 2012 it was noted that competitive labour force (including innovation and technological competence) is best trained at an enterprise (with arithmetic mean evaluation 7,79 in 1 – 10 point scale) and almost satisfactory at college level (with arithmetic mean evaluation 4,95 in 1 – 10 point scale), however, almost critically low at VET level (only

3,35 scores in 10 point system). At the same time in the 2014-2015 survey the evaluations of administrators, experts and entrepreneurs, sectors experts on the statement “Specialists with higher education should have innovation competence” differed statistically significant with high probability – 0,997 (Mann-Whitney test: $z = -2,927, p = 0,003$).

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “Specialists with college education should have innovation competence” differed statistically significantly with high probability – 0,999 (Mann-Whitney test: $z = -3,728, p = 0,000$).

The evaluations of administrators, experts, entrepreneurs, sectors experts on the statement “Specialists with secondary VET should have innovation competence” differed statistically significantly with high probability – 0,993 (Mann-Whitney test: $z = -2,693, p = 0,007$).

Further on it was important to find out the opinions by public administrators if VET institutions should be strengthened in relation to innovation and regarding the need of innovation competent VET specialists in enterprises. The scores turned out to be high.

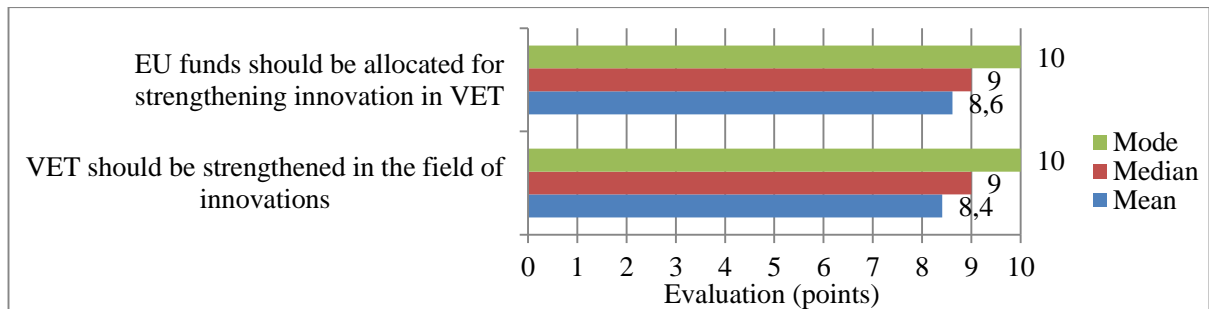


Figure 11. **Average assessments of public administrators and experts evaluations on statements “Enterprises need innovation competent middle level specialists” and “VET should be strengthened in the field of innovations”**

Source: Author’s performed survey in 2014 – 2015, $n=122$

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Average evaluations indicate that very high evaluations are for the statement “VET should be strengthened in the field of innovations” where mode is 10 (the highest possible evaluation), half of respondents gave evaluations less than 9, half of the respondents gave evaluation more than 9 (characterised by median), arithmetic mean for this statement is 8,4.

The evaluations of the statement “Enterprises need innovation competent middle level specialists” were very high with the lowest evaluation 3 which is indicated in figure 12.

If broken down by the attributed scores (points) for each question, it can be concluded that over 80% of the answers are in the range from 8-10 scores. These are very high evaluations which indicate to importance and need for innovation competent middle level specialists.

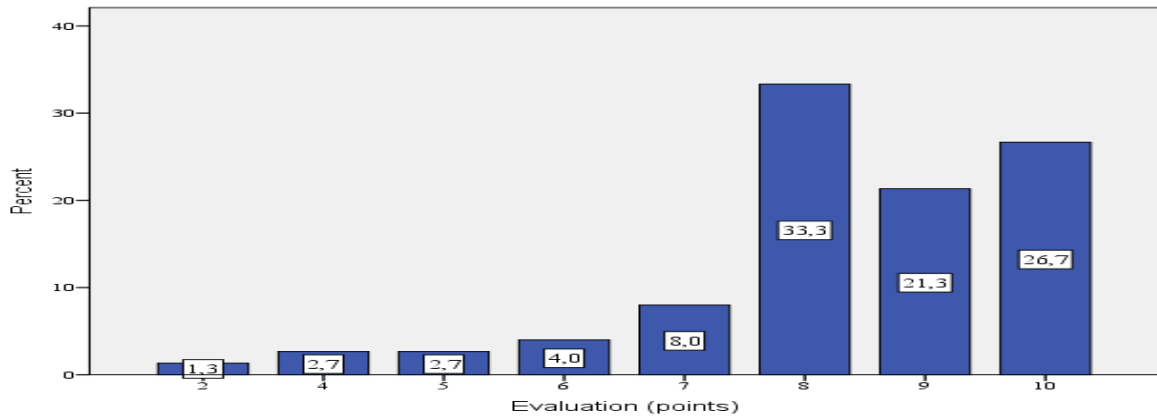


Figure F12. Distribution of public administrators and experts evaluations on statement “Enterprises need innovation competent middle level specialists”

Source: Author’s performed survey in 2014 – 2015, n=122
 Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The same refers to the question on the need for strengthening VET in innovation – a slightly lower evaluation over 70 % for the points in the range 8-10 (see figure 13).

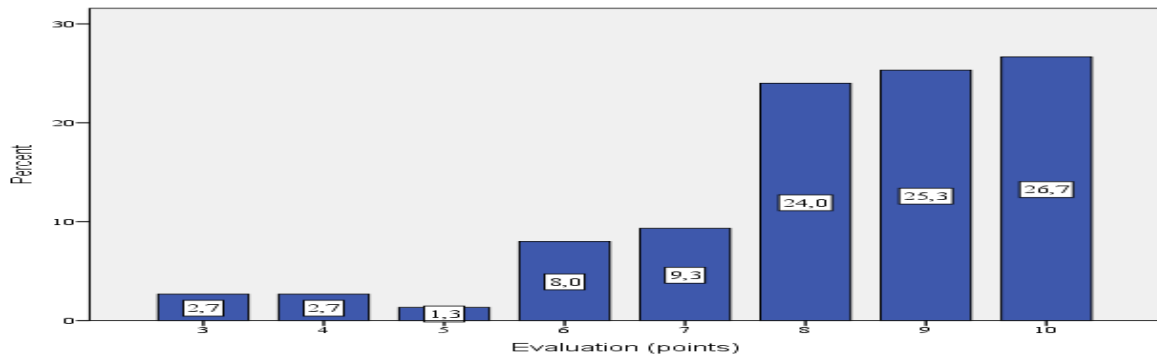


Figure 13. Public administrators and experts evaluations on statement “VET should be strengthened in the field of innovations”

Source: Author’s performed survey in 2014 – 2015, n=122
 Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Also regarding the need to strengthen VET in innovation by the EU structural funds – there is a generally high evaluation – over 70% have given evaluation in the range 8-10.

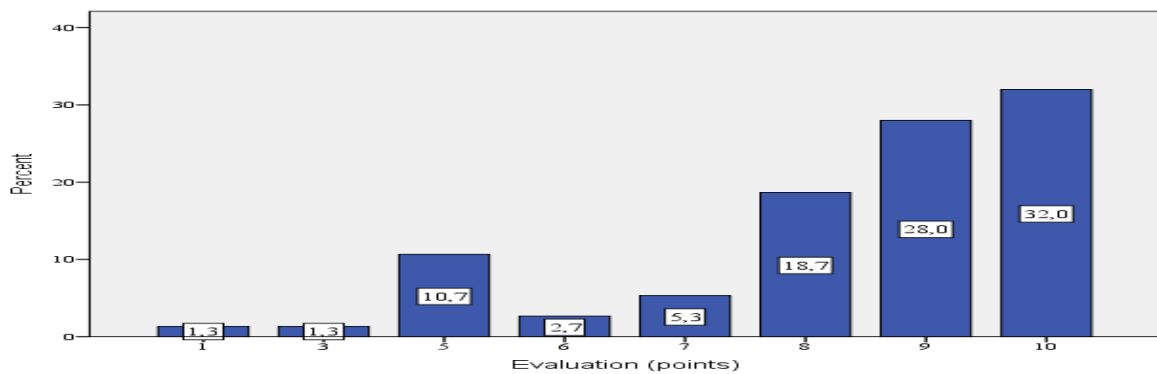


Figure 14. Public administrators and experts evaluations on statement “EU funds should be allocated for strengthening innovation in VET”

Source: Author’s performed survey in 2014 – 2015, n=122
 Evaluation scale 1 – where 1 – do not agree, 10 – fully agree

The EU structural funds are being seen as a relevant financial instrument regarding VET developments and also concerning innovation in VET. Therefore it is worth while to perform further research on the clarification of the understanding among the involved stakeholders of the notion of innovation in VET. Regarding technological innovation, according to our research it should go hand in hand with the permeability of VET programs at various levels with respective carrier development prospects for the involved VET students.

The public administrators strongly support the opinion that the quality of the training of a competitive labour force would be improved if in general primary education better teaching of maths and sciences was done (see figure 15). Evaluations are very high for most respondents, but there are also public administrators and experts who gave the lowest evaluations.

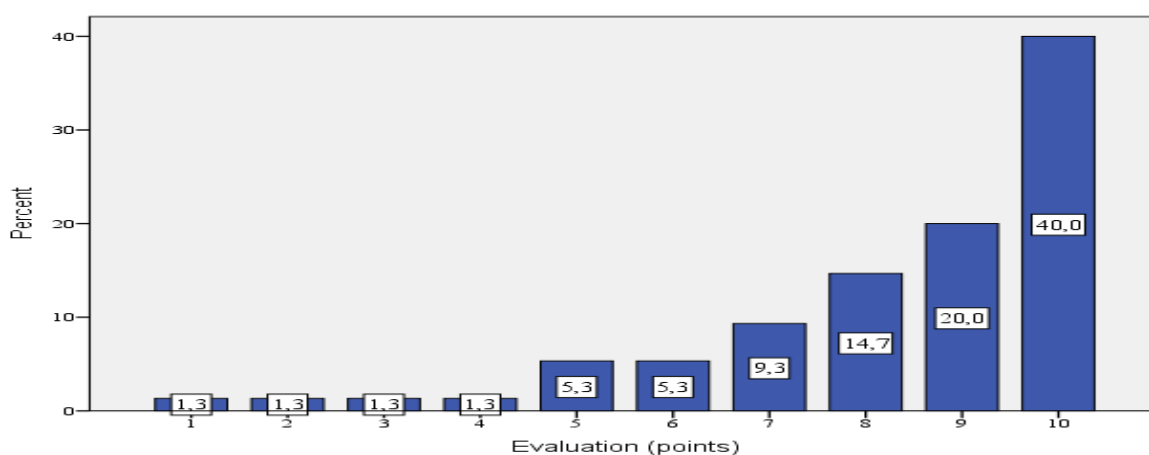


Figure 15. **Public administrators and experts evaluations on statement “In general primary education better teaching of maths and sciences would promote better training of competitive labour force in future”**

Source: Author’s performed survey in 2014 – 2015, $n=122$

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The preliminary conclusions from this part of the research leads to further analysis regarding the identification of the key stakeholders and their relevance in the training of competitive labour force – as a basis for the identification of relevant governance modes and mechanisms. We identified the employers’ organisations and sector associations as increasingly relevant actors. In the empirical study we attempted to estimate the degree and need for their involvement from the point of view of public administrators and employers. Regarding the involvement of sectoral associations and employers’ organisations in the training of a competitive labour force (see Figure 16) the entrepreneurs are only moderately satisfied with the results, represented by the average evaluation between 6 and 7 scores. Regarding the involvement of sector associations, the evaluations are also comparatively low, given the existing institutional mechanisms already put in place by public administrations and the continuous dialogue between the key actors – as indicated by our desk research. This suggests that the information loop (feed-back) should be improved by public administrations.

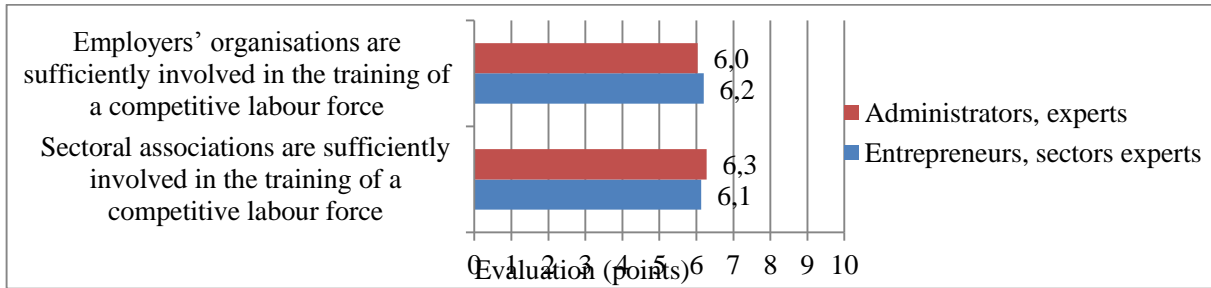


Figure 16. Arithmetic mean of evaluations of administrators, experts and entrepreneurs, sectors experts on statements “Sectoral associations are sufficiently involved in the training of a competitive labour force” and “Employers’ organisations are sufficiently involved in the training of a competitive labour force”

Source: Author’s performed survey in 2014 – 2015, n=368

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “Sectoral associations are sufficiently involved in the training of a competitive labour force” did not differ statistically significant with high probability (Mann-Whitney test: $z = -0,373$, $p = 0,709$).

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “Employers’ organisations are sufficiently involved in the training of a competitive labour force” did not differ statistically significant (Mann-Whitney test: $z = -0,991$, $p = 0,322$).

Regarding the involvement of enterprises, local governments and planning regions – the public administrators are more supportive to the involvement of enterprises and local governments than the entrepreneurs are. Both groups of respondents are to a lower degree interested in the involvement of planning regions which indicates to the still unused potential of these bodies. The involvement of the local governments is more appreciated by the public administrators, with relatively little support from the entrepreneurs side (see figure 17). This is again a surprising result, since our desk research indicates to an increasingly spreading model and good practice where the VET institutions are closely co-operating with the local government, e.g. in the implementation of work-based learning. This may indicate to an insufficient circulation of information by public administrations and limited promotion of examples of good practice. On the other hand – it may indicate to insufficient activity on either side – the employers and the local governments, possibly not seeing potential for mutual beneficially relationship. This situation should be amended – through creating and strengthening joint governance approaches in human resource training locally and regionally.

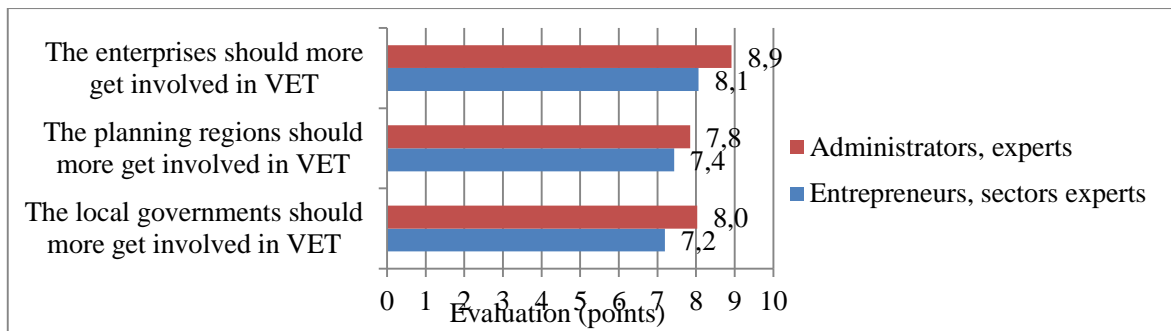


Figure 17. Arithmetic mean of evaluations of administrators, experts and entrepreneurs, sectors experts on statements “The local governments should more get involved in VET”, “The planning regions should more get involved in VET”, “The enterprises should more get involved in VET”

Source: Author’s performed survey in 2014 – 2015, $n=368$

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “The local governments should more get involved in VET” differed statistically significant with high probability – 0,998 (Mann-Whitney test: $z = -3,062$, $p = 0,002$).

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “The planning regions should more get involved in VET” did not differ statistically significant (Mann-Whitney test: $z = -1,783$, $p = 0,075$).

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “The enterprises should more get involved in VET” differed statistically significant with high probability – 0,999 (Mann-Whitney test: $z = -3,724$, $p = 0,000$).

In figure 18. the distribution of the evaluation on the involvement of local governments is presented.

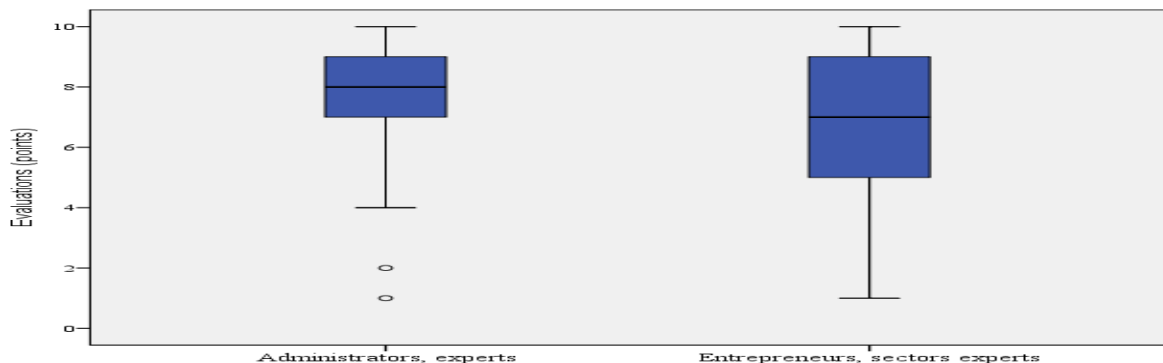


Figure 18. Distribution of evaluations of administrators, experts and entrepreneurs, sectors experts on statement “The local governments should more get involved in VET”

Source: Author’s performed survey in 2014 – 2015, $n=368$

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Here the distribution of the evaluation on the involvement of planning regions is presented – the differences of evaluations are not big (see figure 19).

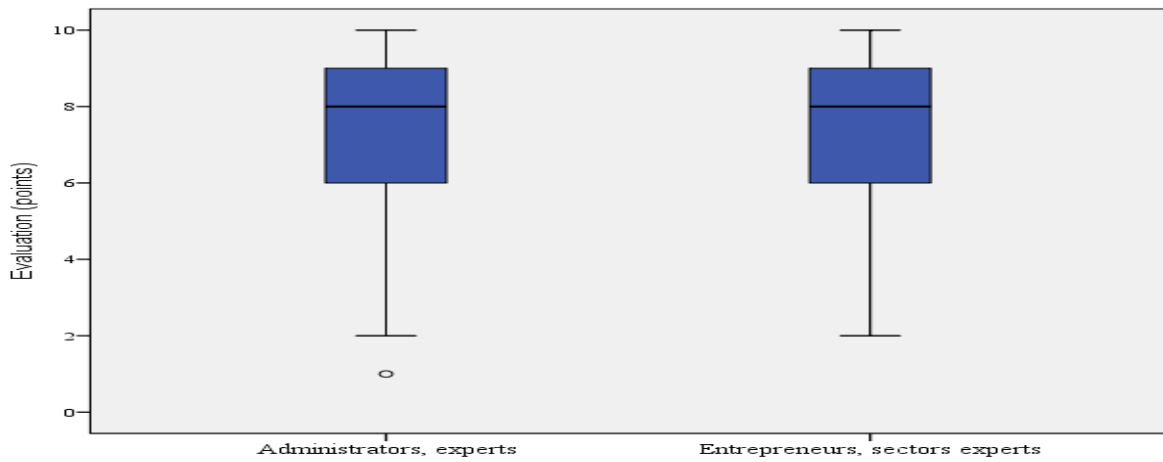


Figure 19. Distribution of evaluations of administrators, experts and entrepreneurs, sectors experts on statement “The planning regions should more get involved in VET”

Source: Author’s performed survey in 2014 – 2015, $n=368$

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Here the distribution of the evaluation on the involvement of entrepreneurs is presented.

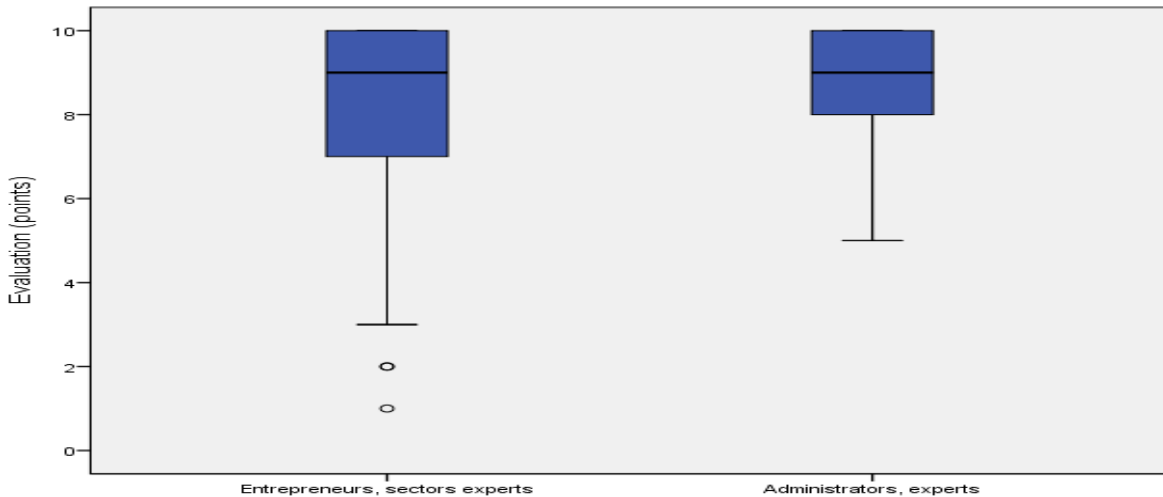


Figure 20. Distribution of evaluations of administrators, experts and entrepreneurs, sectors experts on statement “The enterprises should more get involved in VET”

Source: Author’s performed survey in 2014 – 2015, $n=368$

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Public administrators are markedly supportive to the further and stronger involvement of professional organisations and associations in VET governance which indicates to the openness of the VET system and its preparedness to strengthen links with the world of work and employment for improved labour market competitiveness through the workforce training. It is also important that the entrepreneurs recognise the role of the involvement of the local governments, the planning regions and the enterprises themselves much more in the training of a competitive labour force, which implies that the enterprises are prepared to think strategically in the context of local and regional development, and not solely in the interests of the enterprise (see Figure 17). Also the empirical research performed by the author during visits to VET institutions and local governments in Kurzeme region, as well as joint work with the Kurzeme

planning region explicitly showed the importance and the potential role of the local governments. In the cases where the local public authorities have taken an active role in the strategic planning for the VET institution in their territory – in co-operation with the local entrepreneurs or sectoral association, the results have been strikingly good (these were the conclusions by the author resulting from the on-the-site visits to Kurzeme VET institutions within the Kurzeme regional project). This refers also to the introduction of work-based learning – the success of the WBL pilot project implemented in a small number of VET institutions in 2013/2014 academic year was greatly due to the active involvement and support from the local governments, as our minor surveys on WBL approaches have shown. These findings lead to the next stage in our empirical research - regarding the need for new forms of governance. As represented below (see figure 21) – both the evaluations - by administrators and entrepreneurs - in general are very high with the mode for the highest possible evaluation. The evaluations do not differ much, but entrepreneurs have a higher variety of evaluations covering the whole range of the evaluation scale.

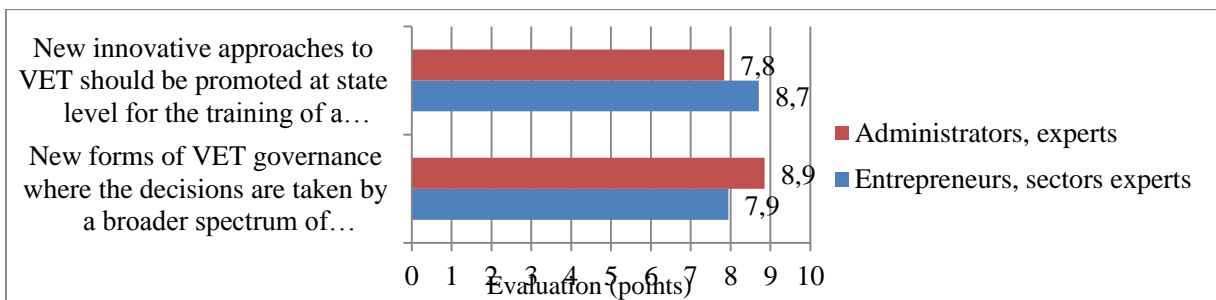


Fig 21. Arithmetic mean of evaluations of administrators, experts and entrepreneurs, sectors experts on statements “New innovative approaches to VET should be promoted at state level for the training of a competitive labour force” and “New forms of VET governance where the decisions are taken by a broader spectrum of stakeholder should be introduced at state level”

Source: Author’s performed survey in 2014 – 2015, n=368

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “New innovative approaches to VET should be promoted at state level for the training of a competitive labour force” are very high, but they differed statistically significant with high probability – 0,999 (Mann-Whitney test: $z = -3,710$, $p = 0,000$). The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “New forms of VET governance where the decisions are taken by a broader spectrum of stakeholder should be introduced at state level” differed statistically significant with high probability – 0,999 (Mann-Whitney test: $z = -4,178$, $p = 0,000$). More in-depth analysis is represented in the break-down into the statistical indicators which are included in table 5.

Table 5. Statistical indicators of administrators, experts and entrepreneurs, sectors expert's evaluations on statements related to VET

Statistical indicators	New innovative approaches to VET should be promoted at state level for the training of a competitive labour force		New forms of VET governance where the decisions are taken by a broader spectrum of stakeholder should be introduced at state level	
	Administrators	Entrepreneurs	Administrators	Entrepreneurs
N	121	246	120	245
Mean	7,84	8,71	8,85	7,95
Standard Error of Mean	0,207	0,108	0,146	0,138
Median	8	9	9	8
Mode	10	10	10	10
Standrad Deviation	2,154	1,573	1,532	2,031
Range	9	9	7	9
Minimum	1	1	3	1
Maximum	10	10	10	10

Source: Author's performed survey in 2014 – 2015, n=368

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The statistical analysis indicates that the differences are statistically significant with very high probability (0,999). The variability of evaluations on statement “New innovative approaches to VET should be promoted at state level for the training of a competitive labour force” is much bigger for entrepreneurs in comparison with administrators. Further on the distribution of evaluations of administrators, experts and entrepreneurs, sectors experts on statement “New innovative approaches to VET should be promoted at state level for the training of a competitive labour force” is represented (figure 22).

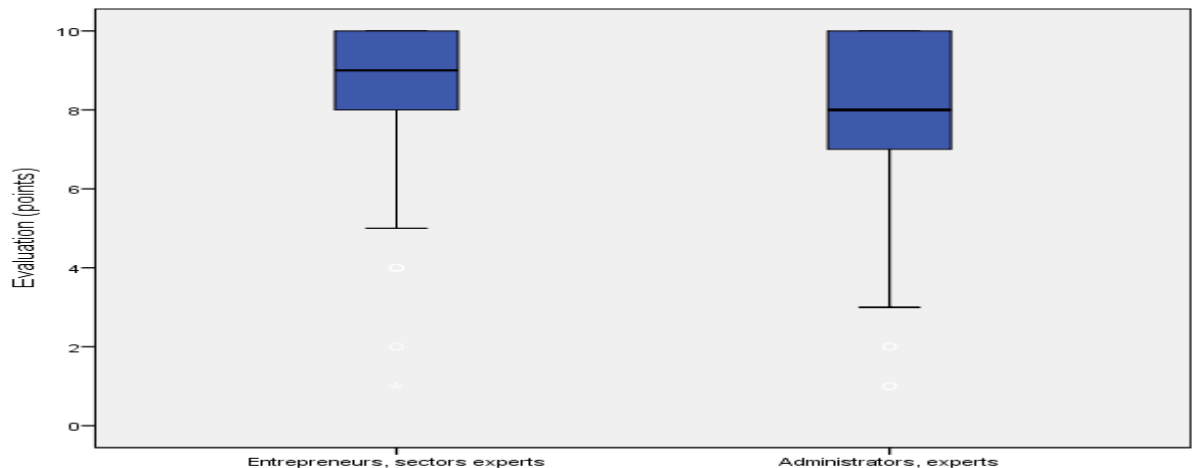


Fig 22. Distribution of evaluations of administrators, experts and entrepreneurs, sectors experts on statement “New innovative approaches to VET should be promoted at state level for the training of a competitive labour force”

Source: Author's performed survey in 2014 – 2015, n=368

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Variability of evaluations on statement “New forms of VET governance where the decisions are taken by a broader spectrum of stakeholder should be introduced at state level” is much higher for administrators in comparison with entrepreneurs as it is indicated in figure 23.

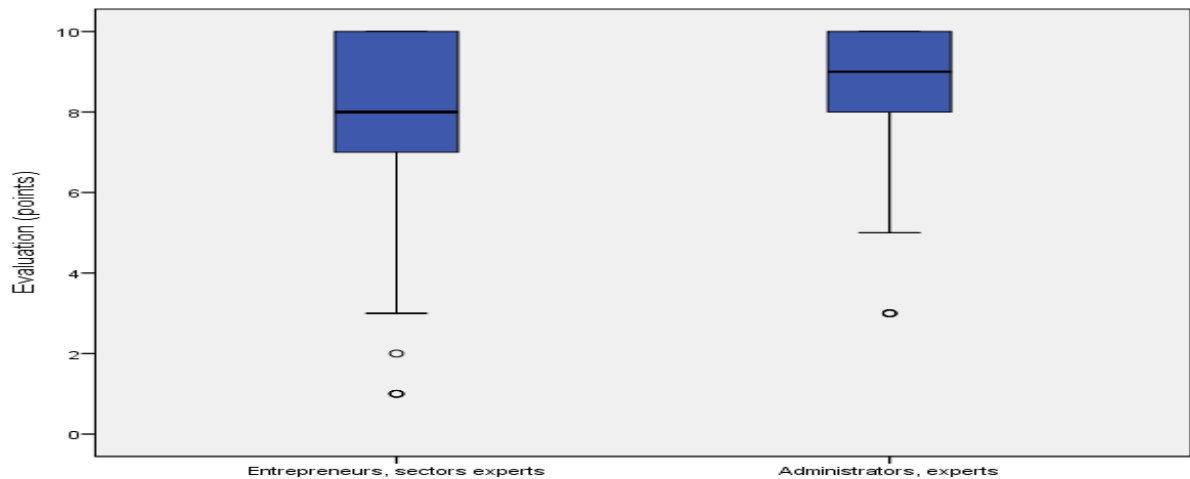


Fig 23. Distribution of evaluations of administrators, experts and entrepreneurs, sectors experts on statement “New forms of VET governance where the decisions are taken by a broader spectrum of stakeholder should be introduced at state level”

Source: Author’s performed survey in 2014 – 2015, n=368

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

All these findings and results indicated to the perceived need for new forms of VET governance regarding the involvement of various stakeholders at national, regional and local level. At the same time the co-operation among key education and training providers and education and research administrators have to be at a particular focus of attention – as being directly responsible for an effective functioning of the overall system. Therefore we found it relevant in our research to study in greater detail the role of their co-operation – as seen from their own perspective. If to compare the results of the 2012 and 2014-2015 survey, it should be noted that comparatively much higher scores on the need for co-operation were given in the latest survey which again indicates to an important dynamics in the evolution of opinions.

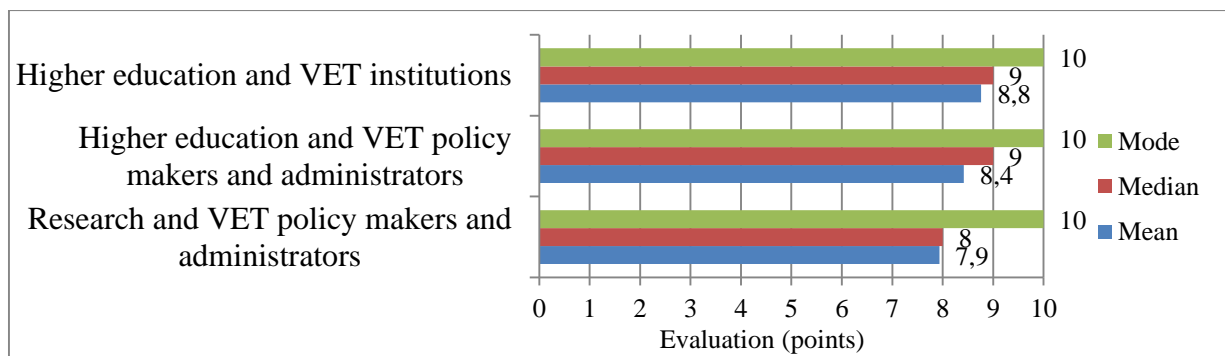


Figure. 24. Average assessments of public administrators and experts evaluations on statements “In the development of competitive labour force there should be more co-operation between VET, HE and research policy makers and administrators”

Source: Author’s performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Breaking down to statistical indicators allows for a more in-depth analysis regarding the importance of co-operation among various stakeholders in the education, training and research sectors. It should be noted that the mean indicators are relatively high (see table 6).

Table 6. Statistical indicators of public administrators and experts evaluations on statements “In the development of competitive labour force there should be more co-operation”

Statistical indicators	Higher education and VET policy makers and administrators	Research and VET policy makers and administrators	Higher education and VET institutions
N	116	115	115
Mean	8,42	7,93	8,76
Std. Error of Mean	0,151	0,204	0,129
Median	9,00	8,00	9,00
Mode	10	10	10
Standard Deviation	1,549	2,103	1,328
Range	6	9	6
Minimum	4	1	4
Maximum	10	10	10

Source: Author's performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Breaking down the 2014 – 2015 year survey data by the involved target groups HE, VETv and research (stakeholders) – regarding VET and HE policy-makers and administrators is represented in figure 25.

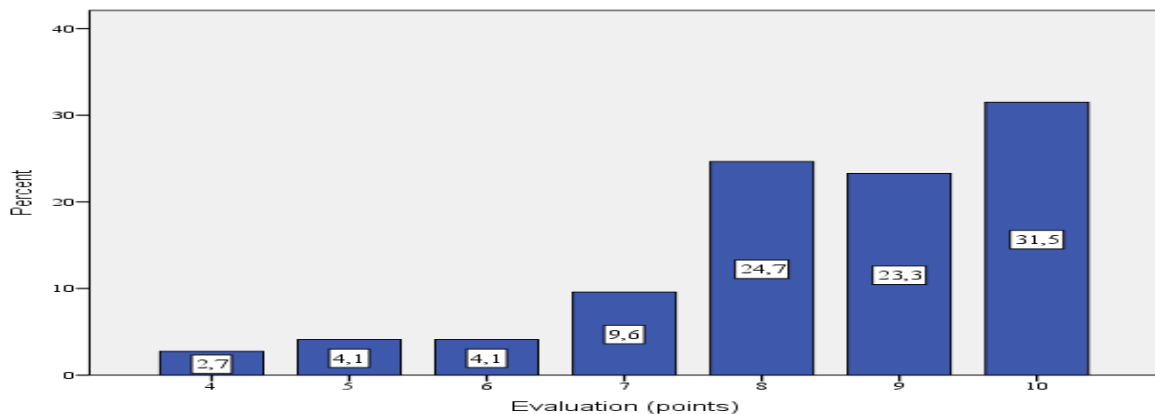


Figure 25. Public administrators and experts evaluations on statement “Higher education and VET policy makers and administrators”

Source: Author's performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Breaking down the 2014 – 2015 year survey data by the involved target groups from VET and research (stakeholders) is represented in figure 26.

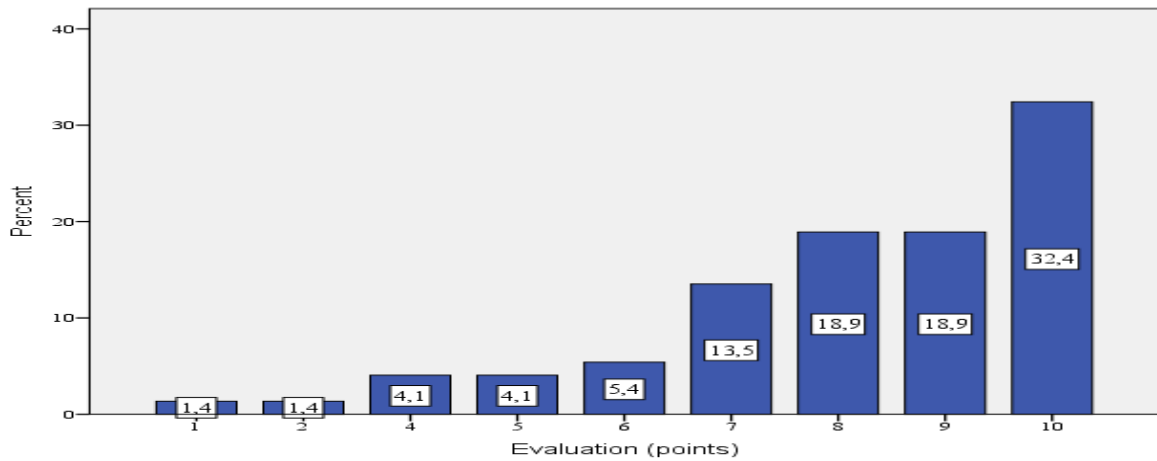


Figure 26. Public administrators and experts evaluations on statement “Research and VET policy makers and administrators”

Source: Author’s performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Although all evaluation scale by respondents is covered for the evaluations, most of the evaluations of the respondents were very high – more than 80% of respondents gave evaluations 7 and higher.

Breaking down the 2014 – 2015 year survey data by the involved target groups HE, VET and research (stakeholders) – regarding co-operation HE and VET institutions are represented in figure 27. The scores are surprisingly high, as if compared to the public administrators opinion in 2012 – the belief in the need for such a co-operation was much lower and a higher degree of reservation was being observed.

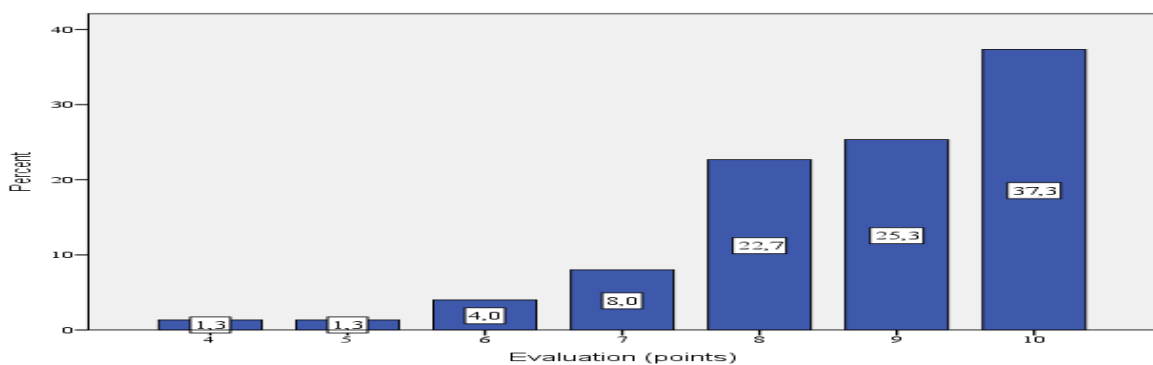


Fig. 27. Public administrators and experts evaluations on statement “Higher education and VET institutions”

Source: Author’s performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

If analysed according to Spearman’s rho regarding the need for cooperation among stakeholders in education, training and research allow to conclude that correlation is statistically significant (see table 7).

Table 7. Correlation coefficients regarding the need for cooperation among stakeholders in education, training and research

Spearman's rho		Higher education and VET policy makers and administrators	Research and VET policy makers and administrators	Higher education and VET institutions
Higher education and VET policy makers and administrators	Correlation Coefficient	1	0,607**	0,585**
	Sig. (2-tailed)	.	0,000	0,000
	N	120	120	120
Research and VET policy makers and administrators	Correlation Coefficient	0,607**	1	0,421**
	Sig. (2-tailed)	0,000	.	0,000
	N	120	120	120
Higher education and VET institutions	Correlation Coefficient	0,585**	0,421**	1
	Sig. (2-tailed)	0,000	0,000	.
	N	120	120	120

Correlation is significant at the 0.01 level (2-tailed)

Source: Author's performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The correlation analysis indicates that there is statistically significant correlation for the statements (with significance level 0,000). Still the challenge remains – would a stronger horizontal cooperation among various education, training providers and researchers would facilitate improved labour force training at all levels. The figure below indicates to high evaluation by public administrators (figure 28).

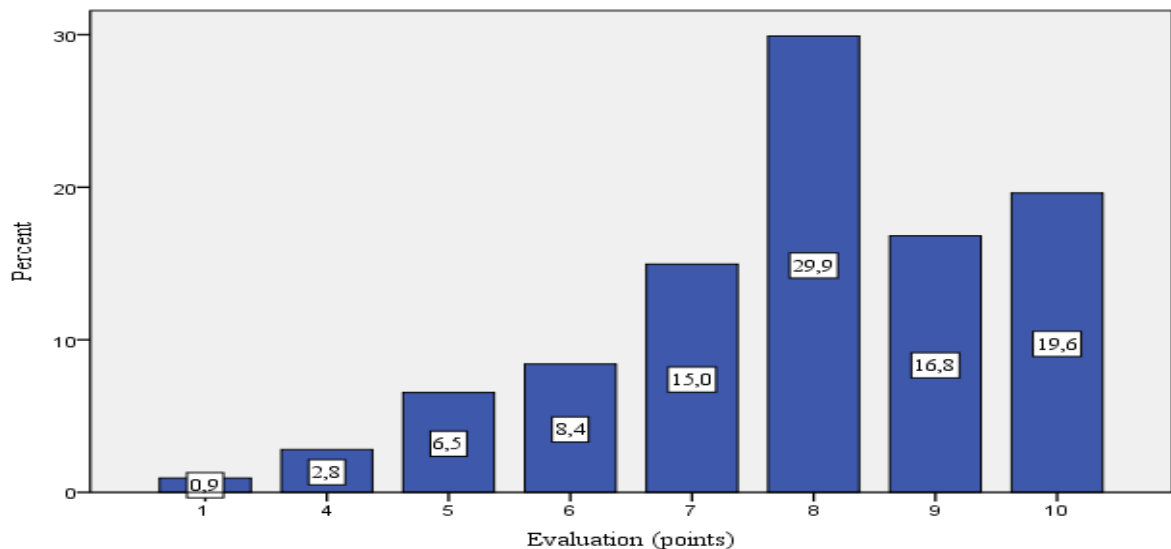


Figure 28. Public administrators and experts evaluations on statement “Horizontal co-operation between institutional mechanisms (various councils expert groups etc.) in higher education institutions, research institutions and VET institutions would contribute to a better development of competitive workforce”

Source: Author's performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

As the demands for competencies of the medium level specialists in the labour market change, also the public administrations need to adapt to this situation – by developing new institutional mechanisms and co-operation schemes that are capable of addressing these new demands in developing medium level competent and competitive specialists. The research has provided answers to this question also from another perspective - could and should the labour force prepared by VET system be strengthened through better links between higher education and VET and if this can serve as a means to support innovation and technology competence in VET labour force.

The competence in innovation and technologies in the world is increasingly becoming an inherent characteristic for competitive labour force also at medium level prepared by the VET systems. For public administrations in Latvia this is a new challenge, as, according to our initial survey among public administrators in 2012 (for details see Annex 10), many tradition rooted opinions and attitudes were predominant. However, the situation tends to change in this respect, and as the survey 2014 – 2015 among public administrators show that there is a relatively high level of awareness on the need to train innovation / technology competent middle level specialists by VET systems for the work at enterprises.

It is also acknowledged that in order to improve the training of competitive (innovation and technology competent) specialists, new institutional mechanisms with stronger links between HE and VET could be beneficial. In this context it is interesting to note that there is also a generally high evaluation for increased horizontal co-operation mechanism in higher education and VET – especially if compared to the rather neutral opinion expressed by public administrators in the author's survey in 2012 (slightly above mean 6 points) where closer links between higher education and VET administrators and experts was not much supported).

Therefore, as the survey of 2014 – 2015 already shows, measures need to be taken at systemic level to secure closer links between the VET, the higher education system and the research system, as well as closer 'horizontal' links between various institutional mechanisms 'serving' HE and VET systems (e.g. various expert councils etc.). This implies also the continuity of programs, vertical and horizontal permeability and other similar measures.

Thus, the conclusion is that in a two years period, there is a generally positive tendency in acknowledging the need for closer links between education system players at various levels – for the training of a competitive labour force at all levels. This finding contributes also to the development of the possibly best suited co-operation model among various stakeholder in VET, as this is one of the cornerstones of the future VET development to increase the labour force competitiveness.

It should be also stressed that the recent survey showing a relatively high support to closer VET and higher education co-operation for the training of competitive labour force is gender and work experience length neutral (no correlation found). Data of the table indicate that no correlation on statements indicated above with work experience and gender. It means that there is no significant difference on evaluations depending from.

Consequently, it can be concluded that the public administrators are of rather similar opinion on the need for new institutional, co-operation and governance mechanisms in the training of competitive labour force. However, the employers show a marked dissatisfaction with the way ministries coordinate their activities in working towards the goals of for such training. At the same time the entrepreneurs explicitly indicate to the insufficient co-ordination of activities of relevant ministries in the development of the labour force, are more dissatisfied than satisfied with the results of their joint work.

Given the fact that there exist several institutional mechanisms – committees and working groups for the co-ordination of the training of labour force at VET level, it was important to evaluate how the public administrators themselves evaluate the work of these mechanisms and how this evaluation relates to the opinions of the employers on the same issues. The attributes scores were relatively low, and differed statistically. The public administrators were still of a higher opinion on the effectiveness of the work of the inter-ministerial bodies than the entrepreneurs, but the differences were not so marked as before as indicated by several experts.

The public administrators and the entrepreneurs have given relatively low scores – the coordination and the achieved results are evaluated between 4,6 (by entrepreneurs) to 5,1 points (by administrators) – see figure 29.

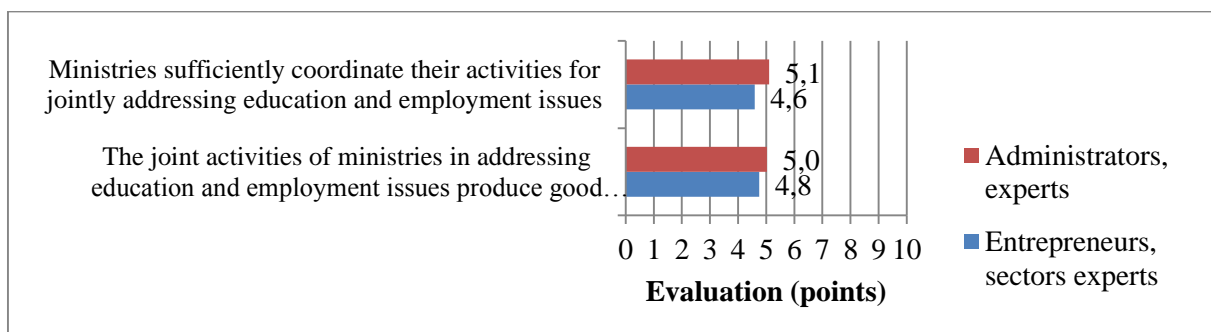


Figure 29. Arithmetic mean of evaluations of administrators, experts and entrepreneurs, sectors experts on statements “Ministries sufficiently coordinate their activities for jointly addressing education and employment issues” and “The joint activities of ministries in addressing education and employment issues produce good results”

Source: Author’s performed survey in 2014 – 2015, n=368

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “Ministries sufficiently coordinate their activities for jointly addressing education and employment issues” differed statistically significant with high probability – 0,981 (Mann-Whitney test: $z = -2,384$, $p = 0,019$).

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “The joint activities of ministries in addressing education and employment issues produce good results” did not differ statistically significant (Mann-Whitney test: $z = -1,343$, $p = 0,179$).

Break-down of statistical indicators allow for a more in-depth analysis of the question for the effectiveness of ministerial co-operation on the labour force training issues. The results of the analysis are represented in table 8. The evaluations of various stakeholders (public administrators and entrepreneurs) showed surprisingly similar evaluations: averages (mean, mode and median) were around 5 points (in 1 – 10 point evaluation scale) whereas individual evaluations have covered almost the whole evaluation scale (not covering the highest evaluation in three cases out of four).

Respondents from public administration had more alike evaluations as respondents from entrepreneurs group which is characterised by indicator of variability - standard deviation (see table 8).

Table 8. Statistical indicators of administrators, experts and entrepreneurs, sectors expert’s evaluations on statements “Ministries sufficiently coordinate their activities for jointly addressing education and employment issues” and “The joint activities of ministries in addressing education and employment issues produce good results”

Statistical indicators	Ministries sufficiently coordinate their activities for jointly addressing education and employment issues		The joint activities of ministries in addressing education and employment issues produce good results	
	Administrators	Entrepreneurs	Administrators	Entrepreneurs
N	116	238	116	235
Mean	5,11	4,59	5,04	4,74
Standard Error of Mean	0,184	0,144	0,169	0,141
Median	5	5	5	5
Mode	5	5	5	5
Standard Deviation	1,986	2,134	1,826	2,081
Range	8	9	8	8
Minimum	1	1	1	1
Maximum	9	10	9	9

Source: Author’s performed survey in 2014 – 2015, $n=368$
Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The distribution of the results regarding the coordination of activities shows that the public administrators and entrepreneurs are of a different opinion regarding the effectiveness of ministerial co-operation and the produced results (see figure 30).

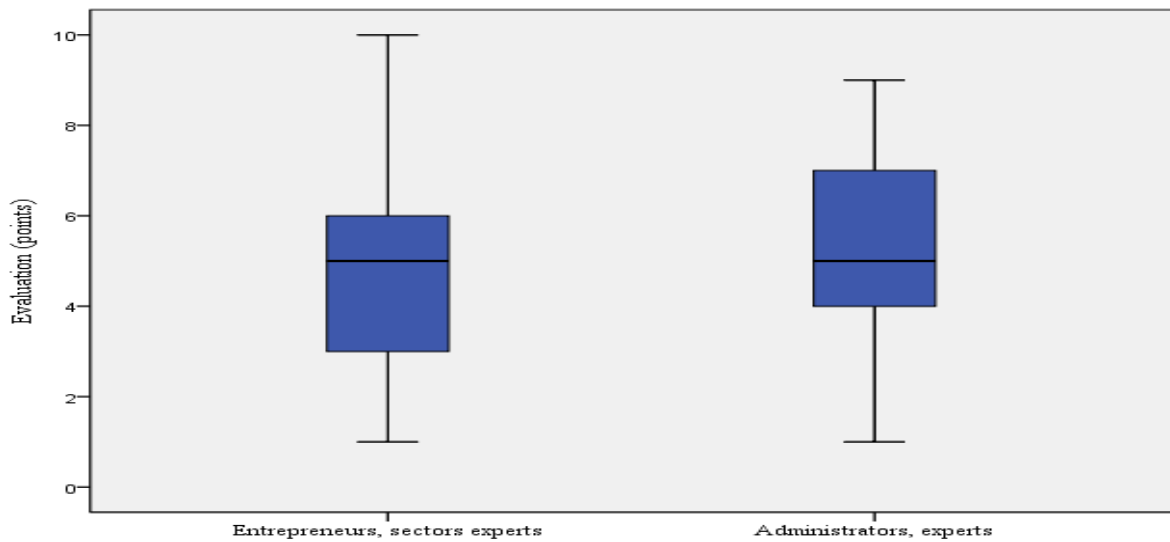


Figure 30. **Distribution of evaluations of administrators, experts and entrepreneurs, sectors experts on statement “Ministries sufficiently coordinate their activities for jointly addressing education and employment issues”**

Source: Author’s performed survey in 2014 – 2015, $n=368$

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Slightly less market differences in the opinion among public administrators and employers apply to the statement regarding the results of the ministerial activities in the labour market training (figure 31).

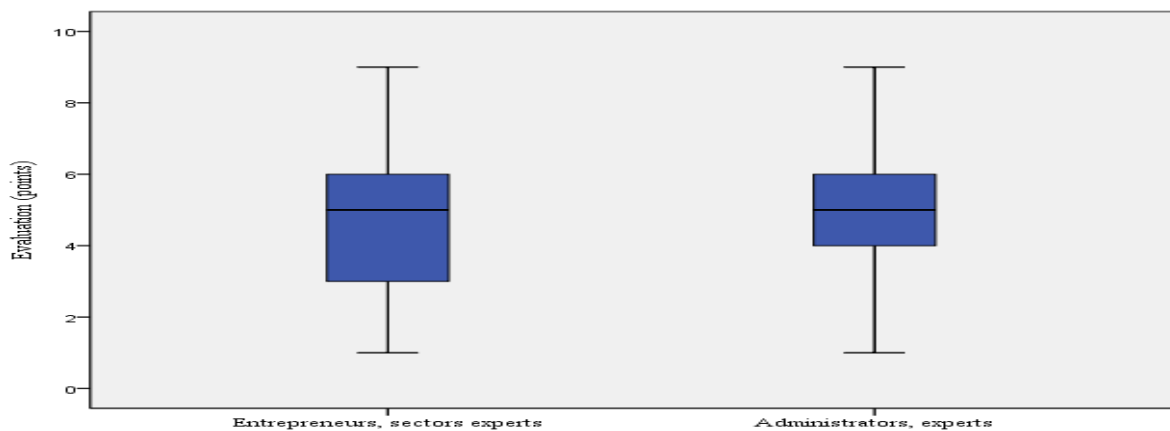


Figure 31. **Distribution of evaluations of administrators, experts and entrepreneurs, sectors experts on statement “The joint activities of ministries in addressing education and employment issues produce good results”**

Source: Author’s performed survey in 2014 – 2015, $n=368$

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The entrepreneurs’ evaluations show the indication that ministries have to pay more attention to education and employment issues. The highest score for co-operation results is 9, which constitutes only 2,9 % of all the evaluation, however the lowest score has been given by 10% of the respondents. The results of the evaluated statement have the indication that ministries have a lot to do in addressing education and employment issues. It is important to note that the opinion of public administrators on these issues is also comparatively low, but still

higher by at least one score or slightly more. At the same time entrepreneurs are highly satisfied with the results of the training of the workforce by the enterprises themselves which suggests that new forms of co-operation between VET institutions and enterprises are highly welcome in Latvia and have to be under attention of public administrators to develop best possible decisions.

At the same time, public administrations are also highly supportive to a strong co-operation among VET institutions and enterprises and give high scores to the statement “The most effective is the training implemented jointly by a VET institution and an enterprise”. The conclusion is supported also by the entrepreneurs answers to the statements “New forms of VET governance where the decisions are taken by a broader spectrum of stakeholder should be introduced at state level” and “New innovative approaches to VET should be promoted at state level for the training of a competitive labour force”. It indicates that the entrepreneurs are not only supporting new initiatives by public administrations but are prepared to become more actively involved in the governance of the VET institutions to improve the training of competitive VET specialists. In this context it is not surprisingly that there has been a high level of support for the development of a legal act regulating the obtaining of all levels of professional qualifications – which is not the case under the present regulation in force. This could be interpreted as a growing need among public administrators to simplify and make more user friendly the legal framework and procedures regulating education and training processes at all levels. Although the development of such a law is hardly feasible in the near future, the perceived need by the stakeholders has to be communicated to the decision-makers in the form of recommendations (Figure 32).

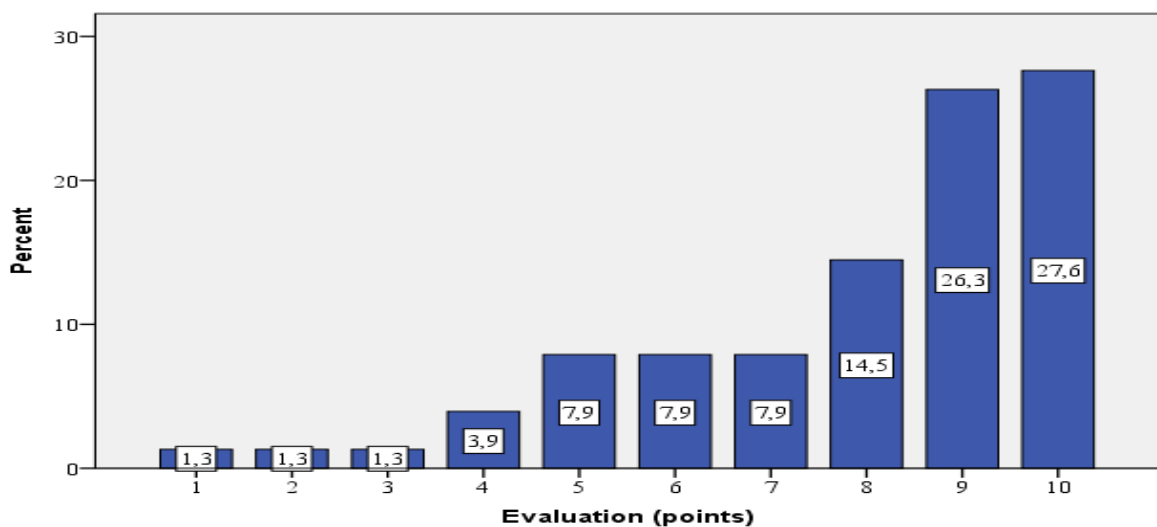


Figure 32. Public administrators and experts evaluations on statement “The law on professional education should regulate the acquisition of professional qualifications of all levels”

Source: Author’s performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Having analysed the governance related issues regarding the labour-market relevance and innovation, as well as concerning the co-operation schemes among relevant stakeholders, further on the governance responses to VET challenges will be studied.

3.2. Governance responses to new challenges in VET

Clearly, under the new social, economic and demographic situation the public administrations in VET need to seek new strategic solutions and approaches for the development of a competitive labour force. At the same time, the comparatively low prestige of VET in Latvia cannot be disregarded, since it is important to bring young people to the VET sector and persuade them on the benefits of the so called ‘blue collar work’ which has a relatively high prestige and social status in several other countries, e.g. Switzerland, but not at all in Latvia, partly due to historical reasons. Consequently, the success of Latvian public administrations in VET in the implementation of new strategic approaches will greatly depend on their ability to raise the overall prestige of VET in Latvia. For this reason the author attempted to find out how the meanings of the notions of “VET attractiveness” and “VET prestige” are being perceived by public administrators and employers. The research shows that the increase of the VET attractiveness has been evaluated higher than VET prestige which bears an implication that raising the VET attractiveness alone cannot be a solution to the problem of the low prestige of VET. Clearly, the measures implemented for raising VET attractiveness imply such concrete actions as improved infrastructure, improved VET programs, support to everyday socially rooted problems (low family income) but cannot alone change the attitude of the society in general. Thus, the conclusion is that by addressing the VET attractiveness issues alone, the prestige in the society will not automatically raise and more targeted strategic actions need to be implemented by public administrations.

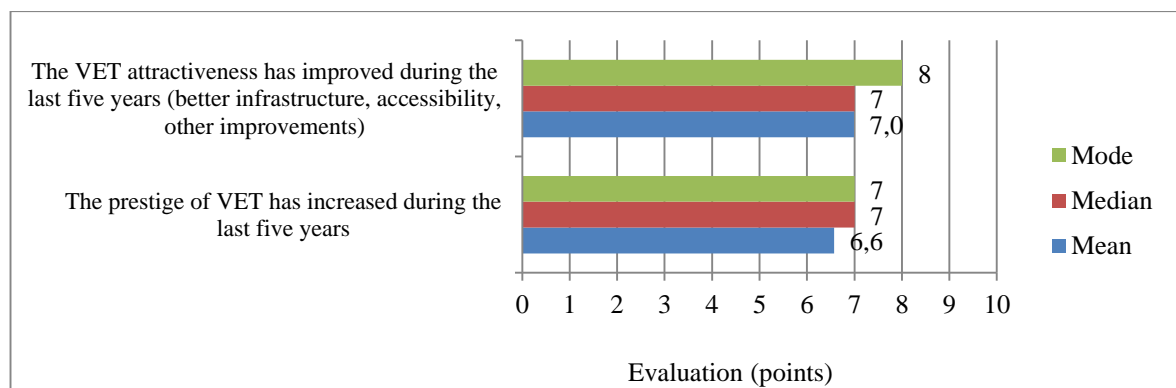


Figure 33. Average assessments of public administrators and experts evaluations on statements “The VET attractiveness has improved during the last five years (better infrastructure, accessibility, and other improvements)” and “The prestige of VET has increased during the last five years”

Source: Author’s performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Break-down by statistical indicators contributes to a more profound analysis (table 9).

Table 9. Main statistical indicators of public administrators and experts evaluations on statements “The VET attractiveness has improved during the last five years (better infrastructure, accessibility, and other improvements)” and “The prestige of VET has increased during the last five years”

Statistical indicators	The VET attractiveness has improved during the last five years (better infrastructure, accessibility, and other improvements)	The prestige of VET has increased during the last five years
N	115	115
Mean	6,99	6,57
Std. Error of Mean	0,156	0,175
Median	7	7
Mode	8	7
Standard Deviation	1,640	1,823
Range	8	9
Minimum	2	1
Maximum	10	10

Source: Author's performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

When analysing more specifically the distribution of evaluations concerning the VET attractiveness and VET prestige, it can be seen that the results are markedly different, thus giving support to the authors claim that VET attractiveness and VET prestige are clearly different notions and have to be addressed by different policy measures and tools.

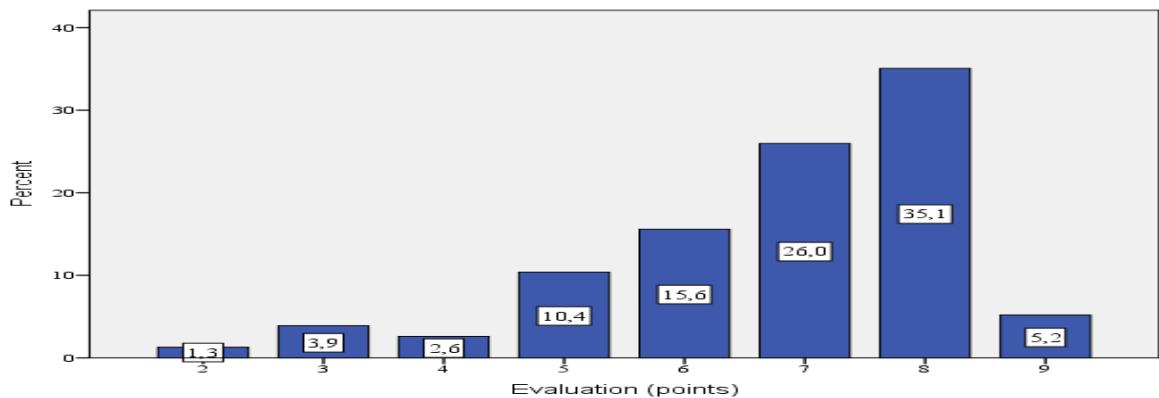


Figure. 34. Public administrators and experts evaluations on statement “The VET attractiveness has improved during the last five years (better infrastructure, accessibility, and other improvements)”

Source: Author's performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

At the same time it should be stressed that the scored attributes to the VET prestige are higher than might have been anticipated. This testifies for a growing potential regarding the role of VET in the education system and in the society as a whole (see figure 35).

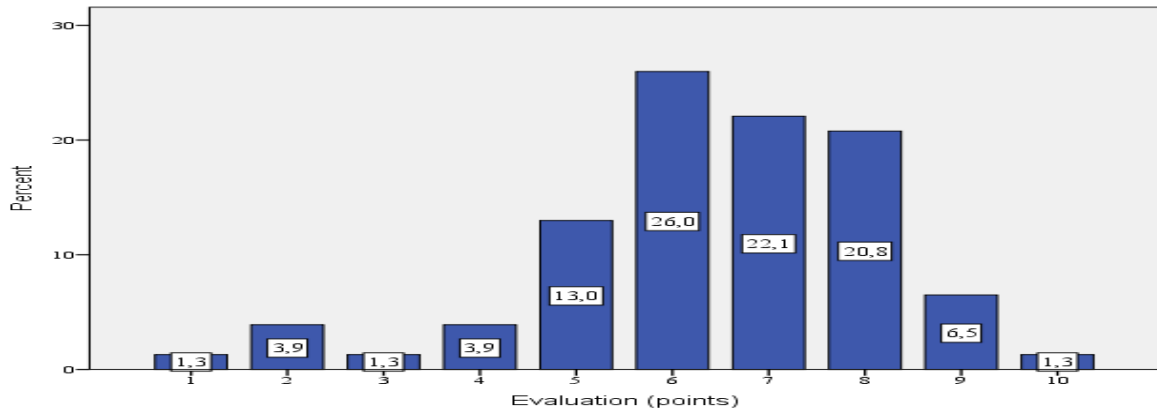


Figure 35. **Public administrators and experts evaluations on statement “The prestige of VET has increased during the last five years”**

Source: Author’s performed survey in 2014 – 2015, n=122
 Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

When inquiring what factors could raise the VET prestige, the survey indicate to the highest relevance of such factors as modern learning environment, modern and innovation oriented VET content and more job opportunities at technology oriented enterprises, this being a significant finding for our research. It is interesting to note that ‘higher salaries for medium level speicalists’ occupies only the fifth palce.

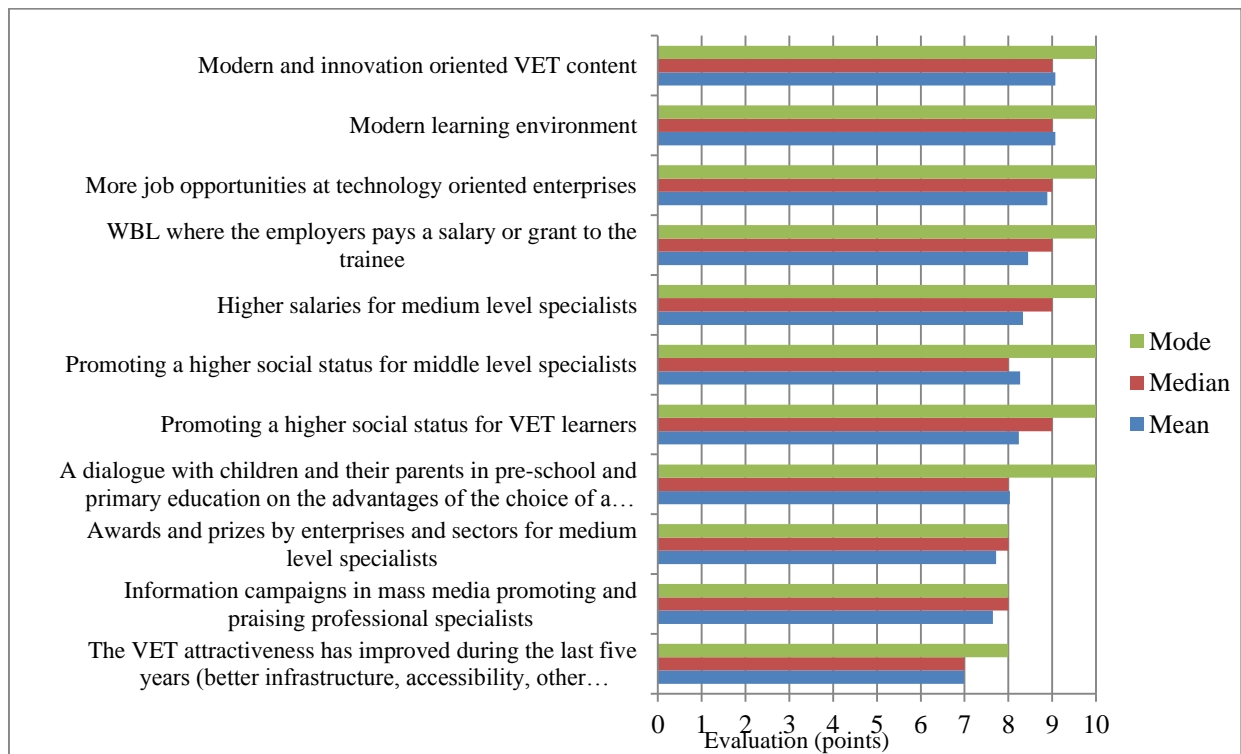


Figure 36. **Average assessments of public administrators and experts evaluations on statements “In your opinion, what could raise the VET prestige”**

Source: Author’s performed survey in 2014 – 2015, n=122
 Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant

The empirical research supports the authors’ assumption that VET prestige could be significantly raised by increasing the innovation and technologically oriented component in the job content of specialists from the VET sector, which implies additional aspects of the

intellectualisation of VET and potentially higher salaries, stable and guaranteed work – all these contributing to the VET prestige in the society.

Moreover, when testing the opinion of public administrators on the need for an early practically oriented, (as well as technology/ innovation input in learners), the answers by the respondents were positive. Certainly, this is not only work with the learners, but also with the families, and the public administrations have to address it at a systemic level.

Clearly, such factors as work with the families has been evaluated as an important aspect, as the decisions on future carriers are strongly influenced by the opinions of the family and parents. Therefore raising the overall VET prestige (public image) in the society is so crucial, so that families and the local community have a high esteem on the ‘blue colour work’, as it is in several EU countries, e.g. in Switzerland. It is important that Latvia and Switzerland in 2014 have signed a Memorandum on co-operation in VET. Among the joint activities it would be recommended to discuss the issues on the approaches to raise the VET prestige and public image. The results on the viewpoints of public administrators and experts on the possibility to raise the VET prestige are represented in table 10.

Table 10. Statistical indicators of public administrators and experts evaluations on statement “In your opinion, what could raise the VET prestige”

	Mean	Standard Error of Mean	Median	Mode	Standard Deviation	Range	Min	Max
The VET attractiveness has improved during the last five years (better infrastructure, accessibility, other improvements)	6,99	0,156	7	8	1,640	8	2	10
Higher salaries for medium level specialists	8,34	0,153	9	10	1,604	8	2	10
WBL where the employers pays a salary or grant to the trainee	8,45	0,148	9	10	1,543	8	2	10
Information campaigns in mass media promoting and praising professional specialists	7,65	0,189	8	8	1,969	9	1	10
Modern learning environment	9,07	0,097	9	10	1,016	4	6	10
Modern and innovation oriented VET content	9,07	0,111	9	10	1,158	6	4	10
A dialogue with children and their parents in pre-school and primary education on the advantages of the choice of a suitable profession	8,04	0,195	8	10	2,014	9	1	10
Promoting a higher social status for VET learners	8,24	0,184	9,00	10	1,909	9	1	10
Promoting a higher social status for middle level specialists	8,27	0,162	8	10	1,683	9	1	10
Awards and prizes by enterprises and sectors for medium level specialists	7,72	0,173	8	8	1,790	9	1	10

Source: Author's performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant

There are many factors influencing opinions of public administrators on possible VET prestige rise, for a more comprehensive understanding factor analysis has been performed.

Table 11. Complex Factors on Public Administrators Evaluations on Aspects “In your opinion, what could raise the VET prestige”

(Complex factor matrix after rotation)

Initial factors	Complex Factors		
	F1	F2	F3
WBL where the employers pays a salary or grant to the trainee	0,785	0,010	0,289
Promoting a higher social status for middle level specialists	0,739	0,539	-0,104
Higher salaries for medium level specialists	0,737	0,117	0,122
Promoting a higher social status for VET learners	0,667	0,569	-0,071
Information campaigns in mass media promoting and praising professional specialists	0,662	0,010	0,298
A dialogue with children and their parents in pre-school and primary education on the advantages of the choice of a suitable profession	-0,009	0,776	0,192
Awards and prizes by enterprises and sectors for medium level specialists	0,173	0,763	0,095
More job opportunities at technology oriented enterprises	0,127	0,449	0,384
Modern learning environment	0,227	0,130	0,854
Modern and innovation oriented VET content	0,117	0,148	0,852

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 6 iterations.

Source: Author's performed survey in 2014 – 2015, n=122

Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant

The results of the factor analysis could be useful for public administrators for further decision making. The interpretation of the identified complex factors with regard to the indicators with which the initial indicators have relatively high burdens:

1) Complex factor F1: Higher Financial and Social Status, the factor has relatively high burdens on the following indicators: WBL where the employers pays a salary or grant to the trainee, promoting a higher social status for middle level specialists, higher salaries for medium level specialists, promoting a higher social status for VET learners, information campaigns in mass media promoting and praising professional specialists.

2) Complex factor F2: Information Support for Job Opportunities, the factor has relatively high burdens on the following indicators: a dialogue with children and their parents in pre-school and primary education on the advantages of the choice of a suitable profession, awards and prizes by enterprises and sectors for medium level specialists, more job opportunities at technology oriented enterprises.

3) Complex factor F3: Modern Learning Environment and Learning Content, the factor has relatively high burdens on the following indicators: modern learning environment, modern and innovation oriented VET content.

Work-based learning can be considered as another major VET development in Latvia in recent years therefore deserves particular attention. On 11 December, 2012 Latvia and Germany alongside with other five EU countries signed a Memorandum on cooperation in VET

in Europe²⁵⁸, and in July 2013 a bi-lateral 3 year Agreement was signed with the German Federal Ministry of Education and Research. Within the framework of this co-operation exchange of experience is being implemented. In Latvia the aim of the project is to pilot new WBL approaches and to create the possible best WBL model in the Latvian context.

According to our research - the work on the analysis of the results of the WBL pilot project is ongoing. It implies: Attractive, accessible and modern study/ learning environment; Flexible offer of modern learning content with competent teachers and trainers; Close co-operation of the involved parties; Uniform mode of representations by sectors; flexibility in reacting to the development tendencies in sectors and professions; More active role and involvement of entrepreneurs, also in relation to modern learning content and the implementation of work-based learning and traineeships/ placements.

A major initiative since 2012 is the implementation of the work-based learning (WBL) approaches in the VET system. The decision to pilot the WBL approaches was taken in relation to the acquisition of best practice from other EU countries (e.g. Germany and Austria), given the success of these countries in securing relatively high levels of youth employment. Through the implementation of WBL pilot project the WBL approaches will be tested – in order to evaluate their suitability in the Latvian context, to identify the existing and potential problems, to discuss and adjust the WBL model for the Latvian VET system and to make a decision regarding the implementation of WBL approaches at systemic level.

In September 2013 a pilot project within the existing legal framework was initiated involving 148 students in 17 different programmes in 6 VET schools with 29 large and medium companies participating. Between the VET school, the company and the student a trilateral agreement is signed and an employment contract is concluded between the school and the student (obligatory in the case of the pilot project). In the pilot project the company is the main partner regarding curricula and training plan development, setting the number of days for training in enterprise per week and during the year. At the same time school selects students based on criteria set by the company and provides theoretical knowledge.

Based on the analysis of the results of the WBL pilot projects, decisions will be taken at system level in order to improve the matching of VET skills with the actual labour market demands. The Employers' Confederation of Latvia, Latvian Chamber of Commerce and Industry and Sectoral Associations also actively participate in the implementation of WBL. There are intensive discussions among social partners on finding optimal solutions for the Latvian economic situation – on how to involve small and micro-enterprises which constitute

²⁵⁸ Memorandum on Cooperation in Vocational Education and Training in Europe, available also at http://www.bmbf.de/pubRD/memorandumvocational_education_and_training_2012.pdf

98% of all enterprises in Latvia. It is necessary to invent legal incentives' system for entrepreneurs to encourage their interest to participate in WBL and invest in skills development.

Currently, according to the survey by the Ministry of Education and Science, around 25 VET institutions are prepared to start WBL in co-operation with around 200 hundred enterprises all over Latvia – to implement around 50 programs by involving around five hundred students.

Coverage by schools. The involved students (learners) – 148

Ventspils Technical College - 27, Ogre Technical College – 38, Riga State Technical School - 33, Jelgava Technical College - 16, Valmiera Vocational School - 19, Jelgavas Crafts School (under the supervision of the local government) – 15.

The programs and qualifications (1 – 1,5 to 4 years long) that were implemented are to be found in Annex 11. The key addressed sectors have been: Metal processing, Engineering, Energy and Electrical Engineering, Electronics, Mechatronics, Wood products' manufacturing, Food services, Printing and publishing, Printing production technology and product manufacturing. Woodworking Road transport, Textile manufacturing technology and product manufacturing, Numerical control machine tools adjuster. The mentioned fields could be adjusted and a little bit changed in next years taking into account real world development in the neighbouring countries and in Latvia.

The Ministry of Education survey from June 2014 shows that in the academic year 2014/2015 already 1round 30 VET institutions are prepared to implement work-based learning in co-operation with around 200 hundred enterprises and involving around 600 learners in around 50 types of programs.

The analysis of the author (through several surveys and interviews) indicates that the decisive factor for the success of the pilot project is the decision taken by the Ministry of Education and Science to take the “bottom-up” approach, instead of the “top-down” approach which seemed not to be promising in the initial discussions with the employers' organisations.

There is a surprisingly high awareness among entrepreneurs about the implementation of the work-based learning in Latvia, given the fact that work-based learning in Latvia started just in 2013 as a small-scale pilot project promoted by the Ministry of Education and Science, partly within the framework of an agreement with Germany on co-operation in VET (however, not overtaking the German dual learning experience but introducing some elements in compliance with the Latvian situation.

Regarding specific innovative approaches to VET – as work-based learning, it was not anticipated that a relatively high numbers of administrators and employers will not be aware of the work-based learning initiatives, as there have been targeted measures for awareness raising

and increased involvement. Regarding the awareness and support to the introduction of WBL approaches – the support is strong but the awareness level was still surprisingly low.

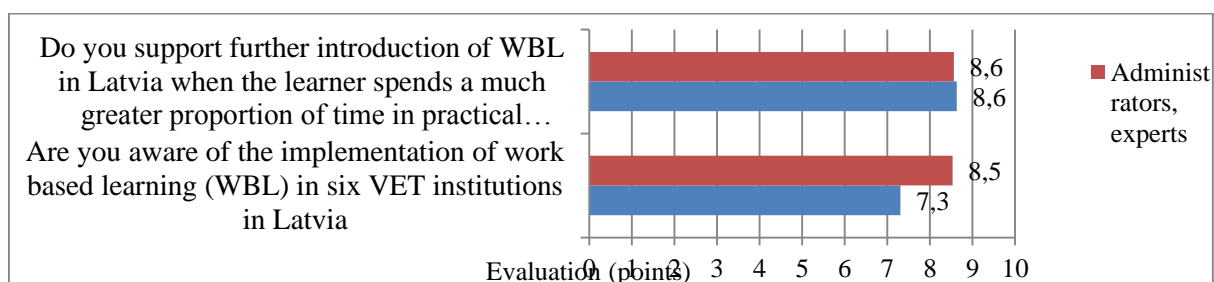


Figure 37. Arithmetic mean of evaluations of administrators, experts and entrepreneurs, sectors experts on statements related to the introduction of work-based learning in Latvia

Source: Author's performed survey in 2014 – 2015, $n=368$

Evaluation scale 1 – 10, where 1 – not aware, 10 – very well aware; 1 – not support, 10 – very support

The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “Are you aware of the implementation of work based learning (WBL) in six VET institutions in Latvia” differed statistically significant with high probability – 0,999 (Mann-Whitney test: $z = -3,972$, $p = 0,000$). The evaluations of administrators, experts and entrepreneurs, sectors experts on statement “Do you support further introduction of WBL in Latvia when the learner spends a much greater proportion of time in practical training at an enterprise” didn't differ statistically significant (Mann-Whitney test: $z = -0,605$, $p = 0,545$). Regarding new strategic initiatives in VET, as work-based learning approaches, it was important to understand which factors were considered as motivating by the public administrators and by the employers. The scores were relatively high and uniform, however, it had not been anticipated that the offered measure ‘information campaigns in mass media’ will obtain the comparatively lowest scores. The break-down by statistical indicators presents a more in-depth view (table 12).

Table 12. Statistical indicators of administrators, experts and entrepreneurs, sectors expert's evaluations on statements “Are you aware of the implementation of WBL in six VET institutions in Latvia” and “Do you support further introduction of WBL in Latvia when the learner spends a much greater proportion of time in practical training at an enterprise”

Statistical indicators	Are you aware of the implementation of work based learning (WBL) in six VET institutions in Latvia		Do you support further introduction of WBL in Latvia when the learner spends a much greater proportion of time in practical training at an enterprise	
	Administrators	Entrepreneurs	Administrators	Entrepreneurs
N	118	240	119	240
Mean	8,53	7,31	8,58	8,59
Standard Error of Mean	0,183	0,191	0,155	0,123
Median	9	8	9	9
Mode	10	10	10	10
Standard Deviation	1,925	2,750	1,632	1,777
Range	9	9	9	9
Minimum	1	1	1	1
Maximum	10	10	10	10

Source: Author's performed survey in 2014 – 2015, $n=368$

Evaluation scale 1 – 10, where 1 – not aware, 10 – very well aware; 1 – not support, 10 – very support

More specifically regarding the relevance of specific activities to promote WBL approaches the answers were as follows (see figure 38).

The evaluations of administrators, experts and entrepreneurs, sectors experts did not differ statistically significantly. Moreover, the entrepreneurs are highly positive about their potential involvement in the implementation of work-based learning in their own enterprise which is an important signal for Latvian VET administrations and their co-operation partners regarding further strategic decisions on the implementation of work-based learning, potentially at systemic level. The evaluations of respondents were surprisingly high, even higher as were evaluations of some experts before the survey. The highest evaluations were given to “support to the enterprises during the organisation of the work placement” and “tax reduction for enterprises involved in WBL”; the evaluations were high by entrepreneurs, as well as by public administrators (see figure 38).

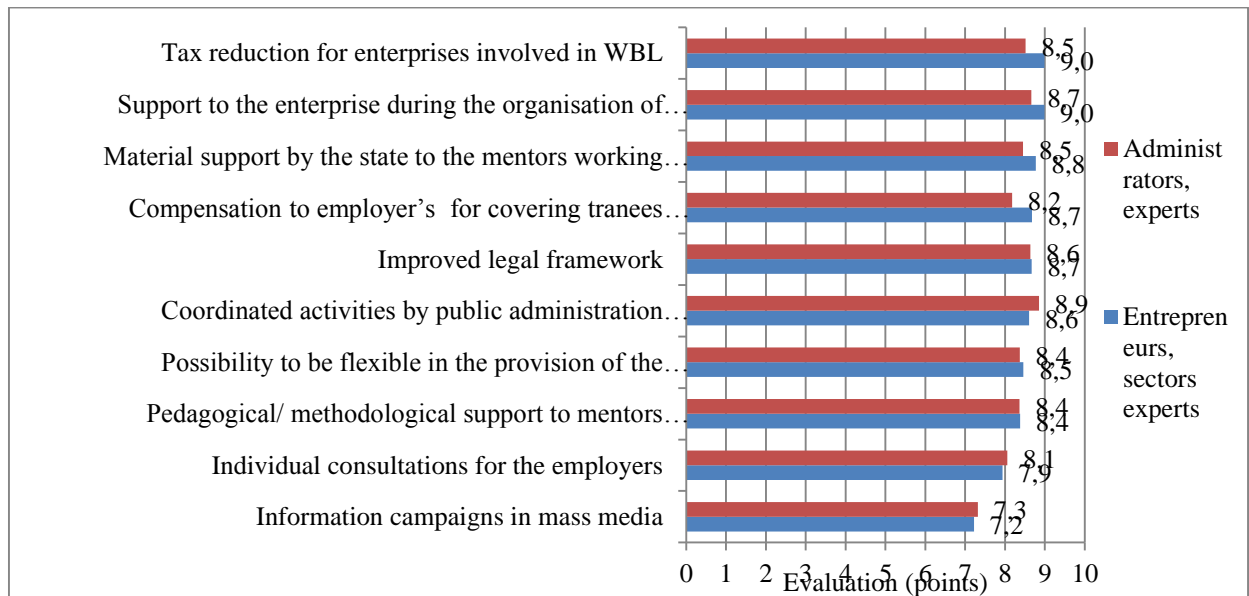


Figure 38. Arithmetic mean of evaluations of administrators, experts and entrepreneurs, sectors experts on statement “What centralised activities do you consider as relevant for a successful introduction of WBL in Latvia?”

Source: Author's performed survey in 2014 – 2015, $n=368$

Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant

For identifying the key factors – “What centralised activities the education, employment, economic and social policy makers and experts consider as relevant for a successful introduction of WBL in Latvia” and determining the mutual statistical relations of these factors, factor analysis has been used. As a result of the factor analysis the initial ten factors, through three iterations (by using the Varimax rotation with Kaiser Normalisation) are grouped in two complex factors (see table 13).

Table 13. Education, employment, economic and social policy makers and experts' evaluation on what centralised activities they consider as relevant for a successful introduction of WBL in Latvia

(Complex factor matrix after rotation)

Initial factors	Complex Factors	
	F1	F2
Tax reduction for enterprises involved in WBL	0,854	0,075
Improved legal framework	0,789	0,162
Material support by the state to the mentors working with trainees at an enterprise	0,752	0,360
Compensation to employer's for covering trainees expenditure on transport fees, specialised clothing etc.	0,683	0,363
Possibility to be flexible in the provision of the theoretical studies according to the employers needs	0,584	0,331
Support to the enterprise during the organisation of the work placement	0,580	0,489
Pedagogical/ methodological support to mentors working with trainees at an enterprise	0,121	0,838
Individual consultations for the employers	0,170	0,791
Information campaigns in mass media	0,391	0,667
Coordinated activities by public administration institutions in addressing training and employment issues	0,341	0,604

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 3 iterations.

Source: Author's performed survey in 2014, n=122,

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The interpretation of the identified complex factors with regard to the indicators with which the initial indicators have relatively high burdens:

1) Complex factor F1: Legal and practical support, the factor has relatively high burdens on the following indicators: tax reduction for enterprises involved in WBL, improved legal framework, material support by the state to the mentors working with trainees at an enterprise, compensation to employer's for covering trainees' expenditure on transport fees, specialised clothing, flexible in the provision of the theoretical studies according to the employers needs, support to the enterprise during the organisation of the work placement.

2) Complex factor F2: Pedagogic and Information support, the factor has relatively high burdens on the following indicators: pedagogical/ methodological support to mentors working with trainees at an enterprise, individual consultations for the employers, information campaigns in mass media, coordinated activities by public administration institutions in addressing training and employment issues.

For identifying the key factors – “What centralised activities entrepreneurs and sector experts consider as relevant for a successful introduction of WBL in Latvia” and determining the mutual statistical relations of the factors, factor analysis has been used. As a result of the factor analysis the initial ten factors, through three iterations (by using the Varimax rotation with Kaiser Normalisation) are grouped in two complex factors (see table 14).

Table 14. Entrepreneurs' and sector experts' evaluation on what centralised activities consider as relevant for a successful introduction of WBL in Latvia
(Complex factor matrix after rotation)

	Factors	
	F1	F2
Tax reduction for enterprises involved in WBL	0,826	0,142
Material support by the state to the mentors working with trainees at an enterprise	0,782	0,193
Compensation to employer's for covering trainees expenditure on transport fees, specialised clothing etc.	0,770	0,150
Support to the enterprise during the organisation of the work placement	0,595	0,189
Information campaigns in mass media	-0,227	0,763
Pedagogical/ methodological support to mentors working with trainees at an enterprise	0,258	0,680
Individual consultations for the employers	0,317	0,652
Improved legal framework	0,403	0,620
Coordinated activities by public administration institutions in addressing training and employment issues	0,233	0,612
Possibility to be flexible in the provision of the theoretical studies according to the employers needs	0,174	0,597

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization."

Rotation converged in 3 iterations.

Source: Author's performed survey in 2014, n=246

Evaluation scale 1 – 10, where 1 – not agree, 10 – fully agree

The interpretation of the identified complex factors with regard to the indicators with which the initial indicators have relatively high burdens:

1) Complex factor F1: Financial and practical support, the factor has relatively high burdens on the following indicators: tax reduction for enterprises involved in WBL, material support by the state to the mentors working with trainees at an enterprise, compensation to employer's for covering trainees expenditure on transport fees, specialised clothing etc., improved legal framework support to the enterprise during the organisation of the work placement.

2) Complex factor F2: Legal and information support, the factor has relatively high burdens on the following indicators: information campaigns in mass media, pedagogical/ methodological support to mentors working with trainees at an enterprise, individual consultations for the employers, improved legal framework, coordinated activities by public administration institutions in addressing training and employment issues, possibility to be flexible in the provision of the theoretical studies according to the employer's needs.

Regarding the position of the trainee in the enterprise and the commitments for enterprise the results present material for policy makers.

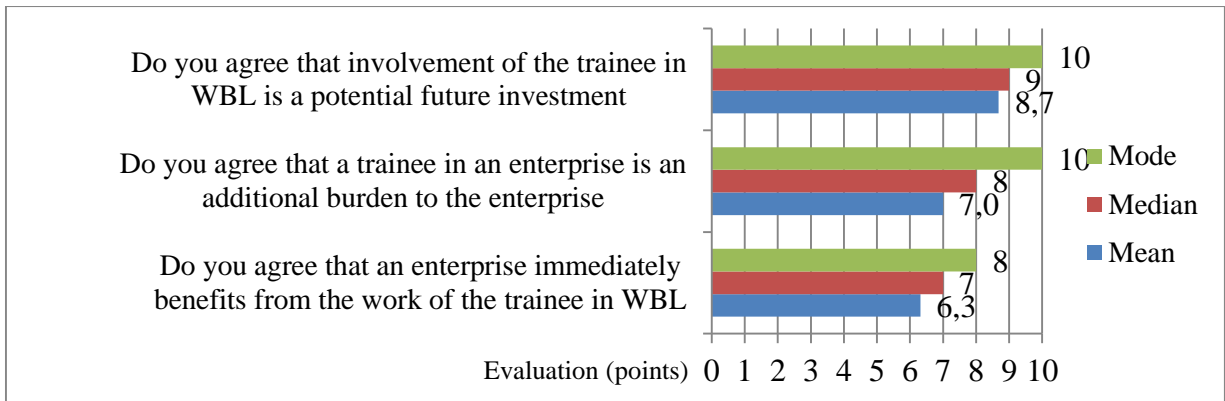


Fig. 39. Average assessments of entrepreneurs and sectors expert's evaluations on statements "Do you agree that an enterprise immediately benefits from the work of the trainee in WBL", "Do you agree that involvement of the trainee in WBL is a potential future investment", "Do you agree that a trainee in an enterprise is an additional burden to the enterprise"

Source: Author's performed survey in 2014 – 2015, n=246

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Generally the trainees at an enterprise are seen as a potential future investment, however, the employers do not deny that it is still a burden for the enterprise, and that there are hardly any immediate benefits. This suggests that the policy makers should reflect on how to support the employers in short term, so that the long-term benefits of WBL approaches could be reached, given the overly positive perception by employers. Statistical indicators represent a more in-depth vision of these questions.

Table 15. Statistical indicators of entrepreneurs and sectors expert's evaluations on statements "Do you agree that an enterprise immediately benefits from the work of the trainee in WBL", "Do you agree that involvement of the trainee in WBL is a potential future investment", "Do you agree that a trainee in an enterprise is an additional burden to the enterprise"

Statistical indicators	Do you agree that an enterprise immediately benefits from the work of the trainee in WBL	Do you agree that involvement of the trainee in WBL is a potential future investment	Do you agree that a trainee in an enterprise is an additional burden to the enterprise
N	238	236	236
Mean	6,32	8,68	7,00
Std. Error of Mean	0,165	0,095	0,185
Median	7	9	8
Mode	8	10	10
Std. Deviation	2,351	1,354	2,635
Range	9	6	9
Minimum	1	4	1
Maximum	10	10	10

Source: Author's performed survey in 2014 – 2015, n=246

Evaluation scale 1 – 10, where 1 – not agree, 10 – fully agree

The break-down by scores represents the opinions of the entrepreneurs in greater detail (see figure 40).

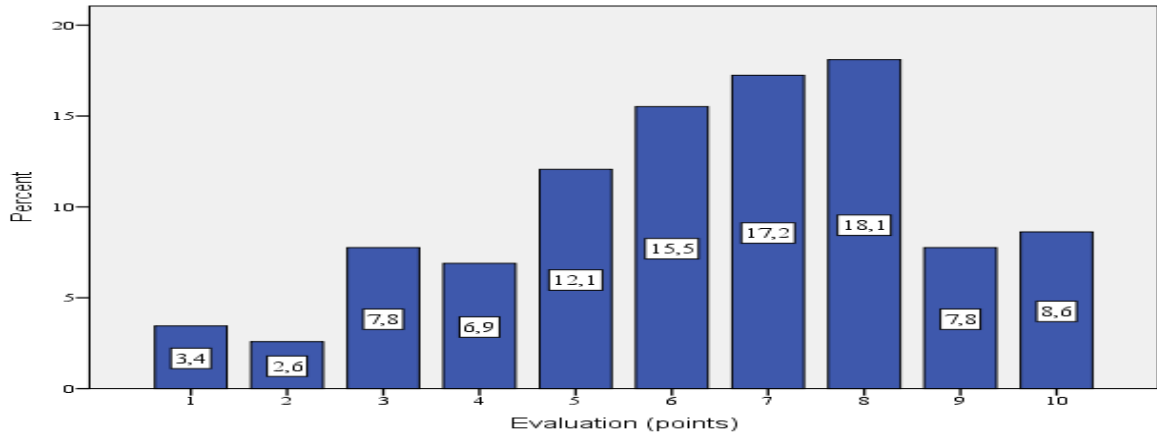


Figure 40. **Entrepreneurs and sectors expert's evaluations on statement "Do you agree that an enterprise immediately benefits from the work of the trainee in WBL"**

Source: Author's performed survey in 2014 – 2015, n=246

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The break-down by scores represents the opinions of the entrepreneurs in greater detail regarding WBL as a future investment, and here the opinions are fairly concentrated on the positive side, with most evaluations being in the range of 8- 10 scores (nearly 85%). Only 3,5% refers to the range 4-6 scores. This is represented in figure 41, showing that there is a potential for further joint strategic planning with social partners regarding the development of work-based approaches in the Latvian VET system. With the support from the social partners it is feasible to develop a legal basis that is motivating for the employers.

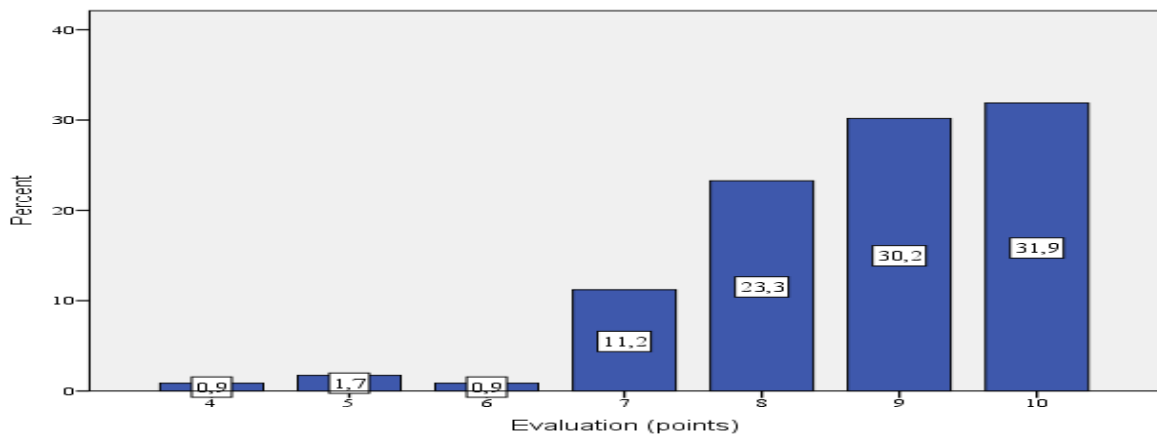


Figure 41. **Entrepreneurs and sectors expert's evaluations on statement "Do you agree that involvement of the trainee in WBL is a potential future investment"**

Source: Author's performed survey in 2014 – 2015, n=246

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

Generally the trainees are being seen as a burden for the enterprise, and the evaluations are relatively equally divided (see figure 42).

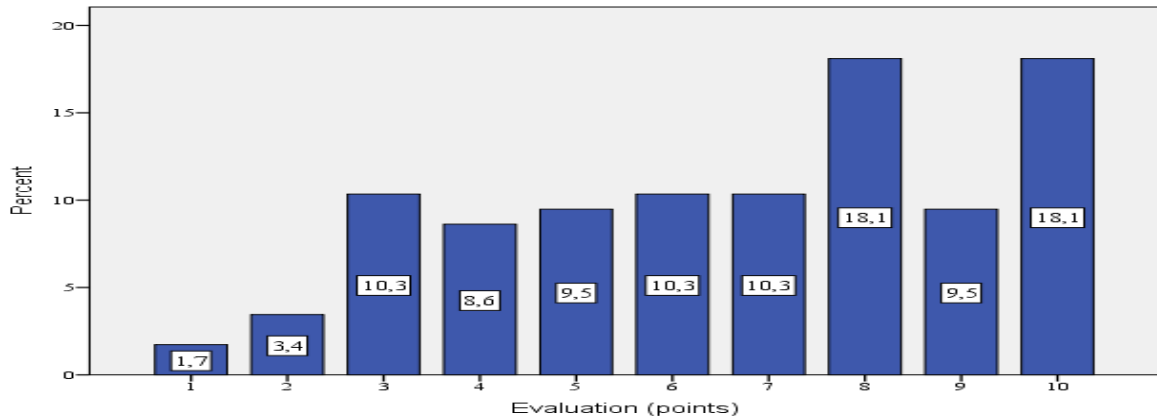


Figure 42. **Entrepreneurs and sectors expert’s evaluations on statement “Do you agree that a trainee in an enterprise is an additional burden to the enterprise”**

Source: Author’s performed survey in 2014 – 2015, n=246

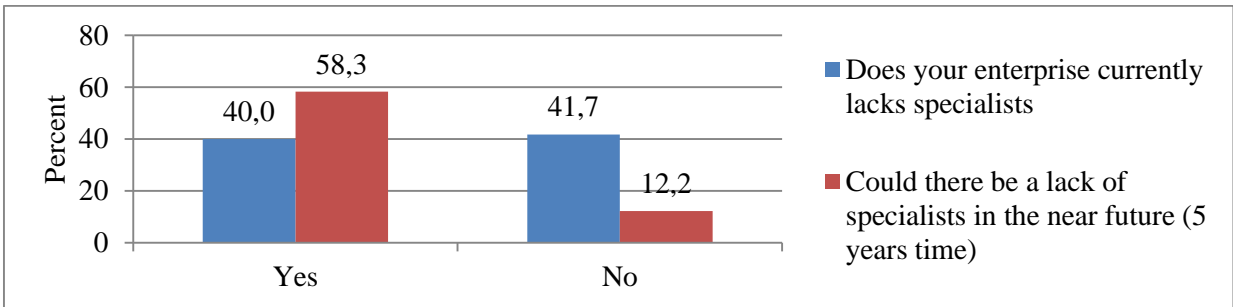
Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

At the same time, when analysing the need for for specialists, the obtained results show that the present and future perceived need for speiocalists is not very high (table 16).

Table 16. **Entrepreneurs and sectors expert’s evaluations on statement “Does your enterprise currently lack specialists?” and “could there be a lack of specialists in the near future (5 years time)?”**

	Yes	No
Does your enterprise currently lacks specialists	40,0%	41,7%
Could there be a lack of specialists in the near future (5 years time)	58,3%	12,2%

Source: Author’s performed survey in 2014 – 2015, n=246



Source: Author’s performed survey in 2014 – 2015, n=246

Figure 43. **Entrepreneurs and sectors expert’s evaluations on statement “Does your enterprise currently lack specialists?” and “could there be a lack of specialists in the near future (5 years time)?”**

The employers’ interest in trainees within WBL iss relatively high (seefigure 44), indicating that the employers are aware of the potential benefits of WBL for the enterprise.

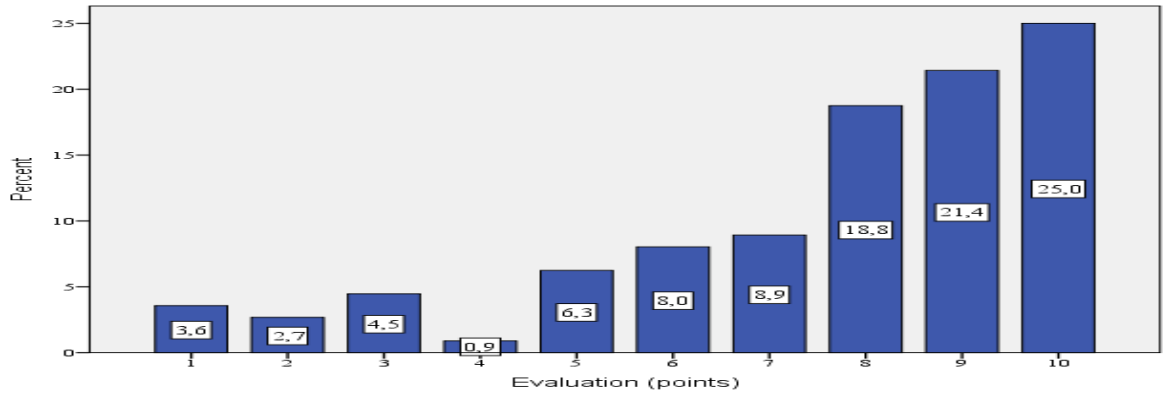


Figure 44. **Entrepreneurs and sectors expert’s evaluations on statement “Would your enterprise be interested to accept trainees in WBL in your enterprise”**

Source: Author’s performed survey in 2014 – 2015, n=246

Evaluation scale 1 – 10, where 1 – not interested, 10 – very interested

The employers do not believe very much in the improved labour market compliance, but they are not very negative (figure 45).

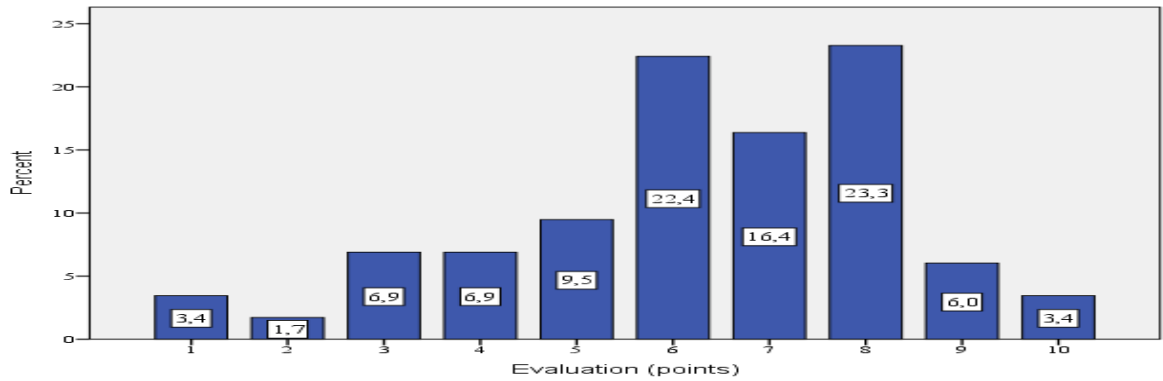


Figure 45. **Entrepreneurs and sectors expert’s evaluations on statement “Do you agree that the quality and competitiveness of VET prepared labour force could significantly improve in relation to the labour market demands”**

Source: Author’s performed survey in 2014 – 2015, n=246

Evaluation scale 1 – 10, where 1 – do not agree, 10 – fully agree

The enterprises on the average would be prepared to pay for the trainees (around 70%) – see figure 46.

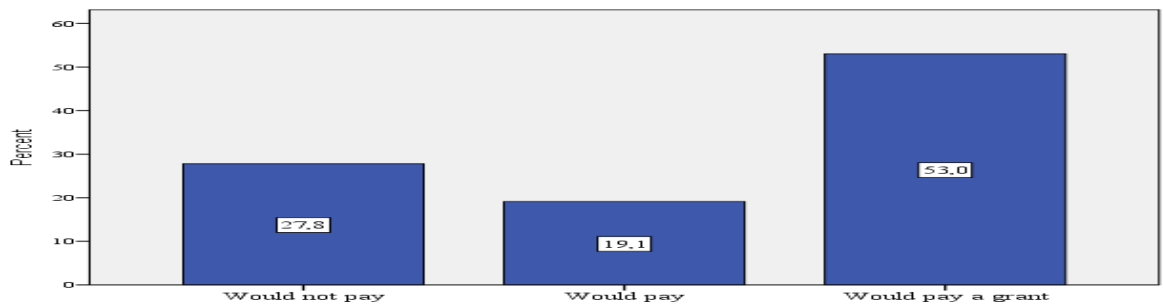


Figure 46. **Entrepreneurs and sectors expert’s opinions on statement “Would your enterprise be prepared to pay to a trainee during WBL in your enterprise”**

Source: Author’s performed survey in 2014 – 2015, n=246

Main statistical indicators of the respective statements provide more insight (table 17).

Table 17. Statistical indicators of entrepreneurs and sectors expert's evaluations on statements "Would your enterprise be interested to accept trainees in WBL in your enterprise", "Do you agree that the quality and competitiveness of VET prepared labour force could significantly improve in relation to the labour market demands"

Statistical indicators	Would your enterprise be interested to accept trainees in WBL in your enterprise	Do you agree that the quality and competitiveness of VET prepared labour force could significantly improve in relation to the labour market demands
N	238	238
Mean	7,61	6,27
Standard Error of Mean	0,233	0,192
Median	8	6
Mode	10	8
Standard Deviation	2,462	2,070
Range	9	9
Minimum	1	1
Maximum	10	10

Source: Author's performed survey in 2014 – 2015, n=246

Evaluation scale 1 – 10, where 1 – not interested, 10 – very interested; 1 – do not agree, 10 – fully agree

Data of table 17 indicates that entrepreneurs and sectors' experts confirm their be interest to accept trainees in WBL (arithmetic mean 7,61 and mode 10, half of respondents gave evaluations less than 8 and half of the respondents gave evaluations higher than 8, characterised by median). Indicators of variability show that there are quite different opinions but most of the evaluations are very high. Evaluations on the statement if quality and competitiveness of VET prepared labour force could significantly improve in relation to the labour market demands are rather high, taking into account the often shared viewpoints. The evaluations of respondents were relatively high: arithmetic mean 6,27, mode 8 and median 6, the variability of responses is not very high although for evaluations the full range of the scale has been used by the respondents. More detailed analysis of evaluations of administrators and entrepreneurs on centralised activities' relevance for a successful introduction of WBL in Latvia are stated in table 18. Statistical indicators provide more insight of the evaluations. These evaluations may porve to be useful in further decision taking by public administration in developing the Latvian WBL model.

Table 18. Statistical indicators of administrators, experts and entrepreneurs, sectors expert's evaluations on statement "What centralised activities do you consider as relevant for a successful introduction of WBL in Latvia?"

		Mean	Median	Mode	Standard Deviation	Minimum	Maximum
Support to the enterprise during the organisation of the work placement	Administrators	8,36	9	10	2,018	3	10
	Entrepreneurs	8,97	10	10	1,729	1	10
Possibility to be flexible in the provision of the theoretical studies according to the employers needs	Administrators	8,28	9	9	1,622	3	10
	Entrepreneurs	8,45	9	10	1,684	1	10
Individual consultations for the employers	Administrators	7,74	8	10	1,895	2	10
	Entrepreneurs	7,80	8	10	1,942	3	10
Information campaigns in mass media	Administrators	7,07	7	10	2,522	1	10
	Entrepreneurs	7,31	7	10	2,135	1	10
Material support by the state to the mentors working with trainees at an enterprise	Administrators	8,05	9	10	2,220	1	10
	Entrepreneurs	8,77	9	10	1,675	1	10
Tax reduction for enterprises involved in WBL	Administrators	8,11	9	10	2,469	1	10
	Entrepreneurs	8,81	10	10	2,149	1	10
Improved legal framework	Administrators	8,44	9	10	1,757	1	10
	Entrepreneurs	8,84	9	10	1,548	4	10
Pedagogical/ methodological support to mentors working with trainees at an enterprise	Administrators	8,15	9	10	1,872	3	10
	Entrepreneurs	8,44	9	10	1,817	2	10
Compensation to employer's for covering trainees expenditure on transport fees, specialised clothing etc.	Administrators	7,86	8	10	2,370	1	10
	Entrepreneurs	8,56	10	10	2,195	1	10
Coordinated activities by public administration institutions in addressing training and employment issues	Administrators	8,83	9	10	1,716	1	10
	Entrepreneurs	9,03	10	10	1,456	3	10

Source: Author's performed survey in 2014 – 2015, n=368

Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant

Given the fact that work-based learning is a hot topic for academic research on VET and in relation to EU strategic approaches in VET, analysis on the tasks of public administrations and recommendations in this respect will be presented further on in the work.

The results of the survey among public administrators at regional level

It has been stressed several times that one of the key claims by the author is the need for promotion of regional aspects in VET improvements as systemic level. Thus, a survey was performed among medium level public education administrators at local/ community level. The intention of the author in carrying out the survey was to learn about the opinion and attitude of public administrators at local level regarding innovation and reforms in the VET system.

Through an anonymous survey which was based on a questionnaire the Heads of the regional Education Departments (HED) of the municipalities of Latvia (public administrators at local/ community level) in June 2013 were asked to answer questions on innovative approaches in VET and VET reform in Latvia, and to give comments to certain questions, also substantiating their answers. Evaluations had to be made in the scale 1 – 10, where 1: fully disagree; 10: fully agree. All in all 79 HEDs (or their nominated representatives) participated in the survey, constituting 93% of the total target group. The survey data testify to the fact that most HEDs support and are in favour in innovation and reforms in the VET system in Latvia. A more detailed analysis of the survey follows.

At the same it should be noted that the questions although related to the same topic as the ones prepared for the administrators and experts at national level had to be formulated slightly differently and occasionally more specifically. This was due to the role and tasks of the target group in the public education administration system – with a more practical orientation towards the education process. Therefore also more concrete questions regarding the VET reform were asked, e.g. regarding the development and delivery of VET programs in compliance with the labour market needs, on the introduction of work based learning approaches or the element of the dual system and other. It was also taken into account that the HEDs being part of the local governments might be more aware of the actual needs in the local communities – not only from the perspective of the education process but also in relation to the local economic and employment situations and the needed measures to improve the existing situation. The survey of public administrators indicated that there is really a high level of support from municipalities to more significant involvement of municipalities into VET developments. Local governments officials' opinion regarding the question “Do you agree that the local governments should get more involved in VET”? evaluations in most of the cases were very high – the distribution of responses are represented in figure 47.

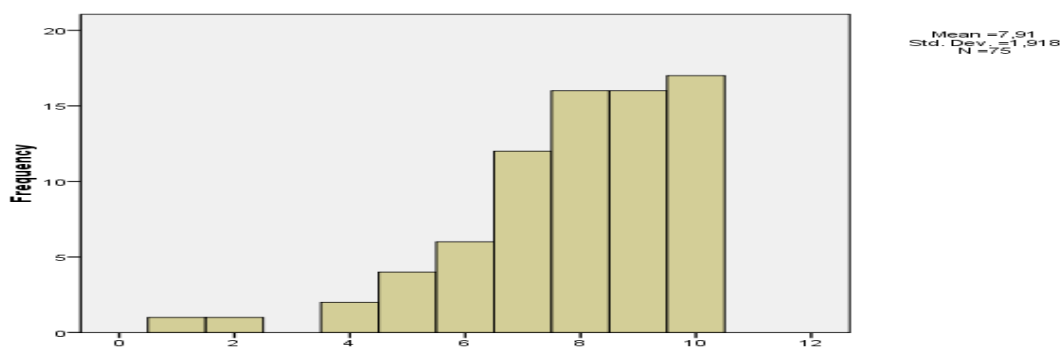


Figure 47. Local governments' official's opinion regarding the question “Do you agree that the local governments should get more involved in VET”?

Source: Author's performed survey in 2013, n=79

Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant

Even more favourable by local governments officials were opinions on the importance of new innovative approaches needed to be implemented in VET for the training of competitive labour force - distribution of responses is represented in figure 48.

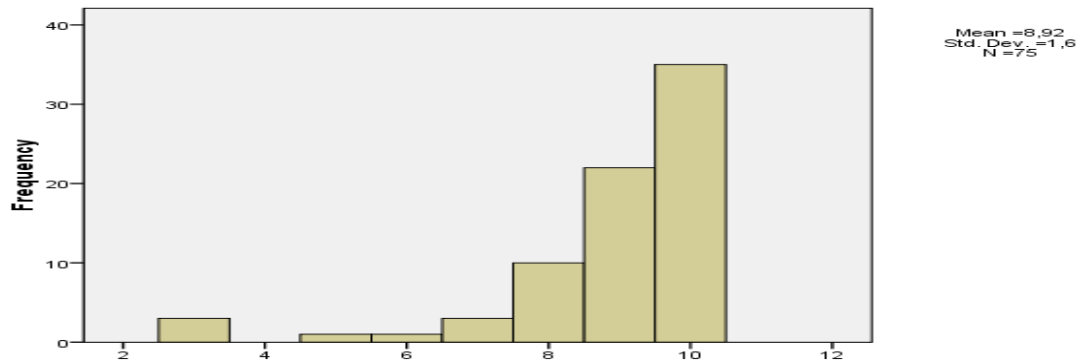


Figure 48. Local governments' officials opinion regarding the question "Do you agree that in Latvia new innovative approaches need to be implemented in VET for the training of competitive labour force?"

Source: Author's performed survey in 2013, n=79

Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant

The answers by the respondents testify that most of them consider these innovative approaches as needed and necessary for the training of competitive labour force. Moreover, many of the respondents have given the highest score possible.

Distribution of local governments' officials opinion regarding the question "In VET modular programs should be introduced more for more flexible reaction to the labour market needs"? is represented in figure 49.

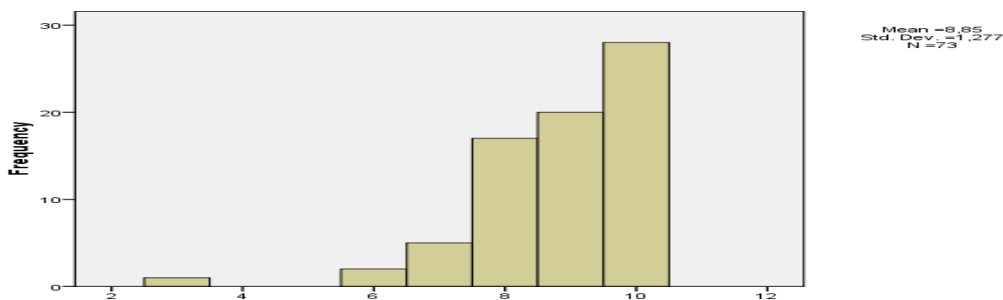


Figure 49. Local governments' officials opinion regarding the question "In VET modular programs should be introduced more for more flexible reaction to the labour market needs"?"

Source: Author's performed survey in 2013, n=79

Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant

The answers by the respondents testify that most of them support switching to such labour market oriented and flexible modular programs which allow to swiftly react to the development tendencies in the national economy. However, a relatively large proportion of the respondents are not completely sure about their value (although no evaluation is lower than 7).

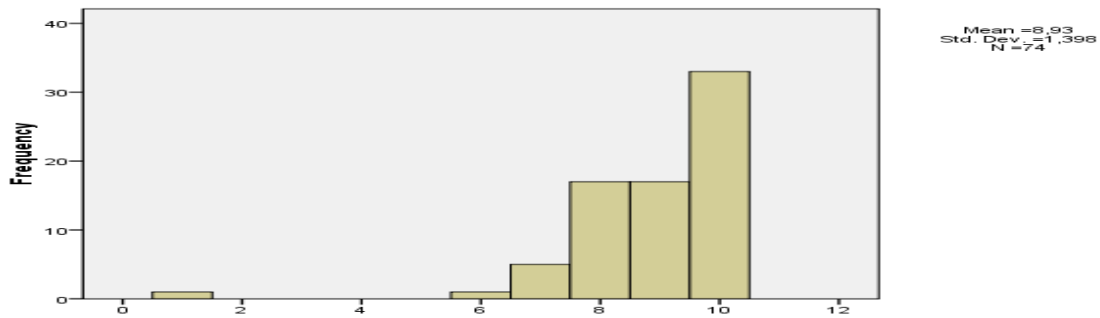


Figure 50. Local governments' officials opinion regarding the question "Do you in principle support the introduction of work-based learning approaches where the learner/trainee spends most of the time with the employer at an enterprise?"

Source: Author's performed survey in 2013, n=79

Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant

The answers by the respondents testify that the majority support these approaches, and most of the respondents have even given the highest score.

Distribution of local governments' officials opinions regarding the question "Coordinated activities by public administration institutions in addressing training and employment issues"? are represented in figure 51.

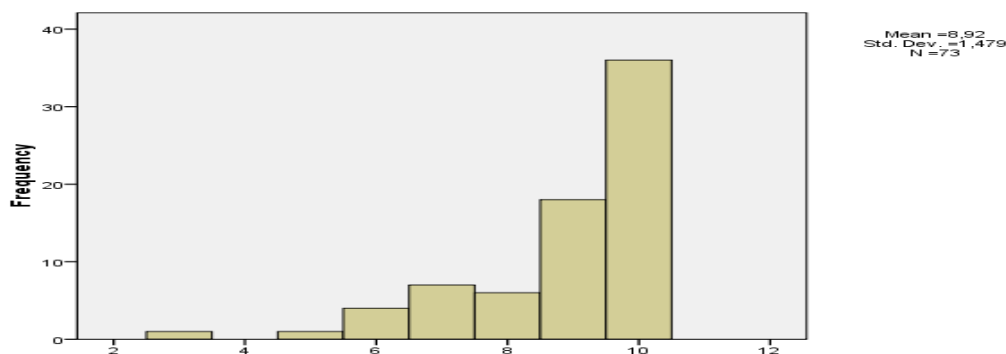


Figure 51. Local governments' official's opinion regarding the question "Coordinated activities by public administration institutions in addressing training and employment issues"?

Source: Author's performed survey in 2013, n=79

Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant

The answers by the respondents testify that the attitude in general is rather positive. At the same time – the distribution of answers is more varied. There is relatively high proportion of cautious answers or even strictly negative reactions. The author’s interpretation is as follows – as soon the question concerns practical implementation of VET approaches (not just theoretical support), the public administrators might be anticipating various administrative, legal or perhaps cultural barriers in implementing innovative approaches, with implications for their actual work.

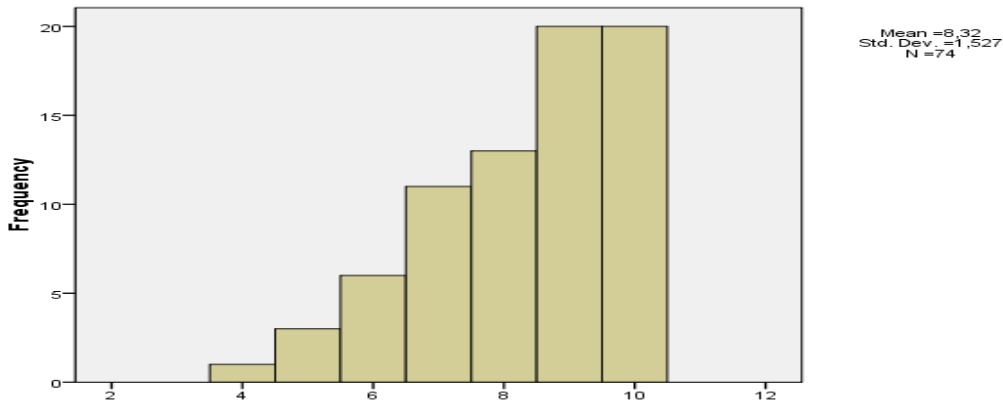


Figure 52. Local governments’ official’s opinion regarding the question “New forms of VET governance where the decisions are taken by a broader spectrum of stakeholder should be introduced at state level?”

*Source: Author’s performed survey in 2013, n=79
Evaluation scale 1 – 10, where 1 – not significant, 10 – very significant*

The respondents’ reactions testify to their overall positive attitude for strengthening the broader spectrum of stakeholders co-operation in VET (the top scores are predominant). A small number of the respondents are neutral in their responses. In the author’s opinion it testifies to the overall openness of the public administrators at community level for new influences and developments in the VET system in Latvia.

In the context of the research it is relevant to analyse the opinions and comments of the local level public administrators regarding particular VET innovations, e.g. the introduction of the work-based learning (this being one of the key VET innovations addressed by the overall research). The opinions of the local level administrators are especially important given the new tendencies for the decentralization and new modes of governance also in VET. This implies also the increasing role of local governments in the implementation of education and training in the context of local economic and employment processes. The respondents (local level administrators) in relation to the question “Please, mention the key problems or challenges you see for the implementation of work-based learning” included more than 70 comments of various

types, and through further analysis performed by the author these comments could be grouped into nine larger thematic groups as follows:

1. Access to enterprises, interest on the employers' part, the motivation for the employers (around 30 comments)
2. Issues in relation to the overall tendencies in the development of the national economy and the labour market, including the so called 'state order' for VET (programs) (7 comments)
3. The issues of the overall awareness and cooperation by the involved parties (7 comments)
4. Compliance with the interests of young people and the possibilities for work after finishing the training (11 comments)
5. The possibilities for schools of general education to participate in the work-based learning schemes (4 comments)
6. The availability of infrastructure and equipment to secure the process (4 comments)
7. The issue of respective qualified teachers and trainers/ mentors (3 comments)
8. The issue of the qualifications to be obtained through such innovative schemes (2 comments)
9. The issue of quality (1 comment).

It cannot be neglected that most of the comments refer to the access to enterprises, interest on the employers' part and the motivation for the employers. Out of the total number of comments it constitutes around 43%. A comparatively high percentage of the comments are attributed to the possibility to obtain a job – around 16%. A relatively big amount of comments refer to the issues related to the tendencies in the development of the national economy and the labour market – around 10%. Also the issue of awareness and cooperation by the involved parties has been addressed by around 10% of the respondents. A surprisingly low percentage of comments concern the issue of respectively qualified teachers and trainers/ mentors – less than 1%. It should be noted that some of the HEDs have given a comment on the possible involvement of the schools of general education in the dual system which in the author's opinion is an innovative and creative approach in the context of high level of youth unemployment, especially among young people with secondary education but without a qualification. A graphical representation of the division of the comments by topic is included in Figure 53.

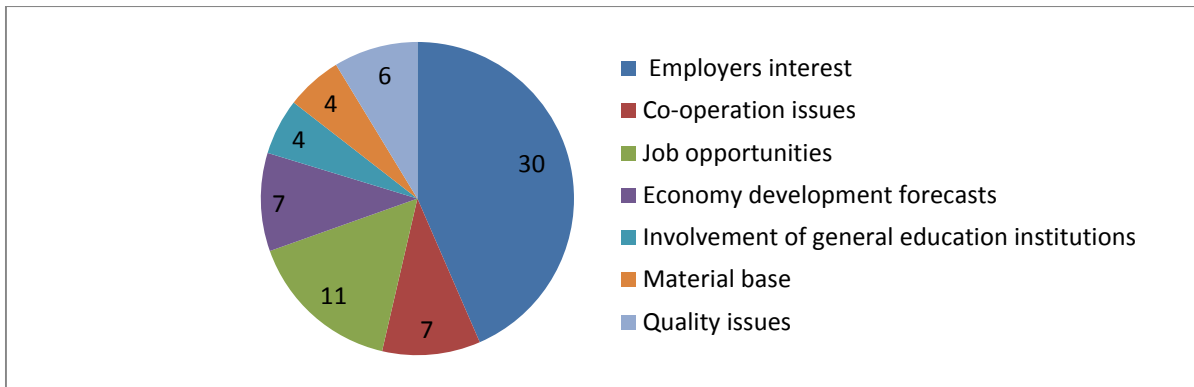


Figure 53. **Comments by HEDs on the problems and challenges in the implementation of the WBL approaches** (based on the survey performed June, 2013)

Source. *The distribution of the respondents' answers by the respondents in the survey by the author in MoES seminar in June, 2013*

The survey indicates to the overall positive attitude by the target group, and also the awareness of the potential problems.

Table 19. **Main statistical indicators of employers' evaluations on the statement "Do you agree that innovative approaches in the VET system in Latvia should be introduced in order to train a competitive labour force? And "do you in principle support the introduction of work-based learning in the Latvian VET system?"**

	Mean	Median	Mode	Standard Deviation	Maximum	Minimum
Do you agree that innovative approaches in the VET system in Latvia should be introduced in order to train a competitive labour force?	7.93	8	10	1.923	10	1
Do you in principle support the introduction of work-based learning in Latvian VET system?	6.107	6	5	2.9856	10	1

Source: *compiled by author based on employers survey, 2013 (n=336). Evaluation scale 1 – 10, where 1 – don't agree; don't support; 10 – agree; support*

In general employers were very positive and interested to get competitive employees and were very positive towards their own participation in pilot project of the dual work based training realised together with vocational education establishments. Approximately 16.3% of the surveyed employers indicated that they would certainly be willing to participate in the pilot project of the dual or work based training to be implemented in cooperation with vocational schools, approximately 22.9% would be generally willing, but 11.4% – will not be ready to participate, more than half of the employers in ten point evaluation scale gave evaluations 5 or more.

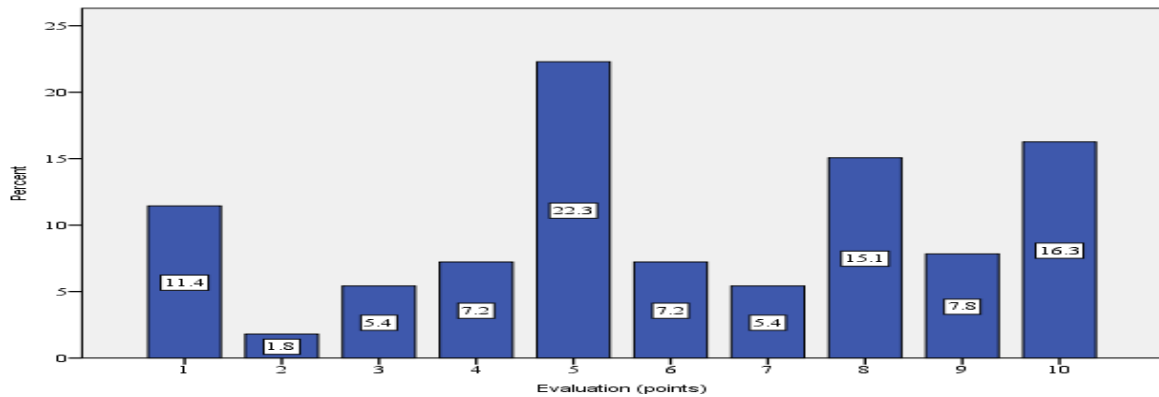


Figure 54. Employers evaluation on statement “To what extent does your company would be willing to participate in the pilot project of the dual world of work based training in the implementation of cooperation with vocational schools”.

Source: compiled by author based on employers survey, 2013 (n=336). Evaluation scale 1 – 10, where 1 – not be ready; 10 – certainly be ready

The employers with secondary education level evaluated the possibility to participate in the pilot project of the dual or work based training implemented in cooperation with vocational schools, this being lower numbers than employers with higher education (arithmetic mean – 4, median 4, mode 1). However, it should be noted that the evaluations were quite heterogeneous. The evaluations of employers with bachelor’s degree and master’s degree were the highest, there the evaluations were quite homogenous. The results of factor analysis indicates that public administrators by evaluating several aspects of centralized activities relevant for introduction of WBL in Latvia consider that it is important to take into account different aspects which are related to organizational issues, legislative support as well as information.

3.3. The role of effective institutional mechanisms and governance schemes

The analysis of the empirical data has allowed to draw conclusions on the public administrators’ and entrepreneurs’ opinions regarding new VET developments in Latvia, as well as to propose approaches to effective operational schemes in VET provision in compliance with the labour market demands. The key institutional mechanisms – with a varying degree of formalisation - used by the relevant stakeholders are as follows: the policy and strategic framework, the legal framework, the formal committees, councils and working groups, associations, the established co-operation networks and procedures, funded projects and schemes, pilot projects and new initiatives. Based on the empirical analysis, and on the basis of the identified institutional mechanisms, several existing or emerging cooperation schemes regarding different aspects and functioning at various levels and can be identified and described. In the context of the present research the author has determined the relevance of the following formalised or emerging horizontal co-operation schemes and processes: 1. Co-

operation among sector ministries and national level social partners; 2. Trio partnership scheme – the local government, the VET providers and the entrepreneurs; 3. The Skills' Cycle - for improved VET content and skills' provision in the modern labour market; 4) Adjusted Tripple Helix Scheme (innovation cycle) for VET – described further on in the work.

Based on the empirical analysis and in relation to the research problem, the author has determined the key strengths and challenges for the major stakeholders in relation to VET provision. This has been described in relation to some of their most prominent benefits, as well as aspects that are missing or still need to be developed or strengthened in order to improve their capacity and role in the modern VET development and provision scheme.

The key stakeholder shave been identified as follows:

1. Ministries and ministry agencies
2. Regional authorities (e.g. planning regions)
3. Local governments
4. Educations and training providers
5. Research institutions
6. Employers
7. Employers' organisations
8. Professional organisations and associations
9. Tripartite Sub-Council for VET
10. Sector Expert Councils
11. Chambers of Commerce
12. Chambers of Crafts
13. Trade Unions
14. Non-governmental organisations
15. Learners
16. Families
17. Society at large

The table 20 in a concise and structured way represents these stakeholders. The key emerging characteristics of these stakeholders in relation to the present research have been pointed out – as conclusions of the performed research by the author. There has not been an intention for embracing all of the strengthes and challenges these stakeholders might have, only the most prominnet featrues have been pointed out.

Table 20. **The list of the relevant VET stakeholders and their strengths and challenges**

	Ministries and ministry agencies
+	Have clear traditional roles and function according to set rules
-	Not sufficient inter-ministerial co-operation and effectiveness in reaching joint results
-	Lack flexibility, limited response to innovative approaches
	Regional authorities (e.g. planning regions)
+	Have potential and preparedness for increased role regionally
-	Lack of clear identity yet for VET provision at national level
	Local governments
+	Increasing non-mandatory role as important stakeholders in VET developments
-	Have to find and use their own funding for VET development as no direct state support
	Educations and training providers
+	Receive state support – depending on the status (under MoES or local government supervision)
-	Have to become more innovative and independent as VET providers lifelong
	Research institutions
+	Capacity and potential for innovation
-	Not yet opened up for the innovation capacities in VET
	Employers
+	Oriented to development and increased co-operation with VET for increased VET quality
-	Cautious for new co-operation forms with training providers, e.g. in WBL, limited motivation
	Employers' organisations
+	Have a great potential to promote new approaches in VET
-	Insufficient administrative and financial resources, limited level of initiative
	Professional organisations and associations
+	Have an increasing role in promoting VET quality and labour market compliance
-	Insufficient administrative and financial resources
	Tripartite Sub-Council for VET
+	Functions according to set procedures
-	More visibility needed in promoting VET quality and labour market compliance
	Sector Expert Councils
+	Have good sector coverage
-	Do not have legal basis, funding, insufficient initiative regarding the promotion of VET quality
	Chambers of Commerce
+	Have a great potential in VET promotion
-	Limited level of interest and motivation
	Chambers of Crafts
+	Have good network and long-term apprenticeship tradition
-	Do not have formal mechanisms for co-operation with VET
	Trade Unions
+	Have interest to increase their role in VET promotion
-	Still seek the optimal mode of operation within the co-operation schemes
	Non-governmental organisations
+	Have a great potential to influence youth employment and employability
-	Not particularly focussed on VET developments
	Learners
+	The key target group and client, at the centre of attention, interested in own well-being
-	Not sufficiently guided towards career and personal well-being, open to prejudice
	Families
+	Have great influence on learners' choices
-	Are not always well informed about the learning and training options and possibilities by VET
	Society at large
+	Large coverage and ability to form collective opinion
-	Takes time to change long established opinions and views, e.g. regarding possibilities by VET

Source: Author's analysis and conclusions based on research results

The formalised or emerging horizontal co-operation schemes and processes can be described as follows:

1. Co-operation among sector ministries and national level social partners – the well established scheme at national level.

2. A new emerging and growing non-formalised trio partnership scheme – the training institution, the employer and the local government (see figure 55) . The partnership between the VET institutions is importantly broadened by a new stakeholder – the local government. The local government ideally should be the ‘meeting point’ for information flows regarding entrepreneurial and employment processes in the region. There are many instruments at the disposal of the local government to support local educational and employment developments. The education institutions are no longer limited to VET institutions alone. On the one hand – schools of general education are increasingly becoming more practice and career guidance oriented – due to measures taken by public administrations. On the other hand – VET institutions are developing closer links with HE institutions at regional and also national level – to promote innovation in VET, with more technological competence of VET specialists. As indicated by the survey – more co-operation is supported by entrepreneurs and the public administrators. At the same time, there is an increasing link between the VET and general education institutions – with more practice oriented subjects in general education for better career guidance and choice.

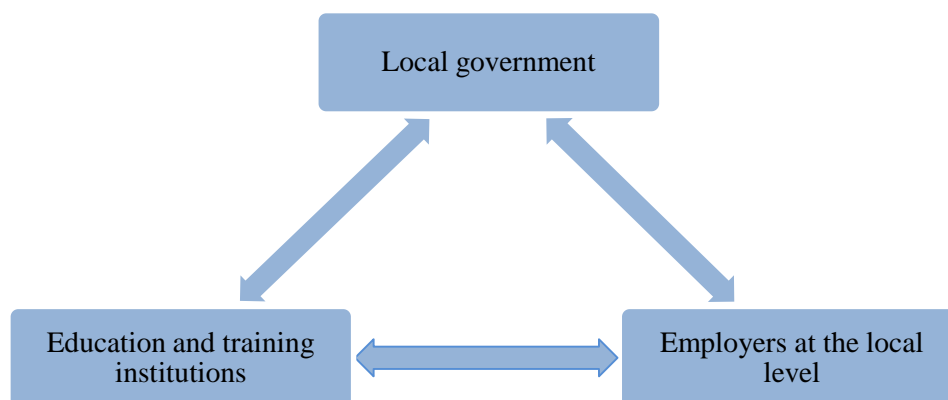


Figure 55. Trio partnership scheme – the stakeholders co-operation for ensuring labour market relevant training

Source: Authors construction based on research results

At the same time, a broader spectrum of stakeholder is involved in the decision making processes locally and regionally – VET institution governance boards, the social partners, sector associations and other. It has been suggested by recent draft amendments to the Vocational Education Law that a new institutional mechanism – Convent – will be developed for better VET governance. The Convents will potentially contribute to better decision making for the training of a competitive labour force.

3. A cycle for improved VET content and skills provision in the modern labour market context (see figure 56). The skills' cycle comprises:

- A. Ministerial cooperation, labour market needs analysis and forecasts. Emerging/ increasing role of local governments
- B. Modern occupational standards and training programs, flexible sector developments
- C. The capacity and incentives for enterprises to implement training in real work environment
- D. The boarder lines between VET, HE and research become blurred, innovation becomes inherent part at all education and training levels
- E. VET institutions as education and training provider in lifelong learning perspective in local communities and beyond

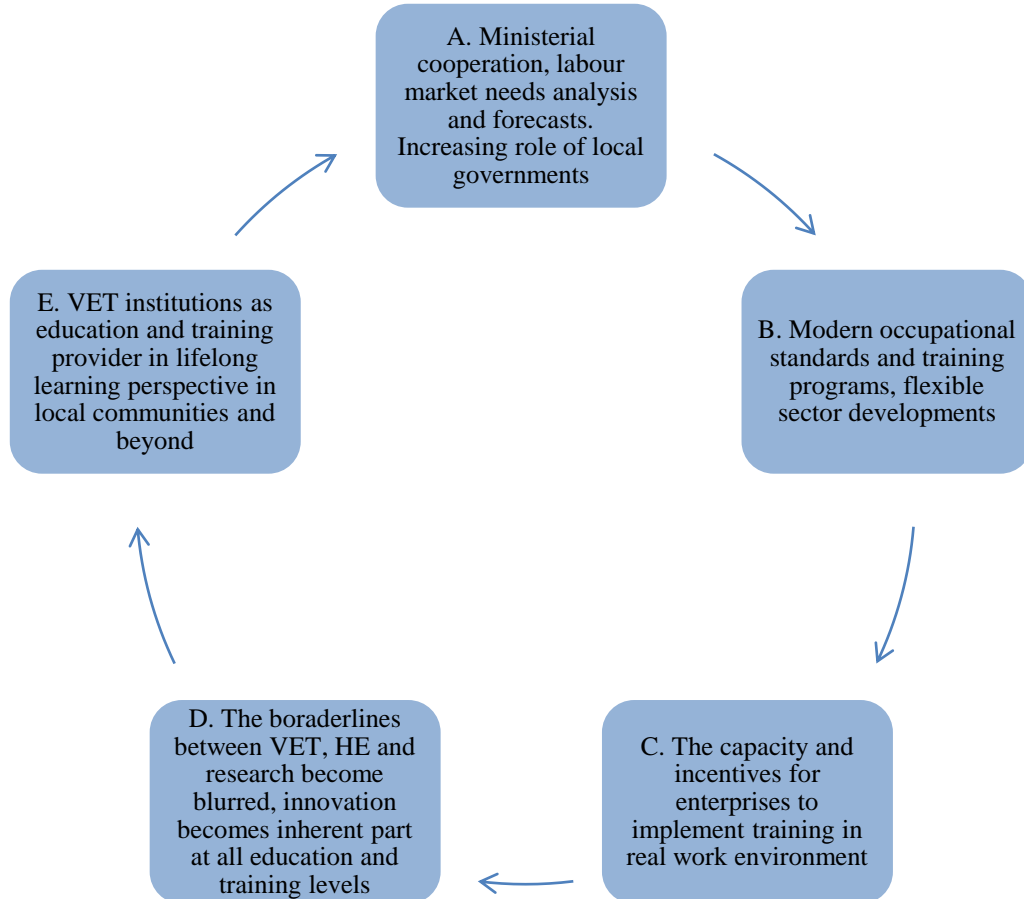


Figure 56. The Skills' Cycle - for improved VET content and skills' provision in the modern labour market

Source: Authors construction based on research results

The proposed cycle is flexible and can be attributed to any level of co-operation and to any of the involved actors – depending of its present and future status, role, plans and ambitions as a player at local, regional or national level.

4. The adjusted Tripple Helix approach to the VET system. The proposed Triple Helix model for VET (see figure 57) not only represents the involvement of the relevant stakeholders – education providers, the public administrators at national and local level and the employers,

but also implies the links and permeability between the various types and levels of education, e.g. VET (potentially also general education). This is especially important in the context of VET innovation and excellence and also in the centralisation and decentralisation processes, with the growing role and importance of stakeholders at local level, including higher education and technological research agents.

The Adjusted Tripple Helix Model

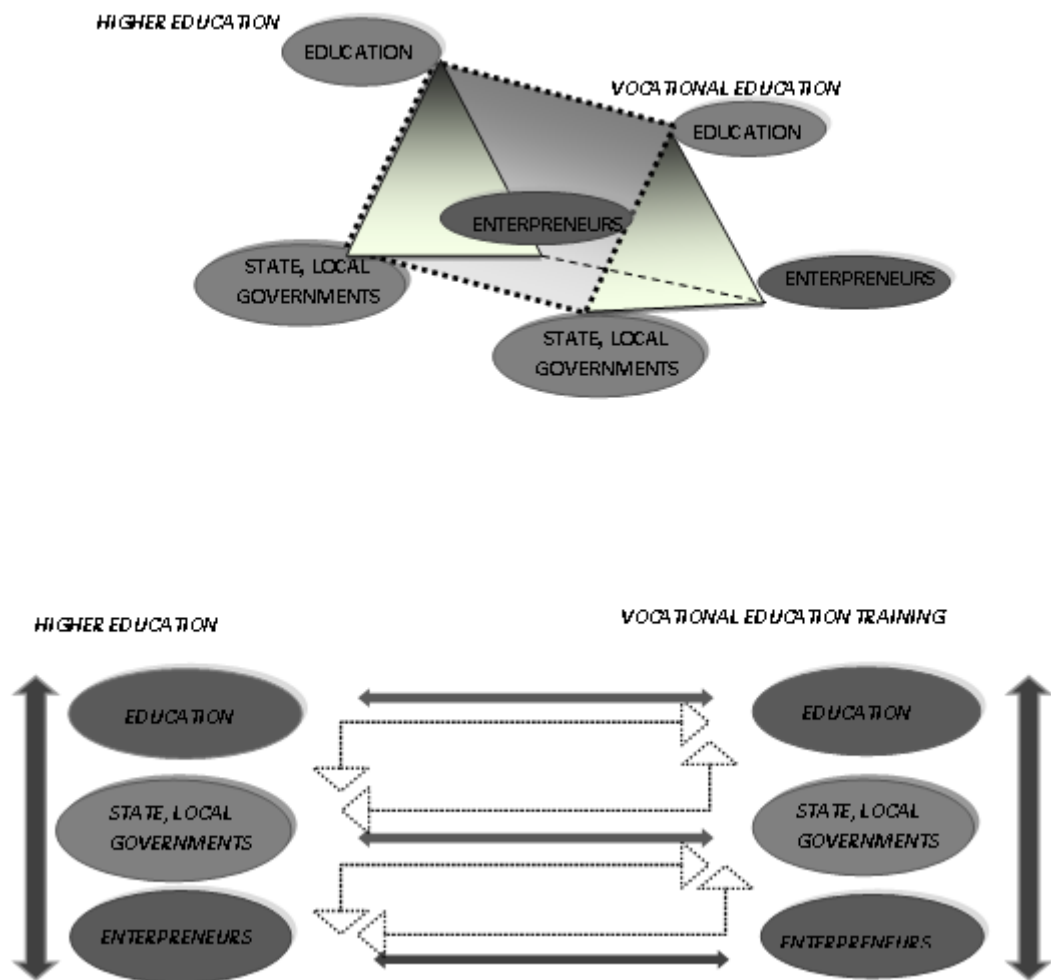


Figure 57. Adjusted Tripple Helix Scheme (innovation cycle) for VET.

Source: Authors construction based on research results

This model also implies possibilities for continuous growth – moving both – in the education system and in one’s carrier at an enterprise. With this also the prestige of VET is increasing, since better and technology competence jobs provide higher income and higher social status of the specialists. The VET specialists can become an important player in ‘innovation diffusion’ – namely, performing technologically demanding jobs for companies implementing major and long term projects. This has also social and economic implications, since satisfied specialists tend not to leave their jobs, thus there is an improved situation also with regard to employment, family income etc. Besides, entrepreneurial attitudes are being

strengthened, which implies also internationalisation processes, in regard to markets, transfer of experience, development possibilities. The described model has been based on the developed framework for the current challenges for public administrations in VET, and it implies mechanisms and co-operation schemes for better decision taking by public administrations in the development of competitive labour force in VET. The model allows for gradual implementation of innovation also in regard to VET – by promoting strategic partnerships at all levels.

5. Based on the above described schemes the Convent as an emerging institutional mechanism in VET should be positioned in this respect. According to the proposed amendments to the VET Law – the Convent of a VET institution will be an advisory body incorporating representatives from the VET institution management, the local government, the relevant ministry or ministries, professional associations, employers and other relevant actors, as appropriate. The Ministry of Education and Science promotes the concept of the Convent as a horizontal co-operation scheme. The author proposes to insert the Convent into the framework of the proposed four national and local level schemes and processes (cycles) and view it as a ‘vertical’ link between the wider network and processes (described in figures 55, 56 and 57) and the concrete VET institution (see figure 58).

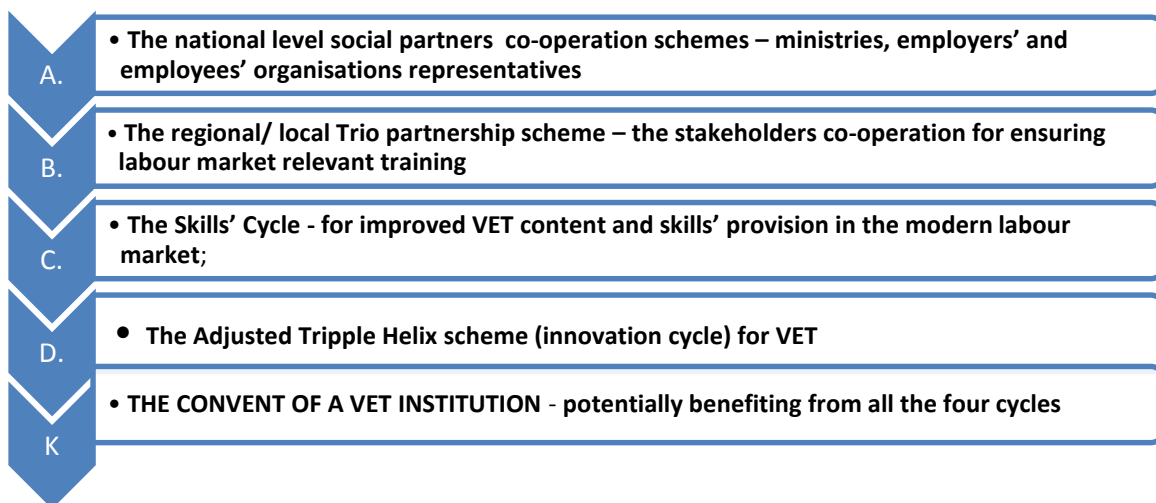


Figure 58. Convent as a vertical link to a VET institution in the context of existing horizontal co-operation schemes and cycles

Source: Authors construction based on research results

In the author's opinion such an approach allows to view the VET Convent from a broader perspective, thus showing the Convent not only as a new type of institutional mechanism but also its links to the existing schemes and its tasks in relation to labour market relevant skills development and VET'innovation and excellence which is relevant for our research and complies with the findings of academic research and EU strategic priorities regarding labour force training by the VET systems.

CONCLUSIONS AND RECOMMENDATIONS

In the Doctoral Thesis the set tasks have been fulfilled and the proposed theses have been defended. The aim of the doctoral thesis has been achieved.

The implementation of the set tasks

1. Academic research based theoretical justification on the need for public administrations to implement new approaches for competitive labour force development has been developed.
2. The EU strategic framework, as well as the strategic and legal framework in Latvia in the context of the research has been evaluated.
3. The relevant framework for the functioning of public administrations has been determined and described - as existing provisions for the development of competitive labour force and as a source for identifying the new tasks arising for public administrations in this respect - based on the analysis of policy documents, reports and scientific literature, as well on the results of the empirical research. This framework implies: 1) the growing investments in VET to promote VET attractiveness with limited effect of these measures towards the growth of VET prestige in Latvia; the parallel centralisation and decentralisation processes in VET in Latvia with the increasing and widening role of the VET competence centres in the life-long learning perspective and the growing role of local stakeholders; 2) New demands for the development of knowledge, skills, competencies and innovation in VET in the context of fast changing social, economic and technological contexts, formation of new strategic partnerships in employment and education, also in the lifelong learning settings with a need for continuous growth and development, and permeability horizontally and vertically with other types and levels of education and training providers, nationally and internationally; 3) Traditionally weak links between VET and HE and research, with the subsequently limited role of VET in regard to innovation and excellence; weak links between VET and general education with inherent financial sensitivities for attracting learners to the both systems; 4) Necessity for closer linkage between the world of education and the world of work – arising from the objective labour market demand and resulting in need for changes in the overall VET governance and governance of VET institutions (given the increasing number of stakeholders involved in the VET processes); 5) Arising respective need for the actual development and implementation of new types of institutional mechanisms and governance schemes in order to introduce the new governance approaches at systemic level; 6). Need for parallel analysing and overtaking or adapting the best practice from other countries, if appropriate, in order to address the new challenges more effectively; 7) Increasing need for a common operational reference structure in Europe in the context of the internationalisation of VET processes and need for international

compatibility and comparability – implying also implementation of the European Qualifications Framework (EQF) and development of respective national qualification frameworks related to European quality assurance framework (EQAVET), and with the potential for links with the European system for credits in VET (ECVET); 8) A new type of challenge for all involved parties including the public administrations themselves - under the situation of unprecedented uncertainty of social, economic, demographic and technological developments, and in relation to the accompanying risks of this uncertainty, a need for the development and flexible and adaptable mind-sets and thinking paradigms - in order to be able to adjust to continuously emerging previously unknown challenges and take the best possible decisions.

4. The relevant existing institutional and cooperation mechanisms in the development of labour force within the VET system have been determined. The success, malfunctioning or failure in the operation of the existing institutional and cooperation mechanisms have been identified and analysed - enabling to propose potential improvements, needed change and improved operational schemes.

5. Based on the analysis the possibly best suited operational scheme enabling the Latvian public administrations to improve the development of a competitive labour force within the VET system has been developed and described; recommendations for the implementation of such a scheme and for improved decision taking in VET have been produced.

Defending the proposed thesis

Theses have been defended based on the analysis of the results of the empirical study.

1) In the new social, economic and demographic situation the public administrations in VET need to seek new strategic solutions and approaches for the development of a competitive labour force by improving the VET attractiveness. The success of Latvian public administrations in VET in the implementation of new strategic approaches will greatly depend on their ability to raise the overall prestige of VET in Latvia which in its turn is dependent of a set of complex factors, and promoting VET attractiveness alone is not a complete solution; this has been proved by the results of the empirical study.

2) A systemic approach to secure closer links between the VET, the higher education system and the research system, as well as closer ‘horizontal’ links between various institutional mechanisms ‘serving’ HE and VET systems (e.g. various expert councils etc.), the continuity of programs, vertical and horizontal permeability are important factors for improved decision taking in VET for the development of a competitive labour force; Reconsidering the existing institutional and co-operation mechanisms is an important aspect for addressing these new demands in developing medium level competent and competitive specialists;

3) The implementation of EU policies and practices, and overtaking the best practice from other countries will be beneficial for the Latvian VET system only provided the public administrations and their stakeholders, before overtaking these practices critically evaluate their suitability in the Latvian context and their correspondence to the Latvian interests. This has been proved by the success of the pilot project in work-based learning where the Latvian public administration in VET implemented their own model and took the decision of a bottom-up approach which turned out critical for the success of the project;

4) The increase of the regional and local factors in the economic and social development increases has caused serious implications also for the governance in the development of adequate labour force. Such developments require new legal initiatives to comply with the actual objective developments;

5) Good governance under the conditions of growing global uncertainty requires reflection and flexibility, and this has implications for public administrations as well. Administrative and managerial procedures in public administrations need to be enriched by the tradition of reflection, implying innovation in the administrative cultures for future development of public administrations. The comparison of the survey among public administrators performed in 2012 and 2015 indicate to the emergence of new administrative culture for VET – with more openness and flexibility and ability for the system to reflect upon itself.

Conclusions

1. The reforms implemented by the public administration in VET in Latvia broadly correspond to the results of the world research regarding the VET development tendencies in the training of a competitive labour force; they correspond also to the EU and strategic priorities and Latvian policy documents for VET development.

2. The existing institutional and co-operation mechanisms ensure the participation of a broad spectrum of stakeholders (various sector ministries, social partners, sectors' representatives and other) in the decision making process, however, from the point of view of the process implementation and the achievement of results the existing mechanisms and co-operation schemes not always can be viewed as optimal. This is being recognised by the public administrations themselves, and this allows to draw the conclusion on the public administrations' ability to objectively evaluate its activities and preparedness to improve it. 3. The public administration in VET has started introducing new innovative forms of VET governance and VET implementation at national and regional level (Convents of VET institutions, closer interaction between VET and general education institutions, work based learning), with parallel drafting of respective legal framework (amendments to the VET Law).

These factors have a potential to have a major positive impact on the development of a competitive labour force in Latvia.

4. The 12 Sector Expert Councils (SECs) formed in Latvia in 2011 can be considered as a promising new institutional mechanism. The SECs can serve as an example for the formation of a new type of an institutional mechanism for an increased labour force competitiveness. However, there are some indications on the dubbing of the SECs' and the TSCVET functions.

5. The issue of innovation in VET practically is not being addressed at system level, however, positive developments can be observed in the opinions of public administrators regarding the role of innovation in VET, also regarding the need for a closer co-operation between VET and higher education, including the permeability of programs, implementation of innovation and regarding joint expertise. It testifies not only to the gradual blurring of borderlines between the various types and levels of education but also suggests the potential of innovation at all levels in the training of a competitive labour force.

6. In Latvia there have been major investments for raising VET attractiveness (improved VET institutions' infrastructure and equipment, social support to the learners, improved quality of VET programs, regular improvement of the professional qualification of teachers), however, these measures have not left a visible impact on raising the VET prestige in Latvia.

7. The public administration in VET in Latvia has been successful in the implementation of its strategic priority in the training of competitive labour force, namely, work –based learning (a WBL pilot project in 2013/2014 and 2014/2015 academic years). Under specific Latvian circumstances when it is not possible to overtake directly the experience of other countries (e.g. Germany and Austria) in this respect, the strategic decision by the senior management of MoES to use the 'bottom-up' approach can be considered as the decisive factor for the successful start of the implementation of WBL in Latvia, and this approach can serve as an example of good practice for other countries, as well.

8. The public administrators and entrepreneurs have a uniform opinion regarding the insufficient involvement of entrepreneurs, employers' organisations and the sector associations in the VET provision. Since already now there are several institutional mechanisms for this put in place, further research is needed on this identified problem.

9. The public administrators and entrepreneurs have expressed their interest in an increased involvement of local governments, the planning regions and enterprises in the VET provision. This indicates to changes in the perception on VET governance. The opinion on the need to implement new approaches in VET governance have been expressed by respondents at national, regional and local level. This testifies to a uniform perception on strategic priorities at all levels of the public administration in Latvia.

10. The author's research testifies to the increasing conviction of the key involved stakeholders on the need for competent labour force at all levels regarding innovation. At the same time, the attitudes are more reserved in relation to institutional changes in this respect. However, the diversity and polarity of answers, as well as the produced comments and proposed solutions can serve as a basis for further research enabling to work on specific recommendations for public administrations in this respect.

Recommendations

1. The Ministry of Education and Science has to ensure balanced centralization and decentralization VET governance processes for the functioning of an effective and labour market oriented VET system. In the operation of the national VET governance networks equally beneficial circumstances should be ensured for the VET Competence Centres' excellence in the capital and in the regions, as well as for the smaller VET institutions, enabling them to reach excellence in a particular niche in the context of the local community. The concept of the unique value of each educational institution should be promoted, in order to preserve the communities social, intellectual and spiritual viability.

2. The Ministry of Education and Science in co-operation with other sector ministries, social partners and the local governments should promote a stronger integration of every VET institution (regardless of its supervision status) into the economic, employment and social environment of the particular region, in order to provide for a closer coordination between the education and employment processes in which the local governments should take the lead as a driving force. This potentially will increase the role of the local level VET governance mechanisms, such as the VET institutions' Convents, therefore MoES should pay a particular attention to the effectiveness of their work.

3. The VET, HE and general education institutions, especially in the regional contexts, should initiate discussions on new forms of co-operation, by this improving the situation with the youth employment and employability in the country. This would also enhance the permeability of different types and levels of education, as well as the formation of a uniform platform for the innovation competence of the future labour force.

4. The public administration should rethink the role and place of VET in the education, employment and innovation system. The issue of social mobility regarding VET should be treated as a high level priority to enhance the VET attractiveness and prestige. The empirical research testifies that the VET prestige could be substantially raised provided the VET system (in co-operation with HE and research experts) prepared more specialists for technologically oriented specialties with elements of innovation and with good future job prospects.

5. The Ministry of Education and Science in co-operation with other sector ministries, social partners and the local governments should promote new development directions in VET, e.g. WBL, entrepreneurial attitudes and other. The acquired knowledge through the implemented pilot projects with tested methodologies should be used more effectively at the systemic level. To this end information campaigns should be intensified, as well as work should be done on developing the system for the motivation of entrepreneurs to implement WBL.
6. The Sector Expert Councils should enhance their role in the VET provision, by increasing the sector approach in practice, especially in the regional and local context, in order to avoid fragmentation in the regional or local strategic planning. New approaches for the involvement of small and micro enterprises in the VET provision for the training of competitive labour force, including WBL, should be promoted. The involved stakeholders should continue discussion on the development of the Latvia specific model in this respect, with the national and local level public administration taking the lead for its co-ordination.
7. The National Centre for Education should work on new approaches in the development of VET content and provision, based on the learning outcomes concept, implementing the modularization of programs and envisaging broader ICT application for simulation programs, instruments for skills' and competence improvement and a digitalized learning environment.
8. The Ministry of Education and Science in co-operation with the social partners have to create new basis for the teaching and training of teachers and mentors in VET institutions and enterprises, taking into consideration the gradual coming closer of the education and working processes. The public administration has to create mechanisms allowing to implement the new role and expertise of teachers and mentors for the training of a competitive labour force.
9. The Ministry of Education and Science should increase work on the documentation and advertising the best Latvian experience and practice with a broader involvement of mass media, including advertising the success stories by personalities originally coming from the VET system – as an effective means for raising the attractiveness and prestige of VET. The best Latvian practice should be more advertised also internationally, in order to enhance the visibility and the global competitiveness of Latvian VET.
10. The State Chancellery should strengthen the overall capacity, interest and motivation of the public administration to introduce new approaches in the education system. Given the inherent inertia of the public administration, the introduction of new governance forms should be promoted, allowing the public administrations to become more reflexive, including reflection on its own activity in the decision making process and the possible improvements.
11. The Higher Education Council and the Rectors' Council should promote closer links between the policy formation processes and the academic discourse. With such an approach a

closer link between theory and practice would be enhanced in a mutually stimulating way. The application of the 'systematic review' approach could serve as an effective tool for the public administration for scientifically justified decision taking in VET.

12. Since a competitive labour force is at the core of the growth of the national economy, the development of such labour force is essential at all levels. The Latvian public administration should jointly seek solutions to promote an innovative VET system and in an appropriate way link it with the HE and research system. To this end, conceptual strategic approaches need to be defined and institutional mechanisms for their implementation ensured. The so far used traditional approaches in the VET system have gradually to be changed by more flexible and innovative ones, through continued discussions among sector ministries, social partners, by critically evaluating and overtaking the best practice from other countries, as well as learning from own experience. On the one hand, the existing traditional approaches serve as a guarantee for the stability and inheritance of the system, but on the other hand, may turn out to be a hindering factor in the new global context. Further academic research is needed on the development of new flexible and sustainable models in the operation of public administration.

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ANNEXES

- Annex 1. Questionnaire for public administrators in 2014-2015
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Annex 1. Questionnaire for public administrators in 2014-2015

Dear senior managers and experts in public administration!

Based on your long-term involvement in education, employment, social and economic development issues in Latvia, as well as your considerable expertise, we would like to ask you to participate in the survey implemented by the Latvian University (under the leadership of Ilze Buligina) in order to find out your views on the development of vocational education and training issues in relation to the training of a competitive workforce. The question is being studied in the context of the the sector development and employment trends in Latvian, as well as in relation to new (innovative) approaches to the management of vocational education and taking into account the recent measures implemented in the work based learning (WBL)* (with elements of the dual system). Also the Ministry of Education and Science of Latvia is interested in the survey results, given that on August 12, 2014 the Cabinet of Ministers approved the informative report "The work based learning possibilities in the Latvian vocational education development", as well as amendments to the Law on Vocational Education envisaging new approaches Latvian vocational education system are being promoted.

At present, the Ministry of Education and Science in collaboration with other government agencies and partners has started work on a concrete proposal for the motivation of employers to get involved in the implementation of work based learning approaches. It is important to clarify the potential ways of strengthening the parties' interest and capacity in the development of vocational education, including DVB training and new (innovative) approach in order to contribute to the quality and the competitiveness of the workforce and the overall employment in the country. The study also focused on the existing and needed institutional mechanisms and networks needed for the public administrations ensure the training of a competitive and innovation-oriented workforce and for improved decision-making process. In addition, note that in the context of the present study by the word collocation 'institutional mechanisms' are being meant formalized structures and processes, as well as the regulatory framework that the public administration have at their disposal.

The survey is confidential. The survey results will be reflected only in aggregate and generalized way. Your opinion is highly important. Filling in the questionnaire takes approximately 10 minutes. Thank you very much for your responses and input.

** Work-based learning (dual system) are specific to Germany, Austria, the Netherlands, Switzerland and several other countries. It is a novelty in Latvian, and currently the most appropriate models are being sought for the Latvian context, taking into consideration also the fact that in Latvia small and micro enterprises constitute the majority of all enterprises. Work-based learning envisages the training of the learner (trainee) training with an employer for several years, and in the curriculum only a relatively small number of hours are devoted to theoretical training in vocational education institutions. The employers usually pay the student (trainee) a salary or stipend. In this way the companies often prepare their future employees. It is not being planned that in Latvia WBL approaches could replace the currently implemented school-based VET systems, but the WBL approach could strongly contribute to the improvement of practical training and qualification practice.*

Questionnaire for the policy makers, administrators and experts in education, employment, economic and social employment issues

Please, evaluate in the scale 1 to 10, where 1 – completely disagree, 10 fully agree

1. Specialists with secondary vocational education are well prepared for work at an enterprise.

1	2	3	4	5	6	7	8	9	10
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2. Specialists with college education are well prepared for work at an enterprise.

1	2	3	4	5	6	7	8	9	10
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3. Specialists with higher education are well prepared for work at an enterprise.

1	2	3	4	5	6	7	8	9	10
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4. Ministries sufficiently coordinate their activities for jointly addressing education and employment issues.

1	2	3	4	5	6	7	8	9	10
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5. The joint activities of ministries in addressing education and employment issues produce good results.

1	2	3	4	5	6	7	8	9	10
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6. The training by enterprises is more effective than training by VET institutions.

1	2	3	4	5	6	7	8	9	10
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7. The most effective is the training implemented jointly by a VET institution and an enterprise.

1	2	3	4	5	6	7	8	9	10
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8. Sectoral associations are sufficiently involved in the training of a competitive labour force.

1	2	3	4	5	6	7	8	9	10
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9. Employers' organisations are sufficiently involved in the training of a competitive labour force.

1	2	3	4	5	6	7	8	9	10
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10. The local governments have a significant role in promoting the compliance of VET with the local labour market demands.

1	2	3	4	5	6	7	8	9	10
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11. The local governments should more get involved in VET.

1	2	3	4	5	6	7	8	9	10
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12. The planning regions should more get involved in VET.

1	2	3	4	5	6	7	8	9	10
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13. The enterprises should more get involved in VET.

1	2	3	4	5	6	7	8	9	10
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14. New innovative approaches to VET should be promoted at state level for the training of a competitive labour force.

1	2	3	4	5	6	7	8	9	10
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15. New forms of VET governance where the decisions are taken by a broader spectrum of stakeholder should be introduced at state level.

1	2	3	4	5	6	7	8	9	10
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16. Professional organisations/ associations should more get involved in VET governance.

1	2	3	4	5	6	7	8	9	10
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17. Are you aware of the implementation of work based learning (WBL) in six VET Please, evaluate in the scale 1 to 10, where 1 – not informed at all, 10 am well informed

1	2	3	4	5	6	7	8	9	10
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18. Do you support further introduction of WBL in Latvia when the learner spends a much greater proportion of time in practical training at an enterprise?

Please, evaluate in the scale 1 to 10, where 1- do not support at all, 10 – strongly support.

1	2	3	4	5	6	7	8	9	10
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19. What centralised activities do you consider as relevant for a successful introduction of WBL in Latvia?

Please, evaluate in the scale 1 to 10, where 1- is not important at all, 10 – is highly important.

a) Support to the enterprise during the organisation of the work placement

1	2	3	4	5	6	7	8	9	10
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b) Possibility to be flexible in the provision of the theoretical studies according to the employers needs

1	2	3	4	5	6	7	8	9	10
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c) Individual consultations for the employers

1	2	3	4	5	6	7	8	9	10
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d) Information campaigns in mass media

1	2	3	4	5	6	7	8	9	10
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e) Material support by the state to the mentors working with trainees at an enterprise

1	2	3	4	5	6	7	8	9	10
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f) Tax reduction for enterprises involved in WBL

1	2	3	4	5	6	7	8	9	10
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g) Improved legal framework

1	2	3	4	5	6	7	8	9	10
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h) Pedagogical/ methodological support to mentors working with trainees at an enterprise

1	2	3	4	5	6	7	8	9	10
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i) Compensation to employer's for covering trainees expenditure on transport fees, specialised clothing etc.

1	2	3	4	5	6	7	8	9	10
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j) Coordinated activities by public administration institutions in addressing training and employment issues

1	2	3	4	5	6	7	8	9	10
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Please, evaluate in the scale 1 to 10, where 1 – completely disagree, 10 fully agree

20. The VET attractiveness has improved during the last five years (better infrastructure, accessibility, other improvements)

1	2	3	4	5	6	7	8	9	10
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21. The prestige of VET has increased during the last five years

1	2	3	4	5	6	7	8	9	10
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Please, evaluate in the scale 1 to 10, where 1- is not important at all, 10 – is highly important.

22. In your opinion, what could raise the VET prestige

a) Higher salaries for medium level specialists

1	2	3	4	5	6	7	8	9	10
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b) WBL where the employers pays a salary or grant to the trainee

1	2	3	4	5	6	7	8	9	10
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c) Information campaigns in mass media promoting and praising professional specialists

1	2	3	4	5	6	7	8	9	10
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d) Modern learning environment

1	2	3	4	5	6	7	8	9	10
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e) Modern and innovation oriented VET content

1	2	3	4	5	6	7	8	9	10
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f) A dialogue with children and their parents in pre-school and primary education on the advantages of the choice of a suitable profession

1	2	3	4	5	6	7	8	9	10
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g) Promoting a higher social status for VET learners

1	2	3	4	5	6	7	8	9	10
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h) Promoting a higher social status for middle level specialists

1	2	3	4	5	6	7	8	9	10
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i) Awards and prizes by enterprises and sectors for medium level specialists

1	2	3	4	5	6	7	8	9	10
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j) More job opportunities at technology oriented enterprises

1	2	3	4	5	6	7	8	9	10
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Please, evaluate in the scale 1 to 10, where 1 – completely disagree, 10 fully agree

23. In general primary education practice oriented subjects should be introduced in order to provide a better understanding on the possibilities to acquire a suitable VET program

1	2	3	4	5	6	7	8	9	10
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24. The law on professional education should regulate the acquisition of professional qualifications of all levels

1	2	3	4	5	6	7	8	9	10
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25. Horizontal co-operation between institutional mechanisms (various councils expert groups etc.) in higher education institutions, research institutions and VET institutions would contribute to a better development of competitive workforce.

1	2	3	4	5	6	7	8	9	10
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26. More research is needed on VET in relation to the development of competitive workforce

1	2	3	4	5	6	7	8	9	10
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27. In order to secure international comparability, more information and activities should be implemented regarding:

a) European Qualifications /framework (EQF)

1	2	3	4	5	6	7	8	9	10
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b) European Quality Assurance Framework for VET

1	2	3	4	5	6	7	8	9	10
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c) European Credit system for VET

1	2	3	4	5	6	7	8	9	10
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28. In VET modular programs should be introduced more for more flexible reaction to the labour market needs

1	2	3	4	5	6	7	8	9	10
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Please, evaluate in the scale 1 to 10, where 1 – not informed at all, 10 am well informed

29. Are you aware of the 12 Sector Expert Councils (SECs) established in 2011?

1	2	3	4	5	6	7	8	9	10
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Please, evalaute in the scale 1 to 10, where 1 – completely disagee, 10 fully agree

30. In the development of competitive labour force there should be more co-operation between:

a) Higher education and VET policy makers and administrators

1	2	3	4	5	6	7	8	9	10
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b) Research and VET policy makers and administrators

1	2	3	4	5	6	7	8	9	10
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c) Higher education and VET institutions

1	2	3	4	5	6	7	8	9	10
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31. Specialists with higher education should have innovation competence

1	2	3	4	5	6	7	8	9	10
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32. Specialists with college education should have innovation competence

1	2	3	4	5	6	7	8	9	10
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33. Specialists with secondary VET should have innovation competence

1	2	3	4	5	6	7	8	9	10
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34. Enterprises need innovation competent middle level specialists

1	2	3	4	5	6	7	8	9	10
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35. VET should be strengthened in the field of innovations

1	2	3	4	5	6	7	8	9	10
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36. EU funds should be allocated for strengthening innovation in VET

1	2	3	4	5	6	7	8	9	10
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37. In general primary education better teaching of maths and sciences would promote better training of competitive labour force in future

1	2	3	4	5	6	7	8	9	10
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We request you to answer several questions which will be used only for the analysis of the survey results.

Your field of competence in relation to the questionnaire (please, tick one answer – the most typical for you)

Higher education policy officer, administrator or expert

Employers' (sector) representative/ expert

Employees' representative/ expert

An official dealing with the implementation of EU policy implementation and strategic planning

An official dealing with the implementation/ of economic policy/ expert

An official dealing with the implementation/ of financial (tax) policy/ expert

An official dealing with the implementation/ of employment policy/ expert

An official dealing with the implementation of VET policy, administration/expert

Other (please, indicate) _____

Your experience (in years) in the indicated field of competence

Up to 5 years 5 – 10 11– 15 16 – 20 21– 25

26 – 30 31 – 35 36 – 40 41 – 45 46 and more

F M

You are invited to add a comment on relevant issues not addressed by the questionnaire

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Thank you very much for your answers! For mor einformation on the study please contact Ilze Buligina, Phone : 29478176, E-mail address: ib11193@lu.lv or Ilze.Buligina@gmail.com

Annex 2. Interview of high level public administrators in 2014

Interview questions for high level administrators in education policy

1. In the Latvian vocational education and training (VET) system in 2013 a new approach was initiated – work-based learning (WBL) pilot project. The ministry of education and Science (MoES) took a conscious decision to use the ‘bottom-up’ strategy, by inviting the interested parties – VET institutions and their co-operation partners – enterprises – to get involved.

Why did MoES chose the ‘bottom-up’ approach instead of the ‘top-down’ approach? Do you think the chosen strategy has justified itself?

2. Public administrations are using various institutional mechanisms and co-operation schemes to ensure the training of competitive labour force by the VET system.

Are you of the opinion that the existing institutional mechanisms and co-operation schemes are optimal? What improvements do you think would still be needed?

3. It has been recognised that in Europe (and in Latvia) there is a marked lack of well-trained medium level specialists, including specialists with competence in innovation and technologies. In many countries the term ‘higher’ VET is being used.

What tasks for public administrations do you consider as the most relevant – in order to speed up the processes leading to the training of such high level VET specialists.

4. In recent years the role and tasks of VET in the training of competitive labour force.

Are you of the opinion that more research is needed on the issues of the development and implementation of VET, the results of such research being also as a source of information for better decision taking by education policy makers in strategic planning.

5. Vocational education and training in Latvia is traditionally having a relatively low prestige. In the society. Currently a set of comprehensive targeted measures are being implemented for raising the VET *attractiveness* – this being not an identical notion with VET *prestige*.

In your opinion – what other possibilities and instruments are at the disposal of public administrations for raising the VET prestige in Latvia?

The interview questions were developed by Ilze Buligina, E-mail address: ib11193@lu.lv, Phone: 2947817

Annex 3. Questionnaire for entrepreneurs and employers' organisations 2014-2015

Survey for the entrepreneurs and sector experts

Dear entrepreneurs and sector experts!

We would like to ask you to participate in the survey implemented by the Latvian University (under the leadership of Ilze Buligina) in order to find out your views on the development of vocational education and training issues in relation to the training of a competitive workforce. The question is being studied in the context of the the sector development and employment trends in Latvian, as well as in relation to new (innovative) approaches to the management of vocational education and taking into account the recent measures implemented in the work based learning (WBL)* (with elements of the dual system). The aim of the survey is to clarify the potential ways of strengthening the parties' interest and capacity in the development of vocational education, including DVB training and new (innovative) approach in order to contribute to the quality and the competitiveness of the workforce and the overall employment in the country.

The survey is confidential. The survey results will be reflected only in aggregate and generalized way. Your opinion is highly important. Filling in the questionnaire takes approximately 10 minutes. Thank you very much for your responses and input.

** Work-based learning (dual system) are specific to Germany, Austria, the Netherlands, Switzerland and several other countries. It is a novelty in Latvian, and currently the most appropriate models are being sought for the Latvian context, taking into consideration also the fact that in Latvia small and micro enterprises constitute the majority of all enterprises. Work-based learning envisages the training of the learner (trainee) training with an employer for several years, and in the curriculum only a relatively small number of hours are devoted to theoretical training in vocational education institutions. The employers usually pay the student (trainee) a salary or stipend. In this way the companies often prepare their future employees. It is not being planned that in Latvia WBL approaches could replace the currently implemented school-based VET systems, but the WBL approach could strongly contribute to the improvement of practical training and qualification practice.*

Please, evaluate in the scale 1 to 10, where 1 – completely disagree, 10 fully agree

1. Specialists with secondary vocational education are well prepared for work at an enterprise.

1	2	3	4	5	6	7	8	9	10
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Specialists with higher education are well prepared for work at an enterprise.

2. Specialists with college education are well prepared for work at an enterprise.

1	2	3	4	5	6	7	8	9	10
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3. Specialists with higher education are well prepared for work at an enterprise.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

4. The training by enterprises is more effective than training by VET institutions

1	2	3	4	5	6	7	8	9	10
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5. Ministries sufficiently coordinate their activities for jointly addressing education and employment issues.

1	2	3	4	5	6	7	8	9	10
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6. The joint activities of ministries in addressing education and employment issues produce good results

1	2	3	4	5	6	7	8	9	10
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7. The local governments should more get involved in VET.

1	2	3	4	5	6	7	8	9	10
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8. The planning regions should more get involved in VET.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

9. The enterprises should more get involved in VET.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

10. Specialists with higher education should have innovation competence

1	2	3	4	5	6	7	8	9	10
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11. Specialists with college education should have innovation competence

1	2	3	4	5	6	7	8	9	10
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12. Specialists with secondary VET should have innovation competence

1	2	3	4	5	6	7	8	9	10
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13. In the training of a competitive labour force there is a sufficient involvement of sectoral associations/ employers' organisations

1	2	3	4	5	6	7	8	9	10
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14. New forms of VET governance where the decisions are taken by a broader spectrum of stakeholder should be introduced at state level.

1	2	3	4	5	6	7	8	9	10
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15. New innovative approaches to VET should be promoted at state level for the training of a competitive labour force.

1	2	3	4	5	6	7	8	9	10
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16. Are you aware of the implementation of work based learning (WBL) in six VET institutions in Latvia?

Please, evaluate in the scale 1 to 10, where 1 – not informed at all, 10 am well informed.

1	2	3	4	5	6	7	8	9	10
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17. Do you support further introduction of WBL in Latvia when the learner spends a much greater proportion of time in practical training at an enterprise?

Please, evaluate in the scale 1 to 10, where 1- do not support at all, 10 – strongly support.

1	2	3	4	5	6	7	8	9	10
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18. What centralised activities do you consider as relevant for a successful introduction of WBL in Latvia?

Please, evaluate in the scale 1 to 10, where 1- is not important at all, 10 – is highly important.

a) Support to the enterprise during the organisation of the work placement

1	2	3	4	5	6	7	8	9	10
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b) Financial support to mentors (praxis supervisors in enterprises) in work with trainees

1	2	3	4	5	6	7	8	9	10
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c) Possibility to be flexible in the provision of the theoretical studies according to the employers needs

1	2	3	4	5	6	7	8	9	10
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d) Individual consultations for the employers

1	2	3	4	5	6	7	8	9	10
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e) Information campaigns in mass media

1	2	3	4	5	6	7	8	9	10
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f) Tax reduction for enterprises involved in WBL

1	2	3	4	5	6	7	8	9	10
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g) Improved legal framework

1	2	3	4	5	6	7	8	9	10
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h) Pedagogical/ methodological support to mentors working with trainees at an enterprise

1	2	3	4	5	6	7	8	9	10
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i) Compensation to employer's for covering trainees expenditure on transport fees, specialised clothing etc.

1	2	3	4	5	6	7	8	9	10
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j) Compensation to employer's for covering trainees expenditure on transport fees, specialised clothing etc.

1	2	3	4	5	6	7	8	9	10
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19. Do you agree that an enterprise immediately benefits from the work of the trainee in WBL?

Please, evaluate in the scale 1 to 10, where 1- will not gain benefit, 10 – will gain significant benefit

1	2	3	4	5	6	7	8	9	10
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20. Do you agree that involvement of the trainee in WBL is a potential future investment?

Please, evaluate in the scale 1 to 10, where 1- is not important at all, 10 – is highly important.

1	2	3	4	5	6	7	8	9	10
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21. Do you agree that a trainee in an enterprise is an additional burden to the enterprise?

1	2	3	4	5	6	7	8	9	10
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22. Does your enterprise currently lacks specialists?

Yes No

or could there be a lack of specialists in the near future (5 years time)

Yes No

23. Would your enterprise be interested to accept trainees in WBL in your enterprise?

Please, evaluate in the scale 1 to 10, where 1- not interested, 10 – very much interested

1	2	3	4	5	6	7	8	9	10
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24. Would your enterprise be prepared to pay to a trainee during WBL in your enterprise?

Would not pay	
Would pay a salary	
Would pay a grant	

25. Do you agree that the quality and competitiveness of VET prepared labour force could significantly improve in relation to the labour market demands?

Please, evaluate in the scale 1 to 10, where 1 – completely disagree, 10 fully agree

1	2	3	4	5	6	7	8	9	10
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We request you to answer several questions which will be used only for the analysis of the survey results.

Your field of competence in relation to the questionnaire (please, tick one answer – the most typical for you)

- Employer/ employers' representative in a micro enterprise
- Employer/ employers' representative in a small enterprise
- Employer/ employers' representative in a medium enterprise
- Employer/ employers' representative in a large enterprise
- Employers' organisation representative
- Sector association's representative
- Sector expert Council's representative
- The enterprise is the member of the Latvian Employers' confederation
- Other (please, indicate) _____

The sector or branch you representat _____

Your experience (in years) in the indicated field of competence

Up to 5 years 5 – 10 11– 15 16 – 20 21– 25

26 – 30 31 – 35 36 – 40 41 – 45 46 and more

F M

You are invited to add a comment on relevant issues not addressed by the questionnaire

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Thank you very much for your answers! For more information on the study please contact Ilze Buligina, Phone : 29478176, E-mail address: ib11193@lu.lv or Ilze.Buligina@gmail.com

Annex 4. Questionnaire for public administrators and experts in 2012

Dear expert!

Given your longterm involvement in the major education developemnts in Latvia, as well as your high-level competence, we request you to participate in a survey by filling out a questionnaire in relation to the training of competitive labour force, including in the context of innovation*. The study refers to the existing and potentially needed institutional mechanisms needed for the training of competitive and innovation oriented labour force

Within the framework of the present work by ‘institutional mechanisms’it is being understood formalised structures and processes, as well as the legal feamework that allow the public adminsitraiton to influence the solutions of concrete issues.

All the answers are confidential and will be used only in a generalised way.

*The word ‘innovation’ in the context of the present research is not being used referring to a certain thing or activity. This word refers to a notion representing a set of activities with an aim to create or introduce (or produce) new types of products or services, offer approaches or solutions that formerly did not exist etc. By ‘innovation’ also societal processes are being understood - in relation to education, research, and other activities.

A questionnaire for education and research policy makers, adminsitrators and experts

Please, evaluate in the scale 1 to 10, where 1- do not support at all, 10 – strongly support., and 0 means that you do not have an opinion or answer on the given questions.

1. In Latvia as result of research valuable innovative solutions are created

0	1	2	3	4	5	6	7	8	9	10
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2. Innovative approaches resulting from research policy are successfully implemented

0	1	2	3	4	5	6	7	8	9	10
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3. Research policy is enough connected with needed innovative solutions

0	1	2	3	4	5	6	7	8	9	10
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4. Labour force is competent for implementation of research results

0	1	2	3	4	5	6	7	8	9	10
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5. It is necessary to pay more attention in education and training for implementation of innovation

0	1	2	3	4	5	6	7	8	9	10
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6. Labour force (LF) with higher education (HE) (within the range of competence) is well prepared for the implementation of innovation (are innovation capable);

0	1	2	3	4	5	6	7	8	9	10
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7. Labour force (LF) with college (first level higher) education (within the range of competence) is well prepared for the implementation of innovation (are innovation capable);

0	1	2	3	4	5	6	7	8	9	10
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8. Labour force (LF) with vocational secondary education (VSE) (within the range of competence) is well prepared for the implementation of innovation (are innovation capable);

0	1	2	3	4	5	6	7	8	9	10
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9. Closer links between the higher education system (HES) and vocational training system (VTS) would promote the implementation of innovation.

0	1	2	3	4	5	6	7	8	9	10
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10. Closer links between the VET system and the research society would enhance the implementation of innovation in VET;

0	1	2	3	4	5	6	7	8	9	10
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11. Knowledge in innovation is equally important in VET and higher education systems.

0	1	2	3	4	5	6	7	8	9	10
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12. Closer links between the higher education system (HES) and VET would enhance a more comprehensive approach towards the training of competitive labour force.

0	1	2	3	4	5	6	7	8	9	10
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13. Competent and innovation oriented labour force training need closer co-operation between:
Administrators of higher and professional education

- Policy makers of higher and professional education

0	1	2	3	4	5	6	7	8	9	10
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- Administrators in higher education and professional education

0	1	2	3	4	5	6	7	8	9	10
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- Policy makers of higher education and research

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

- Administrators of higher education and research

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

- Policy makers of professional education and research

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

- Administrators of professional education and research

0	1	2	3	4	5	6	7	8	9	10
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14. The existing institutional framework ensures the training of innovation competent labour force at the highest level

0	1	2	3	4	5	6	7	8	9	10
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15. The existing institutional framework ensures the training of innovation competent labour force at medium level

0	1	2	3	4	5	6	7	8	9	10
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16. The existing institutional framework ensures the training of innovation competent labour force at lower level

0	1	2	3	4	5	6	7	8	9	10
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17. Are you familiar with the 12 Branch Expert Councils (BECs) established in 2011 (in text further – “Expert Councils”).

0	1	2	3	4	5	6	7	8	9	10
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18. Can you see added value for a ‘horizontal’ co-operation between the institutional mechanisms functioning within the higher education and research system and the vocational education and training system – with the aim of training ‘innovation capable’ labour force at all levels (in text further – “Horizontal co-operation”).

0	1	2	3	4	5	6	7	8	9	10
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19. Training at enterprises is the key measure in preparing an innovation capable labour force

0	1	2	3	4	5	6	7	8	9	10
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20. Cooperation between companies and research institutions are of importance for innovations

0	1	2	3	4	5	6	7	8	9	10
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21. Innovations have to be more stressed in policy documents and legal regulations.

0	1	2	3	4	5	6	7	8	9	10
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22. Law on Professional education has to regulate all qualification levels

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

23. Law on Professional education has to regulate all qualification levels

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

We request you to answer several questions which will be used only for the analysis of the survey results.

Your field of competence in relation to the questionnaire (please, tick one answer – the most typical for you)

Research policy maker

Research administrator

Researcher/ Research expert (in a research institution, the Latvian Research Council and other

Higher education policy maker

Higher education administrators

Higher education expert

VET policy maker

VET administrator

VET expert

Employers' (sector) representative/ expert

Employees' representative/ expert

Other (please, specify)

Your experience (in years) in the indicated area of competence

Up to 5 years 5 – 10 11– 15 16 – 20 21– 25
 26 – 30 31 – 35 36 – 40 41 – 45 46 and more

Female Male

Age group

up to 30 30 – 35 36 – 40 41 – 45 46 – 50
 51 – 55 56 – 60 61 – 65 66 – 70 71 and more

You are invited to add a comment on any relevant issue not addressed by the present questionnaire!

Thank you very much for your answers!

***A more detailed information on the study is available with Ilze Buligina, phone : 2947817,
 e – mail address: ib11193@lu.lv***

Annex 5. Questionnaire for Heads of Municipal Education Boards in 2013

A questionnaire for the heads of Municipal Education Boards implemented within the framework of a seminar on June 27, 2013

regarding new approaches in the implementation of vocational education and training, including work-based learning approaches

Dear education managers and experts!

We invite you to participate in the Ministry of Education survey on new approaches to the implementation of vocational education and training also with regard to work-based learning (WBL). These innovations are also linked to the Memorandum on cooperation in vocational education and training in Europe (hereinafter - the Memorandum), signed in 2012 and opening up new opportunities for Latvian cooperation with Germany. The Memorandum lays down common measures for fighting youth employment. It is especially important to promote the introduction of the WBL with creating a new kind of cooperation mechanisms with the social partners. Such a system provides young people training with an opportunity to be trained with the employer in a real working environment for several years, when only a small proportion of the training is devoted to theoretical training in vocational education institutions.

The effectiveness of such a system has been proved by the examples of Germany, Austria, Denmark and other. This approach does not reduce the role of vocational education institutions, as their overall role is being increased in the regional social and economic development processes. Although the majority of vocational education institutions are under the subordination of the Ministry, the diversification of governance forms and cooperation mechanisms is taking place, including the formation of closer links between various education and training institutions. Consequently, we looking forward to your interest and contribution in discussing these issues.

The survey is confidential. The survey results will be reflected only in aggregate and generalized way. Your opinion is highly important. Filling in the questionnaire takes approximately 10 minutes. Thank you very much for your responses and input.

1. Do you agree that new (innovative) approaches should be introduced in vocational education and training (VET) in Latvia for the training of a competitive labour force?

(please, evaluate in the scale from 1 to 10, where, 1 – do not agree, 10 – strongly agree)

1	2	3	4	5	6	7	8	9	10
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What could be these new approaches?

.....

2. Do you in principle support the introduction of work-based learning approaches in VET when the learner spends a much higher proportion of time with the employer?

(please, evaluate in the scale from 1 to 10, where 1 – do not support, 10 – fully support)

1	2	3	4	5	6	7	8	9	10
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2. Would you be prepared, within the scope of your competence, to support the implementation of a project in work-based learning in your local government?

(please, evaluate in the scale from 1 to 10, where, 1 – not prepared, 10 – fully prepared)

1	2	3	4	5	6	7	8	9	10
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4. Do you agree that more entrepreneurship would be promoted in the operation of VET institutions?

(please, evaluate in the scale from 1 to 10, where, 1 – do not agree, 10 – fully agree)

1	2	3	4	5	6	7	8	9	10
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What activities could these be?

.....

5. Do you see a need for strengthening cross-border and international co-operation in VET?

(please, evaluate in the scale from 1 to 10, where, 1 – do not see at all, 10 – strongly see)

1	2	3	4	5	6	7	8	9	10
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In what ways?.....

.....

6. Do you support transition to flexible modular and labour market oriented VET programs allowing to react faster to the development tendencies in the national economy?

(please, evaluate in the scale from 1 to 10, where 1 – do not support,, 10 – strongly support)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

7. Please, mentioned the biggest challenges or most unclear issues in relation to the introduction of work-based learning.

Other comments

Your experience in (vocational) education (in years)

- Up to 5 years
- 5 – 10
- 11– 15
- 16 – 20
- 21– 25
- 26 – 30
- 31 – 35
- 36 – 40
- 41 – 45
- 46 and more years

Thank you for your answers!

For more detailed information please contact: Ilze Buligina, ilze.buligina@izm.gov.lv, phone: 67047762.

Annex 6. Questionnaire for the pilot project leaders on ECVET in 2013

A questionnaire for the participant of a seminar organised by the State Education Development Agency on the introduction of ECVET (European Credit Transfer System for VET) in Latvia, Riga, May 9, 2013

Dear Experts,

We invite you to participate in the survey implemented by the Ministry of Education and Science regarding the VET reforms in relation to European credit transfer system in VET.

The aim of the survey is to determine the expert views on the potential for ECVET implementation, as well as on the potential effectiveness for investment in ECVET developments, including ESF funding in 2014-2020 planning period.

The survey is confidential. The survey results will be reflected only in aggregate and generalized way. Your opinion is highly important. Filling in the questionnaire

1. Are you of the opinion that new (innovative) approaches to VET should be introduced in order to train a competitive labour force?

Please, evaluate in the scale 1 to 10, where 1- is not important at all, 10 – is highly important.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

2. Are you of the opinion that ECVET as one of such innovative approaches could be beneficial as part of the VET reform in Latvia?

Please, evaluate in the scale 1 to 10, where 1- is not important at all, 10 – is highly important.

1	2	3	4	5	6	7	8	9	10
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3. What is your evaluation on the degree of challenge related to specific ECVET tasks or components

Please, evaluate in the scale 1 to 10, where 1 – not complicated, 10 – highly complicated)

a) The evaluation of learning outcomes in a particular country

1	2	3	4	5	6	7	8	9	10
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b) assigning credit points

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c) the evaluation of learning outcomes from a foreign country (including the recognition of the obtained credits, documentation and certification)

1	2	3	4	5	6	7	8	9	10
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d) the recognition of the acquired credits from abroad as part of a qualification

1	2	3	4	5	6	7	8	9	10
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e) awarding a qualification in compliance with the regulations in the country of origin

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

4. Are you of the opinion that the introduction of ECVET will create an additional burden for education institutions?

Please, evaluate in the scale 1 to 10, where 1- is not important at all, 10 – is highly important.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

5. Are you of the opinion that the education institutions will benefit from the introduction of ECVET

Please, evaluate in the scale 1 to 10, where 1- is not important at all, 10 – is highly important.

1	2	3	4	5	6	7	8	9	10
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6. Would you be prepared in the near future to get involved in the ECVET preparatory activities?

Please, evaluate in the scale 1 to 10, where 1- would not be prepared, 10 – would very much be prepared)

1	2	3	4	5	6	7	8	9	10
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7. Would you be prepared to get involved in the implementation of an ECVET pilot project?

Please, evaluate in the scale 1 to 10, where 1- would not be prepared, 10 – would very much be prepared)

1	2	3	4	5	6	7	8	9	10
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8. Please indicate if you had any information or general idea on ECVET issues jautājumiem.

Yes No

9. Please, mention the most vague or unclear issues about ECVET

**Other
comments** _____

Your experience in vocational education and training (in years)

Up to 5 years 5 – 10 11– 15 16 – 20 21– 25
26 – 30 31 – 35 36 – 40 41 – 45 46 and more

Thank you for your answers!

For more information please contact: Ilze Buligina, ilze.buligina@izm.gov.lv,

Phone: 67047762.

Annex 7. Questionnaire for the entrepreneurs in the Iecava district in 2013

Questionnaire for the entrepreneurs in Iecava district



Dear employers!

We invite you to participate in the study commanded by the Iecava district local government "Study of the needs of the Iecava district in the implementation of EU co-financed and foreign investors' co-financed projects and activities". The aim of the survey is to identify the possibilities for strengthening the capacity of the Iecava district local government for the implementation of the EU co-financed and foreign investors' co-financed projects and activities and to evaluate the potential applications of the foreign investment for the development of the Iecava district. The contractor for the study commanded by the Iecava district local government is the company "NK Konsultāciju birojs".

The survey is confidential. The results of the survey will be represented in an aggregated and generalised way. Your opinion is highly important. It will take around 15 minutes to fill out the questionnaire.

1. Please specify what kind of specialists (and for what jobs) your enterprise lacks currently and will lack in the near future.

2. Please, indicate to what degree your employees possess the given skills and attitudes (arranged in alphabetic order)

(please, evaluate in the scale from 1 to 10 where 1 – do not possess at all, 10 – possess to a high degree)

Personal computer skills

1	2	3	4	5	6	7	8	9	10
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- a. Ability to work independently

1	2	3	4	5	6	7	8	9	10
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- b. Ability to plan one's time

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- c. Co-operation skills

1	2	3	4	5	6	7	8	9	10
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- d. **Ieinteresētība (motivācija) pildīt uzticētos pienākumus**

1	2	3	4	5	6	7	8	9	10
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- e. Initiative and creativity

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- f. Specific professional knowledge and skills needed for the job

1	2	3	4	5	6	7	8	9	10
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- g. Reliability and loyalty to the enterprise

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- h. Language skills

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

i. **Willingness and ability to update one's knowledge and skills in the profession**

1	2	3	4	5	6	7	8	9	10
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j. **General social (cultivated) behaviour**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

k. **Other (please, specify an devaluate)**

1	2	3	4	5	6	7	8	9	10
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l. **Other (please, specify an devaluate)**

1	2	3	4	5	6	7	8	9	10
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Comments _____

3. **Please, evaluate the importance of continuing professional development at your enterprise**

(please, evaluate in the scale from 1 to 10 where 1 – not important at all, 10 – highly important)

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Comments _____

4. **Please, evaluate the role of EU and other foreign aid and investments' co-funded projects and activities in relation to the upgrading of your employees' professional skills**

(please, evaluate in the scale from 1 to 10 where 1 – not important at all, 10 – highly important)

a. Information on the potential availability of project funds for the professional training of employees of the enterprise

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b. Information on the possibilities to acquire professional training courses abroad

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c. Information on the availability of distance learning courses

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d. The organisation of professional development courses at a work-place

1	2	3	4	5	6	7	8	9	10
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e. The development of professional training programmes in compliance with the specificities of the enterprise

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

f. The existing offer of the professional training programmes in the Iecava district

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

g. Regular availability of information on continuing education/ professional development courses

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

h. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

i. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

5. **Please, indicate, if and to what degree you would be prepared to pay for the training of your present and future employees/ preparation for the work at your enterprise for specific needed**

Would not pay	
Would co-finance up to 1/3 of the total cost	
Would co-finance up to 2/3 of the total cost	
Would cover _____ % of the total cost	
Would cover full cost	

Other

6. Please indicate the importance you (as the manager of an enterprise, attribute to the motivation of the employees

(please, evaluate in the scale from 1 to 10 where 1 – not important at all, 10 – highly important)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

Please, evaluate the importance of communication at an enterprises
(please, evaluate in the scale from 1 to 10 where 1 – not important at all, 10 – highly important)

1	2	3	4	5	6	7	8	9	10
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Comments _____

7. Are you of the opinion that new approche should be introduced in VET for the training of competitive labour force?

(please, evaluate in the scale from 1 to 10 where 1 –no need to introduce, 10 – highly important to introduce)

1	2	3	4	5	6	7	8	9	10
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Comments

8. Do you support the introduction of work-based learning approaches (the dual system elements) when the trainee spends most part of his training time with the entrepreneur at an enterprise

(please, evaluate in the scale from 1 to 10 where 1 – do not support at all, 10 – strongly support)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

9. Do you see training praxis of learners at an enterprise as an additional burden to the enterprise?

(please, evaluate in the scale from 1 to 10 where 1 – no burden at all, 10 – a great burden)

1	2	3	4	5	6	7	8	9	10
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10. Are you of the opinion that the enterprise has an immediate benefit from the work of the trainee?

(please, evaluate in the scale from 1 to 10 where 1 – not important at all, 10 – highly important)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

11. Is the involvement of the trainees at an enterprise a potential investment for a future work-force for the enterprise?

(please, evaluate in the scale from 1 to 10 where 1 – not important at all, 10 – highly important)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

12. Please, indicate if you accept trainees at your enterprise.

Yes No

13. Please, indicate if you accept VET students as trainees at your enterprise

Yes No

14. Please, indicate if you accept HE students as trainees at your enterprise

(if your answer is no, please switch to question No 15)

Yes No

15. Please, indicate if you accept learners with special needs as trainees at your enterprise

Yes No

16. Please, indicate if you accept VET students with special needs as trainees at your enterprise

Yes No

17. Please, indicate if you accept HE students with special needs as trainees at your enterprise

Yes No

18. Please, indicate to what extent you would be prepared to accept VET students with special needs as trainees at your enterprise

(please, evaluate in the scale from 1 to 10 where 1 – would not accept, 10 –would definitely accept)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

19. Please, indicate to what extent you would be prepared to accept students with special needs as trainees at your enterprise

(please, evaluate in the scale from 1 to 10 where 1 – would not accept, 10 –would definitely accept)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

20. Please, indicate to what extent you would be prepared to accept general education students with special needs as trainees at your enterprise

(please, evaluate in the scale from 1 to 10 where 1 – would not accept, 10 –would definitely accept)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

21. Please, indicate to what extent you would be prepared to accept VET students with special needs as trainees at your enterprise

22. *(please, evaluate in the scale from 1 to 10 where 1 – would not accept, 10 –would definitely accept)*

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

23. Please, indicate to what extent you would be prepared to accept HE students with special needs as trainees at your enterprise

(please, evaluate in the scale from 1 to 10 where 1 – would not accept, 10 –would definitely accept)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

24. Please, evaluate the importance support measures for your enterprise - for accepting general education, VER, HE students and learners with special needs involvement in the work of the enterprise

(please, evaluate in the scale from 1 to 10 where 1 – not important at all., 10 –highly important)

- a. Tax relief

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- b. Support (subsidies) from the local government

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- c. Advertisement possibilities at various local governments' events

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- d. Advertisement possibilities at the local government newspaper

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- e. Advertisement possibilities at the local government portal

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

f. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

g. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

25. Please, indicate to what degree are you interested in co-operation with the Iecava district education institutions.

(please, evaluate in the scale from 1 to 10 where 1 – not interested at all, 10 – highly interested)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

26. Please, specify with which education institutions and to what degree would you like to co-operate.

(please, evaluate in the scale from 1 to 10 where 1 – would not like to, 10 – would very much like)

a) Iecava secondary school

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b) Zālīte specialised elementary primary education boarding school

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c) Iecavas Music and Arts' School

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d) Iecavas elementary boarding school

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

e) Dzimtīsa primary school

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

27. Please, indicate the reasons why co-operation with Iecava district education institutions might be important for you.

(please, evaluate in the scale from 1 to 10 where 1 – no important at all, 10 – highly important)

a. To make youngsters interested in work at an enterprise

1		2	3	4	5	6	7	8	9	10
---	--	---	---	---	---	---	---	---	---	----

b. To encourage youngsters to spend time in a meaningful way

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c. To promote entrepreneurial thinking among the local young people

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d. To advertise the role of VET in the district

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

e. To advertise own company

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

f. To promote carrier guidance among learners at schools

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

g. The children and grandchildren of the employees attend these education establishments

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

h. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

i. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

28. Please, evaluate the importance for you of the given forms of co-operation with the Iecava district education institutions
 (please, evaluate in the scale from 1 to 10 where 1 – would not be interested at all, 10 – would be highly interested)

a. To provide with basic information on the specific features of the enterprise and the possibilities to undergo training in this enterprise

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b. To provide summer employment opportunities for young people

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c. To organise guest lectures, by telling about the enterprise, its activities, by using advertisement materials, including video presentations)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d. To participate in ‘shadow days’ (to allow young people to observe and follow the work of some of the employees)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

e. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

f. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

29. Please, evaluate the importance of the potential support measures by the local government – in support of co-operation between education institutions and the enterprises

(please, evaluate in the scale from 1 to 10 where 1 – is not important at all, 10 – is highly important)

a. Paying salary to a specialist in entrepreneurship

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b. Paying salary to a carrier consultant

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c. Excursions to enterprises (paying for the transport)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d. To organise business ideas' competition and to involve the entrepreneurs in the evaluation of business ideas

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

e. To render financial support to the carrier days' events

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

f. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

g. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

30. Please, evaluate the importance of the organisation of circles or training courses at the Iecava district education institutions – for the acquisition of professional skills in particular fields

(please, evaluate in the scale from 1 to 10 where 1 – is not important at all, 10 – is highly important)

a. Agriculture

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b. Catering

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c. Carpentry

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d. Hospitality and leisure activities' organisation

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

e. Office work

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

f. Heavy agricultural machinery

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

g. Organisations of tourism services

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

h. Timber industries and wood-work

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

i. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

j. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

31. Please, evaluate how actively would you be prepared to participate in the Iecava district employment promotion activities
(please, evaluate in the scale from 1 to 10 where 1 – would not participate, 10 – would very much like to participate)

a. Provide prizes for the business ideas' competition

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b. Offer places for praxis

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c. Offer transport services to VET institutions

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d. To sponsor the studies of the most talented youngsters – so that after the studies they return to the Iecava district

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

e. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

f. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

32. Please, evaluate the accessibility of information on the entrepreneurship support activities in Latvia

(please, evaluate in the scale from 1 to 10 where 1 – very difficult to find, 10 –very easy to find)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

33. Please, evaluate the existing and the potential entrepreneurship support activities in the Iecava district

(please, evaluate in the scale from 1 to 10 where 1 – not important at all, 10 –highly important)

a. Developemnt of business incubators

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b. A non-governemntal organisation created for the support to enterprises

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c. Support foundation for micro and small enterprises

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d. Tax reduction for immovable property

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

e. Local government's grants (subsidies) in support of new business ideas

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

f. Seminars financed by the local government and training for the employers and the general population

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

g. To contract (take on job) an entrepreneurship specialist

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

h. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

i. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

34. Please, evaluate to what degree there would be a need for a Creative Activities Centre in the Iecava district – with creative workshops for all age groups, with the possibility for trade of locally created

(please, evaluate in the scale from 1 to 10 where 1 – is not needed, 10 – is highly needed)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

35. Please, evaluate to what degree you would be prepared to co-operate with the local government.

(please, evaluate in the scale from 1 to 10 where 1 – would not like to, 10 – would very much like)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

36. Please, evaluate the degree of importance of the co-operation form with the local government

(please, evaluate in the scale from 1 to 10 where 1 – would not like to, 10 – would very much like)

- a. Seminars and training paid by the local government for the for the employers and the general population

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- b. Joint implementation of projects

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- c. Co-operation in training provision

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- d. Co-operation in the creation and maintenance of business incubators

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- e. Joint organisation of sports' and cultural

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- f. Joint development of a entrepreneurship support centre

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- g. Support/ organisation of entrepreneurship support activities

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- h. Consulting councils/ boards for enterprises

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- i. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- j. Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

37. Please, provide a concise information on your enterprise and its owner/ manager (We repeatedly underline that the information will not be disclosed and will be used only in an aggregate way)

--

- a. The key fields of activity of the enterprise

- b. The key products or services of the enterprise

- d. **Please, evaluate the innovative activities of the enterprise during the previous three years**

(please, evaluate in the scale from 1 to 10 where 1 – no innovative activities, 10 – highly successful innovative activities)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments

- e. **Please, specify the enterprises development aims for the coming three years**

(please, evaluate in the scale from 1 to 10 where 1 – no development aims, 10 – very concrete development aims)

We plan for a new enterprise	
We plan to increase the number of employees	
We plan to increase the sales' volume	
We plan to grow regarding the premises/ land/ equipment	
We plan to start the production of new goods / rendering new services	
We plan to reduce the number of employees	
We plan to reduce the variety of our production	
We plan to reduce the sales volume	
We plan to reduce the premises/ the usable land	
Other (please, specify and evaluate)	
Other (please, specify and evaluate)	

- f. **Please, evaluate how actively internet is being used by your enterprise**

(lūdzu, novērtējiet no 0 līdz 10, kur 0 – nelieto, 1- ļoti maz lieto, 10 – ļoti plaši lieto)
(please, evaluate in the scale from 1 to 10 where 1 – does not use at all, 10 – uses very intensly)

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Comments

- g. **Please, indicate if your enterprise has a web-page.**

(strike-through the right answer)

It has	Under construction	Does not have
--------	--------------------	---------------

 Please, evaluate the importance of the education level and experience of the manager for the management of the enterprise
(please, evaluate in the scale from 1 to 10 where 1 – is not important at all, 10 –is highly important)

Education on entrepreneurship

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Experience in entrepreneurship

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Experience in the sector

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Comments _____

h. Please, indicate your sex

Male

Female

i. Please, indicate

The title of your enterprise

Your name, or the name of your manager

Your position

Contact details

Thank you very much for your answers

For more information please contact Ināra Kantāne - Inara.Kantane@lu.lv, tālr. 29491763

Biruta.Sloka – Biruta.Sloka@lu.lv, tālr. 29244966

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Pēteris Tora – ToraPeteris5@inbox.lv

Juris Dzelme – Juris.Dzelme@lu.lv

Annex 8. Questionnaire for the entrepreneurs in the Kurzeme region in 2013



Dear employers!

You are kindly invited to fill out the questionnaire!

The survey is confidential. The results of the survey will be represented in an aggregated and generalised way. Your opinion is highly important. It will take around 15 minutes to fill out the questionnaire.

1. Please, indicate if your enterprise currently lacks employees or will lack them in the near future.

(if the answer is 'no', please proceed to Question 4)

Yes No

2. Please, indicate what specialists your enterprise currently needs.

3. Please, indicate what specialists your enterprise will need in one year.

4. Please, indicate if in your enterprise there are employees with education from a VET institution.

Yes No

5. Please, indicate and evaluate if VET institutions train the needed specialists for your enterprise (please, mention the speciality and evaluate it in then scale from 1 from 1 to 10 where 1 – does not train , 10 – trains enough)

Speciality,
qualification

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Speciality,
qualification

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Speciality,
qualification

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Speciality,
qualification

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

6. Please, evaluate the quality of the specialists trained by VET institutions
(please, evaluate from 1 to 10, where 1 – very poor, 10 – very good)

Speciality,
 qualification

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Speciality,
 qualification

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Speciality,
 qualification

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Speciality,
 qualification

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

7. Please, indicate the importance of the named criteria when contracting new employees (offered in alphabetic order)
(please, evaluate from 1 to 10, where 1 – not important, 10 very important)

m. Work experience in compliance with the offered job

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

n. Education and qualification in compliance with the offered job

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

o. Sense of responsibility

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

p. Developed intellect, ability for judgement, analysis and synthesis

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

q. Appearance and social behavior

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

r. Honesty (integrity)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

s. Ability for oral expression

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

t. Overall impression on the general compliance with the offered job

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

u. Good references from trusted people

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

v. **Motivation for job at the enterprise and the particular vacancy**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

w. **Communication and perception ability**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

x. **Willingness for committed work**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

y. **Other (please, indicate and evaluate)**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

z. **Other (please, indicate and evaluate)**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

8. **Please, evaluate the importance for an employee**

(please, evaluate from 1 to 10, where 1 – not important, 10 – very important)

a. **English language skills and knowledge**

1	2	3	4	5	6	7	8	9	10
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b. **Driving skills**

1	2	3	4	5	6	7	8	9	10
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c. **Other foreign languages skills and knowledge 9apart from English and Russian**

1	2	3	4	5	6	7	8	9	10
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d. **Computer skills**

1	2	3	4	5	6	7	8	9	10
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e. **Initiative – additional effort alongside with the formalized tasks to address various challenges in the work process**

1	2	3	4	5	6	7	8	9	10
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f. **Initiative – undertaking additional tasks**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

g. **Russian language skills and knowledge**

1	2	3	4	5	6	7	8	9	10
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h. **Latvian language skills and knowledge**

1	2	3	4	5	6	7	8	9	10
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i. **Goal orientation**

1	2	3	4	5	6	7	8	9	10
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j. **Professionanl knowledge**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

k. **Group work skills**

1	2	3	4	5	6	7	8	9	10
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l. **Ability to plan and organise (tasks and their implementation)**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

m. **Ability for team leadership**

1	2	3	4	5	6	7	8	9	10
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n. **Taking responsibility for order and work organisations**

1	2	3	4	5	6	7	8	9	10
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o. **Orientation to development, ability to plan own continuing education**

1	2	3	4	5	6	7	8	9	10
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p. **Other (please, indicate and evaluate)**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Other (please, indicate and evaluate)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

9. **Please, indicate the importance of the following issues in relation to the employees professional skills' development***(please, evaluate from 1 to 10, where 1 – not important, 10 very important)*j. **Organising training of mentors for implementing training practice at a work-place**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

k. **Training of employees for the use of internet for the improvement of qualification**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

l. **The possibility to access ES funds and other foreign investment co-financed projects for the training of employees at the enterprises**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

m. **The possibilities for studies abroad for employees professional development**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

n. **The organization of professional development at the work-places**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

o. **The development and implementation of VET programs at a VET institution in compliance with the enterprise needs**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

p. **The offer of VET programmes in the Kurzeme region**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

q. **Regular information on the continuing education/ professional development courses/ seminars**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

r. **The possibilities by distant education courses**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

s. **Other (please, indicate and evaluate)**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Comments _____

10. Please, indicate in what areas your employees would need professional development _____

11. To what degree do you support the introduction of work-based learning where the trainee spends most of the time at an enterprise?

(please, evaluate from 1 to 10 where 1 – not at all, 10 – strongly support)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

12. To what degree your enterprise would be prepared to get involved in the WBL pilotproject in co-operation with VET institutions?

(please, evaluate from 1 to 10, where 1 – would not be prepared, 10 – would definitely be prepared)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

13. To what degree does your enterprise immediately benefits from a trainee?

(please, evaluate from 1 to 10, where 1 – does not benefit at all, 10 – benefits greatly)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

14. To what degree the involvement of a trainee at your enterprise can be considered as a potential attraction of future workforce?

((please, evaluate from 1 to 10, where 1 – cannot be considered, 10 – can greatly be considered)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

15. Please, indicate if your enterprise offers work placements.

(if the answer is 'yes', please switch to question 18)

Yes No

16. If in the previous question you indicated that practical placements are not being offered by your enterprise, please, mention the reasons

((please, evaluate from 1 to 10, where 1 – not important, 10 – very important)

a. No finances are envisaged for it

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b. The specificity of the enterprise does not allow it

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c. There are no suited work-places for trainees

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d. There are no interested trainees

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

e. The workers at the enterprise are not interested to deal with trainees

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

f. There is no such tradition at the enterprise to organise practical placements

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

g. The workers at the enterprise have not been trained to work with trainees

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

h. **Other (please, indicate and evaluate)**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

(please, switch to the question 21)

17. **Please, indicate how often your enterprise accepts trainees**

Once in half a year	
Once in a year	
Once in a quarter	
Other	

18. **Please, indicate approximately how many work placements your enterprise offers to the VET students in a years time.**

19. **Please, evaluate the quality of the trainees during the previous three years**

((please, evaluate from 1 to 10, where 1 – very poor, 10 – very good)

a. **The trainees interest about their speciality**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b. **The practical knowledge of the trainees**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

c. **The theoretical knowledge of the trainees**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

d. **Other (please, indicate and evaluate)**

1	2	3	4	5	6	7	8	9	10
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Comments

20. **Please, evaluate, to what degree would you be prepared to accept in your enterprise trainees from VET institutions**

((please, evaluate from 1 to 10, where 1 – would not accept, 10 – would definitely accept)

1	2	3	4	5	6	7	8	9	10
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21. **Please, indicate if your enterprise offers training possibilities for VET institution teachers.**

(if the answer is yes, please, switch to question 23)

Yes No

22. **If your answer to the previous question was that you do not offer traineeships for VET institution teachers, please, indicate the reasons**

((please, evaluate from 1 to 10, where 1 – not important, 10 – very important)

a. **No finances planned**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

b. **No suited work-places**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- c. **The specificity of the enterprise does not allow for it**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- d. **No teacher have applied**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- e. **It will be interfering with the everyday work**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- f. **There is no tradition to organise such training at our enterprise**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- g. **Other (please, indicate and evaluate)**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

(please, switch to question 24)

23. **Please, indicate how many work placements your enterprise offers annually for VET institution teachers.**

24. **Please, indicate the importance of support (motivation) measures that might encourage your enterprise to accept trainees.**

(please, evaluate from 1 to 10, where 1 – not important, 10 – very important)

- h. **Tax reduction**

1	2	3	4	5	6	7	8	9	10
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- i. **Financial support (subsidies) from the local government**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- j. **Advertising possibilities at local governments activities**

1	2	3	4	5	6	7	8	9	10
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- k. **Advertising possibilities at the at local governments newspaper**

1	2	3	4	5	6	7	8	9	10
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- l. **Advertising possibilities at at local governments portal**

1	2	3	4	5	6	7	8	9	10
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- m. **Other (please, indicate and evaluate)**

1	2	3	4	5	6	7	8	9	10
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Comments _____

26. **Please indicate the degree of your your willing to co-operate with particular VET institutions** (arranged in alphabetic order)

(please, evaluate from 1 to 10, where 1 – not willing 10 – very much willing)

- a. **Cirava VET secondary school**

1	2	3	4	5	6	7	8	9	10
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- Jelgava VET Technical school**

1	2	3	4	5	6	7	8	9	10
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b. Kuldīga Technology and tourism secondary school

1	2	3	4	5	6	7	8	9	10
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c. Laidze VET secondary school

1	2	3	4	5	6	7	8	9	10
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d. VET Competence centre “Liepāja State technical school”

1	2	3	4	5	6	7	8	9	10
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e. Saldus VET secondary school

1	2	3	4	5	6	7	8	9	10
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f. Skrunda VET secondary school

1	2	3	4	5	6	7	8	9	10
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g. Ventspils VET Technical school

1	2	3	4	5	6	7	8	9	10
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27. Please, evaluate the indicated forms of co-operation with VET institutions
(please, evaluate from 1 to 10, where 1 – not important, 10 very important)

a. Support to VET institutions material and technical provision

1	2	3	4	5	6	7	8	9	10
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b. Support in organizing various competitions for VET students

1	2	3	4	5	6	7	8	9	10
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c. Implementaiton of joint projects

1	2	3	4	5	6	7	8	9	10
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d. To participate in “Shadow days” (to allow the student to observe the work of the employees)

1	2	3	4	5	6	7	8	9	10
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e. Participate as an expert in the development of the content of the qualification exam, in the development of the expected learning outcomes and the evaluation criteria

1	2	3	4	5	6	7	8	9	10
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f. To participate as the sector member of the state examination commission

1	2	3	4	5	6	7	8	9	10
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g. To offer summer jobs

1	2	3	4	5	6	7	8	9	10
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h. To offer practical placements (praxis)

1	2	3	4	5	6	7	8	9	10
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i. Co-operation in the development, updating, planning and co-ordiantion of training programs

1	2	3	4	5	6	7	8	9	10
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j. Co-operation in the training process (guest lectures, excursions to the enterprise)

1	2	3	4	5	6	7	8	9	10
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k. To offer information on the latest technologies

1	2	3	4	5	6	7	8	9	10
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l. To offer information on the needed specialists in the sector

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

m. To offer information on the needed specialists in the branch in the future

1	2	3	4	5	6	7	8	9	10
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n. **Joint organisation of sports and cultural events**

1	2	3	4	5	6	7	8	9	10
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Other (please, specify and evaluate)

1	2	3	4	5	6	7	8	9	10
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Comments _____

28. Please, provide a concise information on your enterprise and its manager (We repeatedly confirm that the information will not be disclosed and will be used only in an aggregate way)

a. **The number of employees at your enterprise**

b. **The key directions of activities at your enterprise**

c. **Please, indicate the development aims of your enterprise for the coming three years**
(please, evaluate from 1 to 10 where 1 – there are no aims, 10 – there are very concrete aims)

We plan to establish a new enterprise	
We plan to increase the number of employees	
We plan to increase the sales	
We plan to increase the production space/ land	
We plan to start producing new products/ services	
We plan to reduce the number of employees	
We plan to reduce the variety of products	
We plan to reduce sales	
We plan to reduce the production space/ land	
Other (please, indicate and evaluate)	
Other (please, indicate and evaluate)	

29. Please, indicate the level of your education

Primary	
Secondary	
First level higher education (4th professional qualification level)	
Professional higher education (5th professional qualification level)	
Specialised secondary education (technicum) from former times or secondary vocational education	
Bachelor degree	
Professional bachelor degree	
Masters degree	
Professional Masters degree	
Doctoral degree	

30. Please, indicate your sex Male Female

31. Please, indicate your age

Please, indicate

The name of your enterprise

**The address of your enterprise
(the region/ district)**

**Your name or the name of your
manager**

Your position

Contact information

Thank you for your answers!

*For more information: Ināra Kantāne - Inara.Kantane@lu.lv, tālr. 29491763
Biruta Sloka – Biruta.Sloka@lu.lv, tālr. 29244966*

Annex 9. The strategic objectives of the Bruggess Communiqué

STRATEGIC OBJECTIVES FOR THE PERIOD 2011-2020, FOLLOWED BY SHORTTERM DELIVERABLES 2011-2014

Available at: http://ec.europa.eu/education/policy/vocational-policy/doc/brugescom_en.pdf

Improving the quality and efficiency of VET and enhancing its attractiveness and relevance

VET should have high relevance for the labour market and people's careers. In order to increase the attractiveness of VET, participating countries should pursue the following objectives and actions:

1. Making I-VET an attractive learning option

(a) Raise the quality of I-VET (see also point 2 below), by improving the quality and competences of teachers, trainers and school leaders, introducing flexible pathways between all education levels and increasing public awareness of the possibilities which VET offers. This is of particular importance in participating countries where VET tends to be undervalued;

(b) Encourage practical activities and the provision of high-quality information and guidance which enable young pupils in compulsory education, and their parents, to become acquainted with different vocational trades and career possibilities;

(c) Ensure that key competences are integrated into I-VET curricula and develop appropriate means of assessment;

(d) Organise teaching and learning activities which foster the development of career management skills in I-VET;

(e) Give learners in I-VET access to appropriate up-to-date technical equipment, teaching materials and infrastructures. VET providers should consider sharing costs and equipment amongst themselves and in cooperation with businesses. Work-based learning in enterprises which have the relevant infrastructure should also be promoted;

(f) Monitor the transition of VET graduates to the labour market or to further education and training, using national monitoring systems.

2. Fostering the excellence, quality and relevance of both I-VET and C-VET

Quality assurance

(a) High quality of VET provision is a prerequisite for its attractiveness. In order to guarantee improved quality, increased transparency, mutual trust, the mobility of workers and learners, and lifelong learning, participating countries should establish quality assurance frameworks in accordance with the EQAVET Recommendation;

(b) Participating countries should - by the end of 2015 - establish at national level a common quality assurance framework for VET providers, which also applies to associated workplace learning and which is compatible with the EQAVET framework.

Quality of teachers, trainers and other VET professionals

(a) Participating countries should improve initial and continuing training for teachers, trainers, mentors and counsellors by offering flexible training provision and investment. The ageing European teacher and trainer population, changing labour markets and working environments, together with the need to attract those best suited to teaching, make this objective even more critical. Traineeships for teachers and trainers in enterprises should be encouraged;

(b) Participating countries should work together in identifying best practices and guiding principles with respect to changing competences and the profiles of VET teachers and trainers. This could be done with the support of the European Commission and Cedefop in collaboration with its network of VET teachers and trainers.

Labour market relevance

The labour market relevance of VET (both I-VET and C-VET), and the employability of VET graduates, should be enhanced through various measures:

(a) Authorities in the participating countries - at national, regional, or local level - should create opportunities for enhanced cooperation between schools and enterprises in order to improve teachers' knowledge of work practices on the one hand and trainers' general pedagogical skills and competences on the other;

(b) Participating countries should promote partnerships between social partners, enterprises, education and training providers, employment services, public authorities, research organisations and other relevant stakeholders, in order to ensure a better transfer of information on labour market needs and to provide a better match between those needs and the development of knowledge, skills and competences. Employers and social partners should endeavour to clearly define which competences and qualifications they need in both the short and the long term, and within as well as across sectors. The development of a common language aimed at bridging the world of education and training on the one hand, and the world of work on the other hand, should be continued and should be consistent with other EU instruments, such as the EQF;

(c) VET curricula should be outcome-oriented and more responsive to labour market needs. Cooperation models with companies or professional branch organisations should address this issue and provide VET institutions with feedback on both the employability and employment rates of VET graduates;

(d) To improve the quality and relevance of VET, participating countries, and particularly VET providers, should make use of feedback from guidance services on the transition of VET graduates to work or to further learning;

(e) Work-based learning carried out in partnership with businesses and non-profit organisations should become a feature of all initial VET courses;

(f) Participating countries should support the development of apprenticeship-type training and raise awareness of this.

Annex 10. The results of the survey among public administrators in 2012

In order to carry out the overall the analysis of the role of public administrations in the training of innovation competent labour force by the VET systems, it important to **set the background for the study**. According to the author's opinion - even at a very initial stage of a research merely textual analysis (the relevant conceptual and legal framework, and the existing studies and reports on the respective issue) is not enough. In our case we decided from the very start to carry out **a survey among the key policymakers, administrators and other stakeholders involved in education and research domain at national level – with the aim of finding out their opinions towards our research problems**. Later on it turned out to be a very useful approach, since in the course of almost three years we could follow and observe the dynamics in the change of opinions among public administrators, and this will be described in greater detail further on.

Consequently, a survey among high level public administrators and experts was organised at a relatively early stage - at the beginning of the year 2012. It was targeted at studying the opinions and attitudes of the relevant stakeholders towards a range of questions in relation to our research problems. As pointed out previously, the aim of this early survey was to mark a starting point of our research, in order provide an overall background for subsequent research, as well as to yield data for further potential analysis in a historical dimension, if, for example, at a later stages of our research it might be relevant to see the dynamics of the change or evolution of stakeholders' opinions or attitudes.

Such an approached was partly prompted by the relatively novel character of our research – linking innovation with the VET system – which although being a fairly well developed approach in some countries or parts of the world (e.g. Australia), was not very typical in the Latvian VET system. Even in the EU policy documents, as already indicated in the Introduction of the present work, only very recently innovation is being explicitly linked to VET²⁵⁹, apart from the very traditional linking of innovation to higher education and research.

Consequently, an empirical study in the form of a survey was carried out and a respective analysis performed. For the implementation of the survey, a questionnaire was developed (see Annex 1) where high level public administrators and experts were asked relevant questions to evaluate the current situation in VET with regard to innovation. Before the implementation of the survey the questionnaire was tested among proved professionals in the above mentioned fields and corresponding amendments to the questionnaire made. The

²⁵⁹ Primarily it started with the Copenhagen process and especially with the Bruges Communiqué

questionnaire was developed in such a way that the relevant opinions of stakeholders could be analysed in a detailed way and from several perspectives.

As our research interest primarily lies in the approaches and activities of public administrations to secure the training of competitive and innovative labour force with a focus on VET systems, the questions were formulated accordingly. The emphasis was on various aspects of the issue. Evaluations had to be made in the scale 1 – 10, where 1: fully disagree; 10: fully agree. Based on the material obtained by the questionnaire, the analysis of the opinions of the various target groups was conducted and the results compared.

The target group for the empirical study were high and medium level public administrators in education and research, as well as research experts from various research institutions. Exclusively such public administrators and experts were selected who have a significant experience in education and research, and who apart from their major field of competence are highly aware of the priorities and processes in the overall education system. Due to such choice the author could count with an informed and well considered opinion. The selected group also performed the initial expertise of the developed questionnaire.

Practically all known key administrators and experts at national level were approached at the start of the survey – around 35 persons. Due to several reasons around 15 experts finally could not participate in the survey. In some cases, according to the experts' explanations, it was due to business commitments or non-availability during the time of the survey. However, in some cases the possible reason for non-participation was not clearly indicated or mentioned. Thus, according to the author's assumptions, this reluctance might also have been linked with the potentially controversial or politically sensitive nature of the issue – if not otherwise, then in the context of the predominant traditional approaches to innovation as pertinent to higher education and research system. Innovation non-frequently is still being seen as definitively outside the reach of the VET system. The VET system being still associated more with manual work and not so much with intellectual input (as opposed to the HE system), this might have been sensitive or pretentious to express views on innovation in VET.

This is only the author's assumption, as already indicated before. At the same time, given the high administrative or political position (status) of the administrators and experts approached – regardless the explicit statement in the questionnaire that the results of the survey will be analysed and applied confidentially and only in a generalised way – it is a fairly feasible explanation. Especially supported by the evidence from the filled out questionnaires - with the marked tendency in the answers towards such traditional approaches regarding the innovation potential in the VET system.

Some word on the actual composition and representation of the target group of the initial survey - it included such institutions and their sub-divisions as: top and medium level civil servants from the Ministry of Education and Science (MES) – its Department for Policy Coordination, Department of Vocational Education and Training, Department of Higher Education, Department of Research²⁶⁰; administrators and specialists from Study and Research Administration; ex-MoES officials currently implementing EU VET projects; top level administrators from academic agencies; administrators, researchers and experts from Latvian Technology park. In our opinion, such a concentrated choice of high level administrators and experts in our initial survey was a precondition for obtaining a well-considered professional thought as a background and a starting point for our overall research. Especially taking into consideration the plan for subsequent surveys in the research – concerning other relevant target groups (e.g. social partners) with a possibility to carry out some comparison of opinion, as well.

It should be noted that at this stage of our research in the initial survey we were concentrating primarily on the quantitative analysis - by applying the indicators of central tendency or location (arithmetic mean, mode, median), as well as indicators of variability (variance, standard deviation, standard error of mean, range, etc.) as well as cross-tabulations. The reason for this was that we intended to check the opinions stated in academic literature that male and female opinions differ, as well as experience and age group. This has enabled us to set a general background regarding the predominant attitudes of relevant public sector stakeholders in the field of education and research regarding innovation in VET and respective labour force training.

In the preparation of the survey there was a range of questions to be answered. The author of the research had to find out the interviewees' opinion and attitudes towards certain processes and developments in Latvia in relation to the research problem. Questions or statements were formulated accordingly. However for the convenience of the analysis of the obtained empirical data, the questions further on were grouped into several clusters - according to our particular theoretical interest at the particular stage of our research and in compliance with the progress of the undertaken specific relevant theoretical studies. The main clusters for the empirical data analysis of the first survey (among the high level public administrators and experts at national level) are as follows:

Cluster 1. Study on the attitudes of the relevant stakeholders towards the connection between the research and the implementation of innovation, also linking it to the education process

Statement: In Latvia as result of research valuable innovative solutions are created

²⁶⁰ It should be noted that currently the names of MoES departments have changed since mid 2012, due to reorganisation of the administrative structure of MoES.

Statement: Innovative approaches resulting from research policy are successfully implemented

Statement: Research policy is enough connected with needed innovative solutions

Statement: Labour force is competent for implementation of research results

Statement: It is necessary to pay more attention in education and training for implementation of innovation

Cluster 2. Study on the attitudes of relevant stakeholders towards the success of the training of ‘innovation capable’ labour force, as well as towards possible change of institutional approaches to address challenges in the training of modern labour force.

Statement: Professional education has to be more supported in innovations;

Statement: Law on Professional education has to regulate all qualification levels **Statement:** Cooperation between companies and research institutions are of great importance for innovations

Statement: Valuable innovative findings are created by scientific activities in Latvia

Statement: Innovations have to be more stressed in policy documents and legal regulations.

Cluster 3. The study of the value of the links with social partners and better co-operation between the higher education and VET systems to implement innovation.

Question: Are you familiar with the 12 Branch Expert Councils (BECs) established in 2011 (in text further – “Expert Councils”).

Statement: In the education system more attention should be paid to the training of ‘innovation capable’ specialists (in text further – “Training of innovation specialists”).

Question: Can you see added value for a ‘horizontal’ co-operation between the institutional mechanisms functioning within the higher education and research system and the vocational education and training system – with the aim of training ‘innovation capable’ labour force at all levels (in text further – “Horizontal co-operation”).

Cluster 4. The analysis of the need for strengthening the VET system regarding innovation, as well as strengthening links between VET and research.

Statement: VET system should be considerably strengthened regarding the implementation of innovation;

Statement: Closer links between the VET system and the research society would enhance the implementation of innovation in VET;

Statement: Closer links between the higher education system (HES) and VET would enhance a more comprehensive approach towards the training of competitive labour force.

Cluster 5. Analysis and comparison of the opinions of experts regarding the training of ‘innovation capable’ labour force at the higher and vocational education systems, as well as on the need to establish closer links between the two systems.

Statement: Labour force (LF) with higher education (HE) (within the range of competence) is well prepared for the implementation of innovation (are innovation capable);

Statement: Labour force (LF) with vocational secondary education (VSE) (within the range of competence) is well prepared for the implementation of innovation (are innovation capable);

Statement: Closer links between the higher education system (HES) and vocational training system (VTS) would promote the implementation of innovation.

Cluster 6. Analysis of the preparedness of staff (employees) to implement innovation – depending on the type of education they have had (obtained)

Statement: Staff with college level education are well prepared to implement innovation

Statement: Staff with vocational secondary education are well prepared to implement innovation

Statement: Training at enterprises is the key measure in preparing an innovation capable labour force

Cluster 7. The role and value of co-operation between policymakers and administrators in higher education and VET – to promote innovation.

Statement: Competent and innovation oriented labour force training need closer co-operation between:

Policy makers of higher education and research

Policy makers of professional education and research

Policy makers of higher and professional education

Administrators of higher education and research

Administrators of professional education and research

Administrators of higher and professional education

Further on analysis of the clusters (related groups of statements or questions) will be performed.

Cluster 1. Study on the attitudes of the relevant stakeholders towards the connection between the research and the implementation of innovation, also linking it to the education process. The following empirical research results were obtained:

A.10 T1 Main statistical indicators on research and innovation policy in Latvia in 2012					
Statistical indicators	In Latvia as research result valuable innovative solutions are created	Innovative approaches resulted by research policy are successfully implemented	Research policy is enough connected with demanded innovative solutions	Labour force is competent for research results' implementation	It is necessary to pay more attention in education and training for realisations of innovations
N Valid	19	19	17	19	19
Missing	0	0	4	0	0
Mean	6,2105	4,4737	4,5294	5,1579	7,6316
Std. Error of Mean	0,41590	0,31870	0,68662	0,46681	0,44070
Median	7	4	5	4	8
Mode	5 and 7	4	5	4	8
Std. Deviation	1,81288	1,38918	2,83103	2,03479	1,92095
Variance	3,287	1,930	8,015	4,140	3,690
Range	7	5	8	7	6
Minimum	2	2	1	3	4
Maximum	9	7	9	10	10

Source: Expert survey in January – February, 2011. Evaluation scale 1 – 10, fully disagree, 10 – fully agree (n=19)

where 1-

Information in Table 1 indicates that experts on innovation issues have low evaluations on issues related to innovations: the lowest evaluations of all experts are for the statement “Innovative approaches resulted by research policy are successfully implemented” where there is the lowest arithmetic mean of the evaluations, most of experts for the statement gave 4 (mode), for half of experts evaluations were less than 4, for half of experts evaluations were more than 4 (median). For this statement there were the lowest differences in evaluations of experts – confirmed by indicators of variability. For the statement “Research policy is well connected with demanded innovative solutions” experts had very different view - points: there

was the greatest variability of evaluations, there were even two experts whose evaluations were 9, but many experts gave low evaluations. Most of the experts evaluation was 5, also median was 5. Great differences of expert evaluations were for the statement “Labour force is competent for research results’ implementation” – from 3 to 10, most of experts gave evaluation 4 (mode), half of experts gave evaluations less than 4, for half of the experts gave evaluations more than 4 (median). Based on the analysis of the policy makers and administrators’ statements – major work and input is needed to put the innovation policy on the right track.

Cluster 2. Study on the attitudes of relevant stakeholders towards the success of the training of ‘innovation capable’ labour force, as well as towards possible change of institutional approaches to address challenges in the training of modern labour force.

Through the survey in this Cluster we were aiming at finding out to what degree among Latvian experts the notions ‘professional education’ and ‘innovation’ are seen as a unity and to what degree the field of vocational education is being seen as an important component of the overall professional education domain (where also higher professional education belongs, of which innovation by tradition is seen as an indispensable part). Further on, our intention was to determine the overall attitude of public administrators towards the achievements in innovation in Latvia, and to what degree they acknowledge the importance of linking the innovative ideas to the practice.

A10 T2 Expert evaluations on issues related to innovations for professional education in the Republic of Latvia

Statistical indicators		Professional education has to be more supported in innovations	Law on Professional education has to regulate all qualification levels	Cooperation between companies and research institutions are of great importance for innovations	Valuable innovative findings are created by scientific activities in Latvia	Innovations have to be more stressed in policy documents and legal regulations
N	Valid	20	20	20	20	20
	Missing	1	1	1	1	1
Mean		7,55	5,70	8,50	6,10	7,55
Std. Error of Mean		0,484	0,798	0,387	0,403	0,484
Median		8	7,5	9	6,5	7,5
Mode		10	8	10	5	10
Std. Deviation		2,164	3,570	1,732	1,804	2,164
Variance		4,682	12,747	3,000	3,253	4,682
Range		7	10	7	7	7
Minimum		3	0	3	2	3
Maximum		10	10	10	9	10

Source: Author’s performed expert survey in 2012, n=21

Evaluation scale 1 – 10, where 0- no opinion, 1 – do not agree, 10 fully agree

Data of Table 2 indicate that experts have different views (with very high variability), and the situation in the implementation of innovation is facing challenges. The highest average

evaluation is given for the statement on “Cooperation between companies and research institutions are on greatest importance for innovations” (average 8,5; mode 10 - most met evaluation, median 9 – half of experts gave evaluation less 9, half of experts – more 9).

Regarding Figure 8 - the opinions of experts shows that they do not estimate the results of innovation in research too highly (6,1). The notion of innovation is not much linked to the notion of professional education – which in our opinion implies the still predominating traditional opinions that innovation is primarily linked to the domain of research. Also regarding the possible increase of support to innovation in professional education the opinions of experts show a reserved attitude – 7,55 (most of experts gave the highest evaluation 10 (mode), but there was also an evaluation 3). Neither much support is being shown to the proposed approach – to view the vocational education and the higher professional education as a unity for the training of modern labour force – the experts do not support the idea of one law for professional education at all qualification levels (average evaluation 5,7 with very high differences in evaluations – the biggest variance). We draw a conclusion that the traditional approaches still prevail in public administration concerning the training of innovation capable labour force in vocational and higher education systems. These systems are still being viewed relatively separately, and innovation is scarcely linked to the vocational education system. Regarding the importance of co-operation between companies and research institutions – the attitude of experts is more positive – the score is 8,5 points, indicating that the issue of commercialisation of innovation is accepted as an important routine procedure.

Cluster 3. The study of the value of the links with social partners and better co-operation between the higher education and VET systems to implement innovation (table 3.).

A10 T3 Main statistical Indicators of Expert Survey on Innovation Implementation

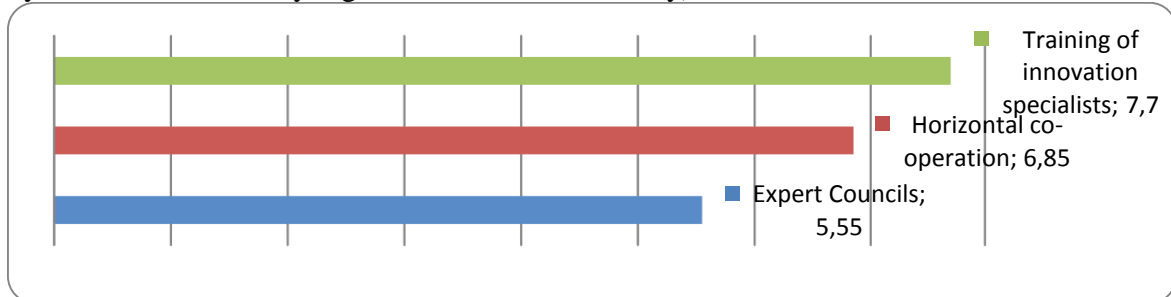
Statistical indicators	Expert Councils	Horizontal co-operation	Training of innovation specialists
N	Valid	20	20
	Missing	1	1
Mean	5,55	6,85	7,70
Std. Error of Mean	0,819	0,629	0,398
Median	6	8	8
Mode	0; 6; 10	8 and 9	8
Std. Deviation	3,663	2,815	1,780
Variance	13,418	7,924	3,168
Range	10	10	6
Minimum	0	0	4
Maximum	10	10	10

Source: Expert survey: January – March, 2012, n=21

Evaluation scale 1 – 10, where 1- fully disagree; 10 – fully agree; 0 – no opinion

Data of table 3 indicate that experts have rather similar and high opinion on “training of innovation specialists”: all indicators of central tendency are alike: arithmetic mean is 7,7;

mode is 8 (most often evaluation level of experts); median is 8 (half of experts gave evaluation 8 or less, half of experts gave evaluation 8 or more), indicators of variability are rather low: all experts gave evaluations at least 4 and all of them had supported this issue and had view on that. Rather high evaluations are on “horizontal co-operation” where most evaluations are 8 and 9, but there are three experts who gave evaluations 4 or less. Very different opinions are on expert councils: the evaluations were from very high till rather low and no opinion (indicated by mode and extremely high indicators of variability).



A10 F1 Average Evaluations of Experts on Innovation Implementation

Source: Expert survey: January – March, 2012, n=21

Evaluation scale 1 – 10, where 1- fully disagree; 10 – fully agree; 0 – no opinion

Cluster 4. The focus of the survey in Cluster 4 has been on the analysis of the need for strengthening the VET system regarding innovation, as well as strengthening links between VET and research. It was also proposed that a comprehensive approach toward the training of modern labour force would be enhanced by a better co-operation between the VET system and the higher education system. It should be noted that the formulation of the statements for research imply possibility to view the same issue from a different but related perspective. As we will show in the subsequent analysis of the answers to the statements – this has allowed us to propose respective interpretation of the expert answers. The results are presented in table4. Q4.

A10 T4 Main statistical indicators of expert evaluations on VET importance for innovations in Latvia

Statistical indicators	Closer relations between science and VET system would enhance the implementation of innovation in VET	Closer relations between science and professional education system could encourage a comprehensive preparation of qualified labour force	VET system has to be strengthen in the implementation of innovation
N Valid	20	20	20
Missing	1	1	1
Mean	6,15	7,10	7,55
Std. Error of Mean	0,549	0,688	0,484
Median	6	8,5	8
Mode	6 and 8	9	10
Std. Deviation	2,455	3,076	2,164
Variance	6,029	9,463	4,682
Range	9	9	7
Minimum	1	1	3
Maximum	10	10	10

Source: Author's calculations of expert survey (2011) results, Evaluation scale 1-10, where 1-disagree; 10- agree

Expert evaluations confirm that they have different views on the analysed issues (proved by the indicators of variability), but on the average evaluations are relatively high: arithmetic mean for analysed statements are higher than 6, most of experts (characterised by mode) gave

high evaluations: for the statement “Closer relations between research and VET system would enhance the implementation of innovation in VET”: 6 and 8; for the statement “Closer relations between research and VET system could encourage a comprehensive preparation of qualified labour force” most of the experts (35%) gave evaluation 9, but for the statement “VET system has to be strengthened in the implementation of innovation” experts (25%) gave evaluation 10: it implies that this issue is of great importance for many experts. For the statement “Closer relations between science and VET system would enhance the implementation of innovation in VET” half of experts gave evaluations 6 or less, half of experts gave evaluations 6 or more (characterized by median). For the statement “Closer relations between science and professional education system could encourage a comprehensive preparation of qualified labour force” half of the experts gave evaluations less than 8,5, half of the experts gave evaluations more than 8,5 (characterized by median). For the statement “VET system has to be strengthened in the implementation of innovation” half of the experts gave evaluations 8 or less, half of the experts gave evaluations 8 or more (characterized by median). As the variability of expert evaluations is very high and experts are really recognised specialists in the field of education and science, as well as innovation, expert evaluations were examined in greater detail, in order to propose reasons and potential explanations for the high rate of the variability.

Cluster 5. The focus of the survey in Cluster 5 has been on the analysis and comparison of the opinions of experts regarding the training of ‘innovation capable’ labour force at the higher and vocational education systems, as well as on the need to establish closer links between the two systems. The results of the analysis of the expert answers to Statements 1 - 3 are presented in table 15.

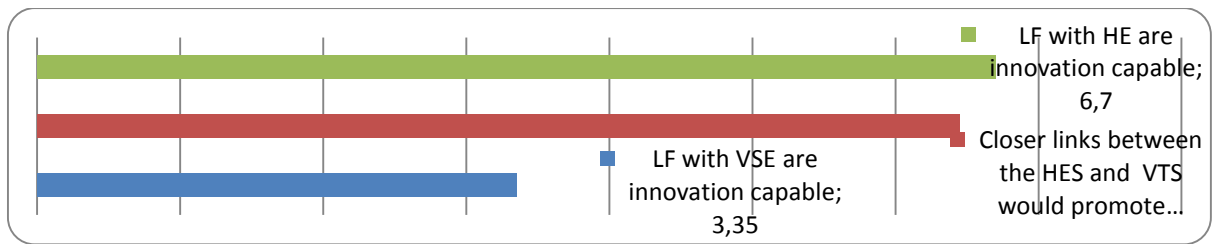
A10 T5 Main statistical indicators of expert evaluations

Statistical indicators		LF with HE are innovation capable	LF with VSE are innovation capable	Closer links between the HES and VTS would promote the implementation of innovation
N	Valid	20	20	20
	Missing	1	1	1
Mean		6,70	3,35	6,45
Standard Error of Mean		0,333	0,604	0,569
Median		6,5	4	8
Mode		6	0	8
Standard Deviation		1,490	2,700	2,544
Variance		2,221	7,292	6,471
Range		6	8	8
Maximum		10	8	9

Source: Author's performed expert survey in 2012, n=21

Evaluation scale 1 – 10, where 0- no opinion, 1 – do not agree, 10 fully agree

Experts have evaluated surprisingly low innovation capability of the labour force with vocational secondary education. The average expert evaluations are presented in Figure 2.



A10 F2 Average expert evaluations on issues related to innovations for professional education in Republic of Latvia

Source: Author's performed expert survey in 2012, n=21

Evaluation scale 1 – 10, where 0- no opinion, 1 – do not agree, 10 fully agree

The distribution of the expert answers to Statement “Labour force (LF) with higher education (HE) (within the range of competence) is well prepared for the implementation of innovation (are innovation capable)” are presented in table 6.

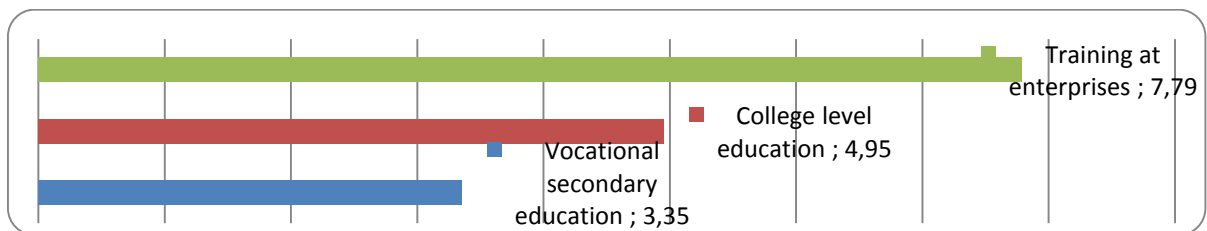
A10 T6 Main statistical indicators of expert evaluations on several statements related to professional education of employees

		Staff with college level education are well prepared to implement innovation	Staff with vocational secondary education are well prepared to implement innovation	Training at enterprises is the key measure in preparing an innovation capable labour force
N	Valid	20	20	19
	Missing	1	1	2
Mean		4,95	3,35	7,79
Std. Error of Mean		0,671	0,604	0,379
Median		5,5	4	8
Mode		0 and 4 and 7	0	8 and 9
Std. Deviation		3,000	2,700	1,653
Variance		8,997	7,292	2,731
Range		9	8	7
Minimum		0	0	3
Maximum		9	8	10

Source: Author's calculations of expert survey results, Evaluation scale 1-10, where 1 – not important; 10 – very important

Data of table 6 indicates that experts gave the highest evaluations for the statement ‘Training at enterprises is the key measure in preparing an innovation capable labour force’, where the average evaluation was 7,79. Half of experts gave evaluation 8 or highest (median), biggest share of evaluations for this statement being 8 and 9 (mode). No expert gave lower evaluation than 3, variability of expert evaluations was rather low (standard deviation, variance, standard error of mean). A conclusion can be drawn that on average there is a high awareness level among relevant stakeholders concerning the role and benefits of training at enterprises, and that such a training is needed for the preparation of innovation capable or innovation competent workforce. This implies also the awareness that in enterprises the actual labour force tendencies are manifested, which potentially can be brought into the VET systems only if a close link between the VET providers and employers is secured.

The experts gave a very low evaluation for the statement ‘Staff with vocational secondary education are well prepared to implement innovation’: the average evaluation was just 3,35. The highest evaluation was 8, but half of experts gave evaluation 4 or lower (median). Rather low were also expert evaluations on the statement ‘Staff with college level education are well prepared to implement innovation’ – the average evaluation was 4,95. Half of experts gave evaluation higher than 5,5 (median). This is a rather unexpected result given the fact that college education in Latvia formally belongs to the higher education system which by definition is much closer linked to the issue of innovation, research and development. Moreover, the college system has a much higher prestige in the eyes of society and also in specialist circles, according to our observations. Therefore additional in-depth study and analysis would be needed to find out the reasons for such a relatively low evaluation of the capacity of colleges to train innovation competent labour force. As it had been expected – the evaluation of VET providers to train innovation competent workforce has been evaluated as low on the average. There were no significant differences, however, in evaluations regarding to experts sex, neither in regard to expert’s experience in the field. Averages of the analysed statements are shown on Figure 3.



A10 F3 Averages of expert evaluations on several statements related to professional education of employees

Source: Authors' calculations of expert survey results, Evaluation scale 1-10, where 1 – not important; 10 – very important

As represented in figure 3, there is a marked difference in the attitudes of experts towards the training of innovation competent work-force at an enterprise (work-based training) and the respective training at school. The evaluation of the school-based training, in our opinion, is almost critically low. There could be several explanations for this. On the one hand – the overall prestige of VET in Latvia is low. At the same time, since the survey question concerns the training of innovation competent workforce, the experts might have held the views that a) innovation does not or need not be related to VET in principle; or b) the training in VET of innovation competence because of objective reasons is hardly existent, consequently scored low in the questionnaire, which by itself may not indicate the overall low evaluation of the VET training (e.g., the low scores relate exclusively to the innovation component which in itself may or may not be regarded as a relevant VET component).

Cluster 7. The focus of the survey is on the role and value of co-operation between policymakers and administrators in higher education and VET – to promote innovation.

A10 T7 Statistical indicators of expert evaluations on statement “Competent and innovation oriented labour force training need closer co-operation”

Statistical indicators		Policy makers of			Administrators of		
		higher education and research	professional education and research	higher and professional education	higher education and research	professional education and research	higher and professional education
N	Valid	20	20	20	19	19	19
	Missing	1	1	1	2	2	2
Mean		7,80	6,35	7,35	7,79	5,37	6,53
Std. Error of Mean		0,490	0,612	0,466	0,371	0,568	0,486
Median		8	7,5	8	8	5	7
Mode		10	8	8	8	7 and 8	8
Std. Deviation		2,191	2,739	2,084	1,619	2,477	2,118
Variance		4,800	7,503	4,345	2,620	6,135	4,485
Range		8	9	7	5	8	6
Minimum		2	1	3	5	1	3
Maximum		10	10	10	10	9	9

Source: Author's calculations of expert survey results, Evaluation scale 1-10, where 1 – not important; 10 – very important

Experts have indicated that it is necessary to perform closer co-operation among policy makers and administrators of higher education, professional education and research, the evaluations are really high. The highest expert evaluations are for suggestions on closer co-operation among policy makers of higher education and research

The overall empirical study was carried out regarding a wide variety of issues, however, the relevant questions for the research represented in the paper concerned the links between higher education (HE, vocational education and training (VET) and research policy makers and administrators for the training of competent and innovation capable labour force and the corresponding institutional mechanism to secure the training of respective labour force. Analysis of answers has been presented regarding the following research specific questions/statements: 1. In the training of competent and innovation capable labour force closer so-operation is needed between various stakeholders: a) HE and VET policy makers; b) HE and VET administrators; c) HE and research policy makers; d) HE and research administrators; e) VET and research policy makers; f) VET and research administrators. 2. The existing institutional mechanisms ensure the training of high level innovative specialists. 3. The existing institutional mechanisms ensure the training of medium level innovative specialists. 4. The existing institutional mechanisms ensure the training of lower level innovative specialists.

The results of the analysis of the expert answers to the Statement ,In the training of competent and innovation capable labour force closer so-operation is needed between various stakeholders‘ are presented in Table 8.

A10 T8 Statistical indicators of expert evaluations on statement “Competent and innovation oriented labour force training need closer co-operation”

Statistical indicators		Policy makers of			Administrators of		
		higher education and research	professional education and research	higher and professional education	higher education and research	professional education and research	higher and professional education
N	Valid	20	20	20	19	19	19
	Missing	1	1	1	2	2	2
Mean		7,80	6,35	7,35	7,79	5,37	6,53
Std. Error of Mean		0,490	0,612	0,466	0,371	0,568	0,486
Median		8	7,5	8	8	5	7
Mode		10	8	8	8	7 and 8	8
Std. Deviation		2,191	2,739	2,084	1,619	2,477	2,118
Variance		4,800	7,503	4,345	2,620	6,135	4,485
Range		8	9	7	5	8	6
Minimum		2	1	3	5	1	3
Maximum		10	10	10	10	9	9

Source: Author's calculations of expert survey results, Evaluation scale 1-10, where 1 – not important; 10 – very important

Data of Table 8 confirms that the evaluations are lower for VET, there is higher variance in responses: higher evaluations of experts were given for policy makers of higher education and research, as well as for administrators of higher education and research. The lowest evaluations are for administrations of professional education and research, where arithmetic mean of the expert evaluations was 5,37 with median 5 (half of experts gave higher evaluation than 5, half gave lower than 5).

For answers to the statement „The existing institutional mechanisms ensure the training of high level, medium level and lower level innovative specialists” see Table 9.

A10 T9 Statistical indicators of expert evaluations on statement ,The existing institutional mechanisms ensures the training of high level, medium level and lower level innovative specialists‘

		The existing institutional mechanisms ensures the training of		
		high level innovative specialists	medium level innovative specialists	lower level innovative specialists
N	Valid	20	20	18
	Missing	1	1	3
Mean		4,75	4,50	4,28
Std. Error of Mean		0,695	0,564	0,535
Median		6	5	5
Mode		8	5	5
Std. Deviation		3,110	2,524	2,270
Variance		9,671	6,368	5,154
Range		8	8	7
Minimum		0	0	0
Maximum		8	8	7

Source: Author's calculations of expert survey results, Evaluation scale 1-10, where 1 – not important; 10 – very important

Survey results indicate that experts give rather low evaluations for the statement. Only for evaluation on training of higher level specialists are higher, but still the arithmetic mean of this evaluations is only 4,75; median is 6 and mode is 8. For all statements no expert gave evaluation higher than 8. The views of experts differ on great extent – it is confirmed by high values of indicators of variability.

The results of the analysis of the expert answers confirms that indicators of central tendency or location for those statements are low, except for the statement „The existing institutional mechanisms ensures the training of high level innovative specialists“. Clearly, more relevance is being attributed to the possibility of training of innovation competent specialists at higher level, with traditionally less importance of innovation competence at medium and lower level. It contradicts the current EU policy priorities, and calls for revision of VET priorities regarding the labour force training. It has implication also to the European Qualification Framework where level 5 qualification refers to highly qualified medium level specialists. It gives the agenda for public administrators to develop the legislative regulation to support training of innovative specialists for all levels: higher level, medium level and lower level specialists.

Conclusions. As a result our research the following conclusions can be drawn: The EU policy making is undergoing a change with new emphasis on innovation in all education and training sectors and close links with the labour market developments. The academic discourse addresses the issue of innovation and training in a variety of contexts, still without clear indications on best possible paths in future. Both – the policy developments academic discourse stress the need for new approaches and mechanisms to promote links between innovation and training. In practice the traditional attitudes still prevail regarding the relevance of co-operation between policy makers and administrators in higher education, VET and research concerning the implementation of innovation.

The least importance is being attributed to the co-operation between VET policy makers and administrators with their counterparts in the research sector
According to the opinion of relevant stakeholders the existing institutional mechanisms currently cannot ensure the training of medium level innovative specialists

Continued research and studies are needed to offer solutions in the Latvian context for improved approaches in the training of innovation competent specialists at all levels

Our analysis shows that traditional approaches to the training of labour force still prevail on most issues. The evaluation of the labour force prepared within the higher education system is still much more considered as an integral part of the implementation of innovation in practice than in regard to the vocational training system. Also the overall quality of the prepared labour

force within the higher education system is being regarded as of higher quality. This in our opinion represents not only the attitude of public administrators and experts towards the quality of labour force trained within the two systems, but also the prevalence of traditional opinions that innovation capable labour force is an integral part to the higher education system. This is partly proved by the prevailing opinion among experts that closer links between the higher education and vocational training systems is not a crucial issue for the overall improvement of labour force training at all levels. The same refers, as our previous research shows, to the attitude towards the existing institutional mechanisms, where relatively little emphasis has been put on the need for a more comprehensive approach towards integrated efforts in the training of 'innovation capable' labour force at all levels. This presents new challenges for further research on the causes and dynamics of the prevailing opinions in the training of labour force.

Although among the key stakeholders in the higher education and research system and the vocational education and training system traditional approaches is currently predominant, the attitudes towards novel solutions are not markedly negative, which allows us to assume that there is space for innovative development.

In the public administration of Latvia innovation is predominantly viewed as part of the higher education and research system, with less linkage to the professional (vocational) education and training. Professional education is still being viewed as consisting of two distinct parts – vocational education and professional higher education, with innovation to a high degree belonging to the higher education domain. Consequently, innovation is being attributed to the domain of highly skilled workforce, but not so much to the training of workforce at medium and lower qualification levels. The respective institutional mechanisms reflect the same tendency, for example, the legal framework, where the expert survey shows potential adherence to traditional approaches. Not questioning the positive aspects of adherence to tradition, as a result of our research we have come to the conclusion that public administration not only has to secure the implementation of innovation but should itself be open for innovative approaches of governance and policy design. Therefore we see it important to stimulate further discussions among relevant stakeholders to promote new and innovate forms of governance in public administration to secure improved approaches to labour force training in the context of innovation. The results of the analysis suggest material for future research on these problems. The role of social partners in the context of top level policy decisions for the training of innovation competent labour force in the VET system

Having studied the opinions and attitudes of the public administrators and experts at national and at local/ community level regarding innovation in VET and the training of competent labour force, it was important to study the opinions and attitudes of the other major

target group – the employers. The study of the opinion of the target group was carried out in the framework of two independent EU supported projects. However, the overall study was not limited to the employers alone, it concerned also other relevant target groups as well. Therefore alongside with the main focus on the employers, also data from other relevant target groups were partly utilised, as will be explained further on.

At the same time it should be noted that geographically the projects cover the whole of the Kurzeme region of Latvia and the greater part of the Zemgale region (the Iecava and Jelgava districts). Since the territory where the two projects were implemented and the employers' survey performed geographically covers almost half of the territory of Latvia, there is good ground to presume that there is a high level of representation implied in the survey. More details on the methodology for the choice and access to the target group (the employers) and the development and use of the relevant questionnaires will be presented further on.

First of all the process and the results of the survey of the employers of the Iecava district will be presented. An extensive empirical study in the form of a survey was carried out. The target group for the empirical study were both - high and medium level public administrators in education and research and experts from various research institutions, as well as representatives from regional employers and employer organisations as a pilot group. Several research questionnaires were developed for these specific target groups. The administrators, experts and employers were asked relevant questions to evaluate the current situation and the potential future developments. More specifically, the target group consisted of: 1) high and medium level public administrators from the education and research domain, as well as research experts chosen according to their status and proved competence. Practically most relevant public administrators and experts were approached at the start of the survey – with significant experience in education and research, and who parallel to their major field of competence are also highly aware of the priorities and processes of the overall education system (to have an informed and well considered opinion). 2) employers of the Iecava region - covering both, small and medium size enterprises, as well as several larger enterprises in the region.

Before the expert survey the questionnaire was tested among proved professionals in the above mentioned fields. Evaluations had to be made in scale 1 – 10, where 1: fully disagree; 10: fully agree. Based on the material obtained by the questionnaire, the primary analysis of the opinions of the various target groups has been conducted and the results compared.

The qualitative analysis has been complemented by quantitative analysis by applying the indicators of central tendency or location (arithmetic mean, mode, median), as well as indicators of variability (variance, standard deviation, standard error of mean, range, etc.) as well as cross-tabulations. This has enabled us to draw conclusions regarding the research

problem based on which further practical recommendations for possible steps in policy making could be prepared and taken.

The public administrators and experts were asked questions concerning the need to strengthen the VET systems for innovation, the need to pay more attention to the training of innovation competent labour force and the value of training at the work place approach²⁶¹.

The employers of the Iecava region were asked questions to find out their attitude towards the need of innovative approaches in VET in general and specifically regarding work based learning (dual system) approaches. The questions concerned 1) the employers' attitude towards innovation and work based learning: Do you find it necessary to introduce innovative approaches in VET in general? Do you support the introduction of work-based learning (dual system) in VET? 2) their attitude and satisfaction with the VET content and mode of delivery - the questions concerned the employers' satisfaction with : Information on possibilities to train employees; Information on training abroad; Information on distance education programs; Increase of professional competence at work place; Creation of special professional training programs; Offer of professional education programs for company; Regular information on distance education courses - in order to secure more flexible approaches to better match the demand. In the following part the results of the empirical research will be presented and analysed. The results of the study concerning the opinions of the public administrators and experts are represented in Table 10.

A10 Table 10. Public administrators and experts' views on the need for innovation in the VET system

Statistical indicators	The VET system should pay more attention to the training innovation competence of the labour force	The VET system should be much more strengthened regarding innovation	The training implemented by employers is the most important approach in the training of innovation competent labour force
Mean	7,70	7,55	7,79
Std. Error of Mean	0,398	0,484	0,379
Median	8	8	8
Mode	8	10	8 and 9
Stdandard. Deviation	1,780	2,164	1,653
Variance	3,168	4,682	2,731
Range	6	7	7
Minimum	4	3	3
Maximum	10	10	10

Source: Author's calculations based on expert survey results. Evaluation scale 1-10, where 1-not important; 10- very important

²⁶¹ The questions to the administrators and experts were: 1. The VET system should be much more strengthened regarding innovation; 2. The VET system should pay more attention to the training innovation competence of the labour force; 3. The training implemented by employers is the most important approach in the training of innovation competent labour force.

Experts gave a very high evaluation for the proposed statements. Only several experts gave the evaluations 3 or 4 (no one gave a lower evaluation). All averages are very alike, mode and median in all statements of the experts are not lower than 8, variability of responses are low. It means that experts really see the importance of innovations in the VET.

The results of the study of opinions of employers of Iecava region of Latvia are represented in Tables 11 and 12.

A10 Table 11. Entrepreneurs' views on the need for changes in vocational education in Iecava district in April 2013

Statistical indicators	Do you find it necessary to introduce innovative approaches in VET in general	Do you support the introduction of work-based learning (dual system) in VET
Mean	7,64	7,71
Standard Error of Mean	0,428	0,465
Median	8	8
Mode	8 and 10	10
Standard Deviation	2,264	2,462
Variance	5,127	6,063
Range	7	9
Minimum	3	1
Maximum	10	10

Source: Author's calculations based on entrepreneurs survey results. Evaluation scale 1-10, where 1-not important; 10- very important

Entrepreneurs have expressed support on necessity of introduction of innovative approaches to VET, the evaluations were very high, no employer has given the lowest evaluations. Rather similar attitude of employers were on introduction of dual education system or at least its elements in professional education.

Data of Table 12 indicate that entrepreneurs gave very high evaluations for both the mentioned statements, where the average evaluation was 7, 64 and 7, 71. Half of entrepreneurs gave evaluation 8 or higher (median), largest share of evaluations for those statements were 8 and 10 (mode). Variability of entrepreneur's evaluations was rather high (standard deviation, variance, standard error of mean).

The average there is a high awareness level among entrepreneurs concerning the need for changes in the vocational education. This implies also the awareness that in enterprises the actual labour force tendencies are manifested, which potentially can be brought into the VET systems only if a close link between the VET providers and employers is secured. Evaluations of attitudes are included in Table 12.

A10 Table 12. Entrepreneurs views on the needs for professional education/ training for their companies in Iecava district 2013.

	Information on possibilities to train employees	Information on training abroad	Information on distance education programs	Increase of professional competence at work place	Creation of special professional training program	Offer of professional education programs for company	Regular information on distance education courses
Mean	5,93	4,46	5,36	5,50	4,79	5,41	6,12
Std. Error of Mean	0,613	0,569	0,517	0,516	0,540	0,637	0,614
Median	7	4	5	5	5,5	5	6
Mode	1	1	5 and 8	5 and 7	1 and 7	1	10
Std. Deviation	3,242	3,012	2,738	2,728	2,859	3,308	3,128
Variance	10,513	9,073	7,497	7,444	8,175	10,943	9,786
Range	9	8	9	9	9	9	9
Minimum	1	1	1	1	1	1	1
Maximum	10	9	10	10	10	10	10

Source: Author's calculations based on survey results. Evaluation scale 1-10, where 1-not important; 10- very important

Employers have indicated that they are interested in information on different possibilities for increase of professional competence of their employees, but the views of preferences are wide. Almost all the scale were covered in the statements. The highest evaluations were on “Regular information on distance education courses” – the highest arithmetic mean and mode.

Entrepreneurs survey results confirm that views of entrepreneurs related to professional education/training are highly different, and the average evaluations for different statements differ in a wide range. The highest evaluations entrepreneurs gave for information on distance education courses, the lowest are for information on training abroad: it confirms that they are interested not disturb their production process and imply the use free time for improvement of qualification and skills.

Conclusions regarding entrepreneur's opinions (also in comparison in some aspects with the public administrators and experts' opinions)

The research had been aimed at studying the role of public administrations and employers in relation to the training of innovation competent labour force in VET systems – in order to secure a better match of the acquired competences and the actual labour market demands.

As a result of the research the following conclusions have been drawn. In the public sector there is a growing awareness among public policy makers that innovation competent labour force needs to be trained also in the VET system, since the labour market needs innovation capable workers at all levels. The growing awareness is manifested both, in the most recent policy planning documents, as well as in interviews with relevant stakeholders. Most

experts also hold the view that it is important to strengthen the VET system in relation to innovation. Regarding the proposed innovative approach for Latvia – the introduction of work-based learning – were evaluated highly. The consistency of the answers by experts to all the three proposed statements testify to their confidence on the above-mentioned issues.

Our empirical research has shown that employers and employers' organisations are also generally well aware of the need for VET innovation, and there is supportive attitude also toward specific innovative measures, e.g., the work-based learning.

At the same time, in the answers by employers to the questions on the training of the employees, a contradiction emerges, since the generally low evaluations for the offered training options testify to the reluctance of the employers to further educate and train their employees. Moreover, the highest score given by the employers to the value of distance education courses represent the pragmatic implications – not let the training interrupt or disturb the production cycle. Consequently, the conclusion can be drawn that the employers for some reason do not value various forms of training (including sessions abroad) as important (or possible) for the competence development of their employees. The reason for this might be the present economic crises (this is only our assumption, since it was not the task of our research to study the motivation of employers). At the same time to some extent this testifies to a systemic problem – lack of incentives and support for employers to be interested and afford continuing education and competence development of their employees to secure an innovative and competent labour force. In our opinion this implies a task for public administrations to review the existing legal framework concerning the labour force training and competence updates at companies as well. Consequently, further research is needed on the mechanisms for implementing VET innovation jointly by public administrators and by the relevant social partners.

Annex 11. Programs and qualifications in WBL pilot project

According to the Ministry of Education Press Briefing presentation July 1, 2014, programs covered by VET institutions in WBL in the academic year 2013/2014:

Program: Administrative and secretarial services, Qualification: Customer Service Specialist

Program: Road, Qualification: car mechanic

Program: Road, Qualification: electrician

Road-mechanic

Road - mechanic, auto mechanic, electrician, logistics officer

Program: Construction, Qualification: Road construction technician

Program: Works, Qualification: Technician of finishing works

Program: Works, Qualification: Roofer

Program: Works, Qualification: the chainsaw operator

Program: Works, Qualification: Carpenter

Program: Computer Systems, Qualification: Computer Systems Technician

Program: Computer Use, Qualification: word processing operator

Program: Garden and park maintenance, Qualification: park gardener

Program: Gardening, Qualification: gardener

Program: Energy and Electrical Engineering, Qualification: Electrician

Program: Electronics, Qualification: electronics technician

Program: Catering Services, Qualification: cook

Catering services, Qualification: Food Service Specialist

Program: Floral Services, Qualification: floristry specialist

Program: Hairdressing, Qualification: barber-stylist

Program: Materials and Wood Technology Qualification: woodworking machine operator

Program: Wood Making, Qualification: carpenter

Wood Making - carpenter, furniture carpenter, CNC machine tools master

Program: "Commercial" Qualification "retail commercial employee"

Program: Cosmetology, Qualification: beautician

Program: Agriculture, Qualification: rural property manager

Program: Agricultural machinery Qualification: agricultural machinery mechanic

Program: Mechanical Sciences, Qualification: construction and road-building machinery mechanic

Program: Metal, Qualification: mechanized welding with active gas plant medium (MSM)

Program: Program: Forestry Equipment, Qualification: forest machine mechanic

Program: flour products, Qualification: bread and flour products specialist

Program: Real estate marketing and management Qualifications: House Manager

Program: Food Technology, Qualification: sweets and chocolate production technician

Program: Restaurant services, Qualification: restaurant service specialist

Restoration - restorer assistant

Program: Heat, Gas and Water Technology, Qualification: utilities assembler

Program: Plant breeding, Qualification: gardener plants grower

Travel services - ecotourism specialist travel consultant, travel companion group

Program: "Textiles manufacturing technology and product manufacturing", Qualification: Textile production and manufacturing specialist

Program: Travel services, Qualification: rural tourism specialist

video operator

Program: Hotel services, Qualification: hotel service specialist

Hotel services - Chambermaid