

**CRITICAL EVALUATION OF THE NECESSARY CHANGES OF THE INTERACTION OF
EMPLOYERS, EMPLOYEES, LOCAL AUTHORITIES, STATE AND OTHER STAKEHOLDERS OF
THE EDUCATION SYSTEM**

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Abstract. Expansion of business creates globalization, which should be balanced by the localization and development of adequate changes in education. Aim of the paper is to find the ways to solve the social problems linked with the globalization.

The review of the existing problems reveals many shortcomings of the classical “free market” theory. The increased speed of exchange of information demands special care to improve the accessibility and quality of education, using life-long learning and distance education. The appropriate attitudes, skills and knowledge should be proposed to support innovations, localization of economics and organization of interaction between employers, employees and other involved parties (state authorities, local communities) to cope with the future challenges.

Research methods used in this paper are scientific publications and previous research analysis, statistical data analysis for the critical evaluation of social structure, interaction of people and possibilities for the cooperation. The dispersed knowledge, necessary for the successful action of economics belong to different actors. Creation of trust between all involved actors becomes more important now. Education must give not only skills and knowledge, but also attitudes and morality.

All stakeholders of the education system should participate to support changes in education and lifelong learning according to the fast changes in the social structure. The main part of the interaction should be informal. Cooperation and negotiations, using local networks, are the most effective way to receive the knowledge and skills and to create trust and motivation. Innovations should be linked with the development of local networks and other necessary changes in the social structure. Informal regulations, trust and morality should support management. Humanities, art and philosophy must be used by the education system to form the attitudes and motivation.

Keywords: *innovations, attitudes, knowledge, skills, lifelong learning.*

JEL code: J24, J44, J5, J6, Q28

Introduction

Different aspects of employer support for education is on research agenda world-wide for many researchers (Kimpah, Ibrahim and Raudeliuniene, 2017); including the evaluation of factors determining the efficiency of knowledge sharing process in different fields (Raudeliūnienė, Meidutė-Kavaliauskienė and Vileikis, 2016). Capitalism is changing (Galbraith, 1967). Now free market cannot exist without state regulations and without the help of non-governmental organizations. Labor market more and more uses not only skills and knowledge, but also attitudes are important criteria for labor force (Buligina *et al.*, 2014). Employers must solve numerous complicated tasks in the field of processing all the different kinds of information. Successful employers should use interaction with employees to receive and to use valid information. Positive attitudes in the mutual relations and cooperation during the problem solving are important. The most critical is cooperation in services and in small business. Large industries can use more formal interaction between employers and employees, but the trend is the same. Formal, hierarchical, one way command system, vertical relations are changing to cooperation, and to horizontal relations. The number of hierarchical levels of management is decreasing and autonomy of actors is increasing at all levels.

New framework for the interaction between employers and employees should be used. Instead of one way system of regulations and commands with retarded feedback negotiations with immediate feedback should be used.

Problem. Labor market does not satisfy all new needs of employers. Employees must be capable of finding and using information, know how to cooperate with coworkers to solve problems and to negotiate. New skills to process information and the appropriate attitudes are critically important for employers. New ways of cooperation with education system should be established.

Purpose. Investigation of possible changes of relations between employers and employees are necessary. Informal ways of cooperation are evaluated. The possible new activities and regulations must be investigated to introduce new frameworks for the interaction between employers and employees. Suggestions for the improvement of education should be formulated with the help of employers.

Object. The organization of the exchange of information and the cooperation between different participants of the production process is under investigation. The education system for employees has been analyzed. Changes of formal and informal regulations are important conditions for the improvement of business. Organization of negotiations and cooperation between employers, employees and other stakeholders is important. Possible activities of Sector expert councils and Conventions of vocational education and training (VET) institutions have been investigated.

Tasks:

- to review the role of the dispersed (distributed, spread) knowledge for the business and to evaluate the possible ways to improve the receiving and use of the dispersed knowledge;
- to estimate possibilities to gather information about the trends of the desired qualifications of the labor force;
- to identify needs of employees and employers to receive support for the improvement of the quality of employees' qualifications;
- to propose new frameworks for the cooperation between employers and employees;
- to show the possibilities for introducing innovations for the cooperation of employers with education.

The improvement of the support for education must help the whole society to achieve its goals. Therefore first step should be review of the changing goals of the society. Next preliminary step should be revision of the general tasks of business. Third step should be revision of the education and information systems.

We shall investigate first of all the formal education, controlled by the government, but we shall take into account that adult education and all informal education system has an increasing role. Open sources of information and internet create increasing possibility to receive knowledge and to improve qualification on the individual basis. Formal and informal learning should be united in one complex life-long learning system, acting according to the aims of all stakeholders. The aims of stakeholders are different therefore activities should be discussed and agreed by all involved groups.

Research methods - scientific publications and previous conducted research analysis, statistical data analysis are applied. The investigation is based on the critical analysis of the different existing sources of information. The synthesis of the different evaluations of trends is carried out. The review of official regulations and information about their effectiveness provide basis for the recommendations concerning the future development of education and business.

Literature Review

1. Dispersed knowledge

The concept of the dispersed (distributed, spread) knowledge is the basis to explain advantages of capitalism and free market in industrial society (Boaz, 1997; Popper, 1986). Distributed knowledge might be called the aggregate knowledge of a community. The distributed knowledge to solve a problem is decentralized (Hayek, 1945). The

knowledge is unevenly dispersed among different members of society. As a result, decisions are best made by those with local knowledge.

The knowledge about the market always is uncertain, because the basic uncertainty principle does not allow to know precise information (Heisenberg, 1927). The extent of uncertainty depends from the velocity of the exchange of information between community members and from the dynamics of the change of environment, market and community. If the dynamics is faster than the exchange of information, the dispersed knowledge cannot be gathered and the possibility to use principle of self-organization, proposed by Hayek (Hayek, 1945), is lost.

Appearance of information technologies demonstrates transfer to new, postindustrial situation. The velocity of the changes of market and its environment often becomes significantly faster than the velocity of the exchange of information between persons involved in the economics. The theory of free market (Hayek, 1945) is not valid now, because interaction between actors often is slower, than changes of important conditions (prices, needs, supply etc.). Activities of individual actor (employee) in classical situation are restricted and stable. Skills and some professional knowledge usually is enough. Main part of business problems can be solved by owner – employer. Modern situation gives much more freedom for individuals and asks much more flexibility. Problem solving in unclear situations asks to include motivation, attitudes. Employees should participate in problem solving of business, using and creating the dispersed information.

The concept of human capital (Nelson and Phelps, 1996) has been used to investigate the development of skills. Formal education level is not sufficient to explain the relations between demand and supply of skills in the labor market (Spence, 1973). According to the investigation of strategically most demanded skills in future Latvia (Poject and Quality Management, 2013), the skills are developed not only in the framework of the educational system, but increasingly more and more directly in the work environment. A fundamental problem is, that there exists an information asymmetry between the demand of labor market and the information used for the formal education, i.e. which skills an individual must have after a successfully completing an educational level. Skills are continuously developed on the basis of informal learning by employees already active in the labor market. Individuals improve and change their qualification according to the needs of employers using different possibilities for learning.

Important partners for the effective cooperation of all stakeholders are the local governments (municipalities). The role of local governments has been emphasized in several studies (Poject and Quality Management, 2013; Buligina *et al.*, 2014; Kantane *et al.*, 2015). The authors of the scenarios for the future development (Poject and Quality Management, 2013) believe, that the most realistic is a moderate GDP growth and a gradual restructuring of the economy toward high added value sectors. There should be medium strength cooperation among the EU countries with a relatively severe competition. Consolidation of all local stakeholders is necessary (Buligina *et al.*, 2014; Kantane *et al.*, 2015).

Health and social care sectors may increase more significantly in EU and in the world due to GDP growth and society aging. New technologies and innovations, based on psychology, biology, chemistry and physics should stimulate the growth of social care and health sectors.

Latvia has good possibilities to develop health sector, including pharmacy. Investment and Development Agency of Latvia (IDAL, 2019) states: “Latvia has been exhibiting the fastest growing economy among the Baltic countries over the last five years, according to the latest statistics of the third quarter of 2017 by the Central Statistical Bureau of Latvia. The most recent data from the third quarter show that Latvia’s GDP has grown by 5.8%, which is the highest increase over the last five years in the Baltics. An important factor in the economy growth stimulus was the increase in investments. In the third quarter of this year, gross fixed capital formation was 1/5 higher than a year ago. Investments in housing, buildings and construction increased by 25%, while in machinery and equipment – by 13%.

Additionally, investment in intellectual property products (research, computer software, databases, copyright, etc.) has increased by 17%. Investment dynamics continue to be positively affected by both growing external and internal demand, the expansion of the availability of EU structural funds investment as well as the increase in credit limits. With continued favorable environment for investments and high capacity, a relatively rapid investment dynamics can be expected in the future. At the same time, the economic growth continues to be driven by an increase in private consumption – household consumption expenditure increased by 5.8% in the third quarter. It should be noted that the increase in consumption is positively affected by the noticeable improvement in the labor market – the number of employed increased by 0.9% in the third quarter, the unemployment rate decreased to 8.5%, while the average gross wage increased by 7.5% during the year. Comparatively to previous years, export volumes have reached the highest level. Exports of goods and services increased by 2.4% in the third quarter (exports of goods by 2% and exports of services by 4%), while earnings from export increased by 6.7% (comparatively, in the second quarter by 6.3%). It should be noted that the faster growth of export earnings was largely driven by the increase in prices of exported products. In the third quarter of this year, producer prices for exported products increased by 3.3% year-on-year. A significant factor in the GDP growth in the third quarter was the construction industry that saw an increase in investments as high as 25%. At the same time, the base effect also should be considered – the industry's rapid growth is compared against 2016, when the construction sector saw sharp declines in volumes due to delays in European Union investment fund availability. In comparison with the third quarter of 2015, the construction volume was still lower by 2.5%” (IDAL, 2019).

This forecast should be corrected, taking in account the development of the health sector and adding education as a driver for the future development (Kantane *et al.*, 2015). Increasingly important is cooperation between professional education and higher education (Buligina *et al.* 2014).

A complex approach to various tasks asks to use integral understanding of professional competences (Kouwenhoven, 2003). Professional competence is more than only professional knowledge, skills and attitudes (Korthagen, 2004). Behavior and competences include personal traits (Kouwenhoven, 2009). Beliefs, personal identity and mission should be included in the integral approach to the professional skills (Hager, 2007).

Integral approach to the interaction of education and labor market is included in the theological studies (Taivāne, 2010). Beliefs as a part of personal identity are changing according to the context and must be investigated as a complex of sociological, historical, philosophical, ethnological and psychological parts (Smart, 1999). Employees and employers should have common traditions and beliefs with each other, should be linked with common for all culture and history, and at least should understand all parts of the dispersed knowledge about environment, society, social relations. In this case it will be easy to work together, to use and to change the specific, professional knowledge about the technologies, to use the professional and general skills and to use the effective attitudes during the communication. The common culture and history is not automatic, therefore the education system should take care for the synergy of personal traits and beliefs. The local community should participate as an active actor to organize the exchange of information necessary for the effective development of competences including information about culture and history. Integral approach to education, culture, industry and social problems should be organized, first of all, by local government. If the local people will be linked together, they will be able to use the dispersed knowledge to solve all social and economic problems. Globalization and freedom should be balanced by localization and synergy of attitudes.

2. Decreasing time periods for the decision making

The time period to create some new governmental regulation usually is from several months and up to more than a year. For a new law it can take one year to accept it, but negotiations and discussions between stakeholders go on for several years as if the changes of the real situation are slower than regulations can be enough effective. If the

critical time period for the changes of the situation becomes less than the period for the appropriate changes of the regulations, the management system must be changed and the level for the decision making must become lower. Now this decrease of the time periods for the decision making demands, for example, the transfer of the creation of regulations from state to municipal level in public administration (Van De Ven, Ganco and Hinings, 2013). There is a global consensus that sustainable development implementation should be based on local level solutions and initiatives designed with and by the local communities (Leach, Mearns and Scoones, 1997). It is widely agreed now, that wages and prices do not adjust as quickly as needed to restore equilibrium (Romer, 2011).

Authoritarian style of management allows to shorten time for the decision making, but lowers significantly the amount of information which can be used for the decision making. Other possibility is wider discussions at the lowest levels of management. Now the necessary level of decision making in many cases is individual employee, who should participate in the direct negotiations with employers. The most important field of changes is education, because the time period for the changes in education system is rather long, up to at least several years, in many cases more than ten years. Different ways to include employees in decision making about education are very important for the business administration (Dzelme, 2009). Such aspect is supported in academic publications also by other authors.

3. Overlapping networks

Information technologies and globalization of economics allows to create multiple networks for the supply with goods, services, information, finances etc. Freedom of choice and technologies allow to find and to change suppliers around the globe. Globalization seems as an advantage for the effective development, but it is in contradiction with human nature and creates undesirable instability.

Localization of networks within restricted region push the networks to overlap. The nodes of different networks become the same partly or fully. For small local networks the nodes most often are just individual persons. Overlapping different relations, formal and informal, administrative and business, social and personal creates stability of the local community and gives the tools to diminish risks (Van De Ven, Ganco and Hinings, 2013; Sapru, 2008). Affective and socio-psychological aspects of human behavior in organizations are under investigation (Sapru, 2008), but more attention should be paid to personal relations, morale and leadership in business. The optimal organization, leadership, or decision making style depends upon various internal and external constraints (Van De Ven, Ganco and Hinings, 2013). The theory of structuration investigates various aspects of the environment, which change the management style and organizational structure: the structuration factors (Giddens, 1984). These investigations should be continued and linked with the investigations of socio-psychological aspects.

Networks of individuals as a basis for the investigation have been set in the activity theory (Foot, 2001). Here the world was not seen as composed of human subjects and objects, but rather objects are secondary constructs whose nature depends on the activity applied to them. Activity is not so much an attribute of any individual but rather a system within which an individual is placed and which determines how they behave. Activity theory provides a method of finding patterns and describing interactions. Special language, used by the activity theory, allows to investigate different goals and their systems and to find the ways to achieve the goals.

The activity theory has been used by Shchedrovitsky G.P. (Shchedrovitsky, 1997; Foot, 2001) and other researchers to create practical tools for the investigation of complex systems with many overlapping elements (Foot, 2001). The most interesting approach is the development of activity games. These investigations should be continued. They allow to find the dispersed knowledge and to use it more effective.

There is other general method, proposed to solve different problems in all sectors of human activities – the theory for solving tasks of inventions (TRIZ) (Altshuller, 2005). This method is useful for many engineering problems, but for social problems it is much less effective. The basis of TRIZ is combination of objects and their interactions to

achieve specific goals. This method is valid for mechanistic systems, but becomes much less effective for biological and social systems. Complicated links and interactions do not allow free combination of the elements of biological or social system. The holistic approach, including personal identity in case of society, should be involved.

The activity theory and TRIZ could be used as useful tools to find the solutions in complicated situations. The main idea of both theories is to discover new combinations of the existing elements. In the case of social and economic problems this approach gives only part of the possible solutions. If the changes of the elements are necessary and if the interactions between elements are comparable with the interactions inside the elements, more complicated theory is necessary. Therefore TRIZ is not valid, for example, in case of chemistry. Effective theories of economic and society, which can predict and plan changes and evolution of all society, should contain all significant sectors of private and public relations, including personal identity, faith and religious problems (Giddens, 1998) as well as other aspects, are analysed by academic researchers.

4. Social needs and aims

The evolution of mankind during at least hundred thousand years has created the modern type of emotions, attitudes, morality and social relations (Burlak, 2011; Fuerle, 2008). The natural selection is targeted to two main objects, two main levels of the complicated system of interacting representatives of mankind – individual persons and closely linked groups (tribes, populations). Empathy, altruism, morality are partly based on the genetic level information, created and selected for the groups to survive (Izard, 1991; Lefebvre, 1982). Social structure of the modern society must use the same biological basis as it was created thousands of years ago.

Stable and happy society must have social structure similar to the group structure of ancestors. The ancestor customs and our morality use the same biological background. Personal relations are very significant. Virtual reality and World Wide Web must not cancel direct social interaction (Boaz, 1997). Local communities should restore human relations according to the socially and biologically determined needs (Renge, 2003). The main needs were analyzed by A.Maslow. Social structure is highly depending of inclusion and recognition, pointed out by A.Maslow. Now the most important need becomes self-realization, possible as a creative process, in artistic and scientific activities. The aim of society should be - to stress self-realization, recognition and inclusion as a priority for national and local politics and economics. Physiological needs and safety are already achieved level, which must be maintained, but future stability depends of other part of needs, linked with acquisition and use of knowledge. Knowledge society must be oriented to social interaction in overlapping local communities, linked by different overlapping networks. Virtual reality must serve as tool, aid to establish stable communities, consisting of some hundreds interacting traditional families. Local economics should help to transit to such social structure.

Local governments with the support of whole society should concentrate and personalize as much as possible interpersonal relations of different kind. Trust between the members of the same community stimulate cooperation, exchange of information and other activities to be performed more effective, but trust does not appear automatically. State, local governments, education system must use all possibilities to strengthen trust between all members of the society. Local networks for cooperation in economics should be used to develop social and cultural interaction, to improve and widen the existing networks.

5. Local economics

Large systems with many internal freedom levels are unstable. Physics demonstrated (Prigogine and Stengers, 1994), how in such systems starts order out of chaos. Similar processes are going on in large social systems. Some social order should be created and maintained to avoid catastrophes and revolutions. The possible way is local cooperation between employers, employees and all other stakeholders within the territories of local municipalities. Local government and local participants of different business activities are better informed about possible responses

and therefore can decrease the negative influence of accidental deviations, using local reserves. To increase local flexibility, the necessary reserves and appropriate institutions should be created, for example, local saving banks.

Local governments must have enough rights in the field of public administration to have real independence. Corruption and activities against interests of local people is easier to hide in a large system. Indirect and direct interaction of the representatives of the local administration with local people discovers real situation, activities and attitudes. The local decisions are under effective informal control of the social environment. Appropriate formal control together with informal control could create a stable model of the local power (Van De Ven, Ganco and Hinings, 2013). Analysis of the political problems shows, that the power of the state government should be decreased and decentralization of the public administration is desirable (Pūķis, 2016).

Important tool for the improvement of cooperation between people is common faith. Ethical and religious issues are closely linked. Effective economics should receive support from attitudes arising from the common ethical principle. Now the Christianity is the easiest way to the common ethics, but future development should give more place for the ethics based on science, philosophy and art (Knitter, 1991; Klīve, 1995). Other religious systems, different from Christianity, also could be used (Klīve, 1998). For example, Buddhism and Shintoism could become popular and helpful.

Research results and discussion

6. Future qualifications

According to the demands all participants of business activities should change at least partly their skills, knowledge and attitudes. The changes have been identified as The Fourth Industrial Revolution (Gray, 2016). The predictions recognize that for individual's emotional intelligence, attitudes will become more important (Toffler 1970; Dzelme 2002; Dzelme 2009).

The skills and competences that are found necessary on the labor market in Europe are similar, e. g. effective communicative skills, flexibility, cross-cultural competence and ability to work in multilingual and multicultural teams.

In the information report on long-term labor market forecasts for 2030, the Ministry of Economy of the Republic of Latvia informs that the labor market demands graduates with good communication, IT, problem-solving, information analysis and interpretation skills as well as with the ability to find solutions and take decisions independently. The report emphasizes the importance of the transfer of the given skills to other fields and a high level of language competence (Labour Market Research activity of the ESF programme, 2013).

Important criteria for the strategic plans in education are the level of qualification, employment and unemployment rate - data on employment and unemployment in Latvia according to the job position are included in the table 1.

Table 1

Employment and Unemployment in Latvia According to the Job Position 2010; 2017; 2018

	2010		2017		2018		2010		2017		2018	
	1000	%	1000	%	1000	%	1000	%	1000	%	1000	%
Branch	Employed persons ¹						Unemployed persons ² by occupation in the last job Unemployed persons ³					
1	2						3					
	850.7	100.0	894.8	100.0	909.4	100.0	167.3	100.0	67.6	100.0	56.7	100.0
1. Managers	86.1	10.1	90.9	10.2	90.6	10.0	8.6	5.2	2.8	4.1	2.5	4.3

1 The total number also includes military occupations and persons with unspecified occupation.

2 Unemployed persons who stopped working within the past 8 years.

3 The total number includes unemployed persons who were employed in military occupations as well as persons who did not indicate occupation thereof in the last job.

2. Professionals	144.3	17.0	159.1	17.8	154.5	17.0	12.0	7.2	4.4	6.5	3.7	6.5
3. Technicians and associate professionals	115.3	13.6	126.7	14.2	124.7	13.7	16.7	10.0	5.1	7.5	4.9	8.6
4. Clerical support workers	50.3	5.9	47.3	5.3	51.0	5.6	10.7	6.4	2.8	4.1	3.7	6.6
5. Service and sales workers	123.9	14.6	134.8	15.1	136.1	15.0	28.0	16.8	12.3	18.3	8.2	14.4
6. Skilled agricultural, forestry and fishery workers	36.7	4.3	31.3	3.5	30.1	3.3	2.6	1.5	2.1	3.1	2.0	3.5
7. Craft and related trades workers	96.3	11.3	105.8	11.8	112.8	12.4	39.2	23.4	10.2	15.1	10.8	19.1
8. Plant and machine operators, and assemblers	79.7	9.4	81.3	9.1	85.8	9.4	15.1	9.0	6.7	9.9	5.5	9.7
9. Elementary occupations	114.4	13.5	112.1	12.5	115.9	12.7	34.0	20.3	21.2	31.4	15.0	26.4

Source: Authors construction based on CSB database NBG100; NBG282

The Ministry of Welfare's report, 2019 "Training results of unemployed and job seekers in 2018 and priority training directions" states that the largest share of registered unemployed in Latvia is vocational education - 36%, half of whom are over 50 years old. Of the total number of unemployed, the largest target groups at the end of June 2019 are unemployed people aged 50 and over - 41.2% (Ministry of Welfare, 2019).

According to the data the higher level of qualification and salary the less unemployment rate. Some problems are with managers. The quick changes creates unemployment problems, but these problems are more linked with reorganization tasks. Real long time unemployment is a difficult problem for the lowest qualification groups. This problem has been discussed at the World Economic Forum in Davos (World Economic Forum, 2018): "The least-skilled jobs which often involve non-routine tasks (such as cleaning) remain because they cannot easily be undertaken by machines, whereas routine work that can be automated is heavily concentrated in the middle of the skills distribution, leading to higher levels of job displacement there. Digitalization, at the same time, augments the productivity of the most highly skilled workers and leads to a rising relative demand for high-skilled workers. The wage premium of high-skilled workers relative to low-skilled workers therefore increases, leading to growing wage inequality. This skills polarization has particularly profound effects in those economies lacking the institutions and policies to prevent or mediate this impact on inequality. ... a successful strategy for innovation diffusion will require a workforce which possesses the right skills to work with advanced technologies. If access to reskilling and upskilling is indeed evenly distributed across the population, this will in turn reduce one source of inequality, creating less need for redistributive policies. The evolving division of labour between workers and machines is transforming current job profiles and shifting the skills required to perform them. Global average skills stability— the proportion of core skills required to perform a job that will remain the same— is expected to be about 58%, meaning an average shift of 42% in required workforce skills over the 2018–2022 period."

At the World Economic Forum in Davos in the Future of Jobs Report (2016) new skills such as emotional intelligence and cognitive flexibility have been treated as indispensable to an individual in 2020, but at the World Economic Forum Annual Meeting 2019 (World Economic Forum, 2019), it is facing a major problem in the world of

improving the working skills of young people. Today, the labour market requires transferable skills such as problem solving, team building, communication, confidence building skills as well as specific professional skills such as accounting, business, digital skills, green technology, modern agriculture or engineering, joinery skills. etc. skills.

Now the Christian values should be the basis for ethics and cross-cultural competence in Europe. In future more efforts must be made to understand the complex of sociological, historical, philosophical, ethnological and psychological roots of morality (Allen, 2005). Philosophy, based on science, should serve as a basis for morality, ethics, motivation and attitudes and should be included in the education and culture system of society in nearest future. Failure of many existing traditional religious systems to serve as a foundation for the value education demands more attention to philosophy, art and science.

The economics of Latvia become more involved in the global processes. According to the data, included in the Table 2 and Table 3, the main part of GDP and of employees is in the service sector of economics (Latvia: Review on Nation Development 2015/2016. 2017). The export and import grows continuously. Society of Latvia become more dependent from the globalisation and this dependence could become dangerous during changes of the world economics. The service sector is the biggest and continuously growing sector, but the productivity is expected to be higher in industry. The state support for education should be increased for the qualifications valid for the development of industry.

Table 2

Indicators of National Income of Latvia 2000-2017

Years	Gross Domestic Product (GDP), billions EUR	Added value to GDP % - Agriculture	Added value to GDP % - Industry	Added value to GDP % - Services	Export from GDP %	Import from GDP %
2000	6850,3	5	20	75	36,9	44,9
2001	7460,1	5	19	76	38,1	48,5
2002	8397,1	5	19	76	36,6	46,7 ¹
2003	9552,7	5	18	77	36,2	48,7
2004	11048,7	5	18	77	39,1	54,6 ¹
2005	13597,2	4	16	80	43,2	57,7
2006	17101,9	4	15	81	40,0	60,6 ¹
2007	22592,0	4	15	81	38,5	57,5 ¹
2008	24351,2	3	14	83	39,5 ¹	52,5
2009	18862,6	4	16	80	42,6	44,2 ¹
2010	17937,9	4	19	77	53,7	55,1 ¹
2011	20302,8	4	18	78	57,8 ¹	62,8 ¹
2012	21885,6	4	18	69	61,3 ¹	65,8 ¹
2013	22831,5	4	17	79	60,3 ¹	63,9 ¹
2014	23681,5	3 ¹	20 ¹	77 ¹	60,7 ¹	62,2 ¹
2015	24353,1	4	20 ¹	76 ¹	60,4 ¹	60,9 ¹
2016	24925,6	3	19	78	60,0	59,1
2017	26 856,6	4	22	74	60,5	61,8

GDP figures are calculated according to the methodology of the European System of Accounts (ESA-2010).

¹ Data are revised

Source: Author's calculations based on Latvia: Review on Nation Development 2017/2018. (page 138).

The main reason of low development of industry is insufficient links with education and research. Unsatisfactory financing level of research and higher education is the key problem for the innovations and the development of high technologies. High level specialists, necessary for industry and business, cannot appear without high level research and excellent education.

Table 3

Employment in Latvia 2000-2017

Years	Inhabitants billions	Employed inhabitants % ¹	Employed in Agriculture % ²	Employed in Industry % ²	Employed in Services % ²	Increase of income %	Working week hours
2000	2,4	51,4	15	26	59	5,7	41,4
2001	2,4	52,2	15	26	59	6,1	41,3
2002	2,3	53,9	15	26	59	8,0	41,9 ³
2003	2,3	54,5	14	27	59	10,9	41,7
2004	2,3	54,9	13	27	60	8,8	40,9 ³
2005	2,2	55,9	12	26	62	17,0	41,3
2006	2,2	59,7	11	28	61	23,1	41,3
2007	2,2	61,6	10	28	62	32,0	40,6 ³
2008	2,2	62,0	8	29	63	22,5	39,4
2009	2,2	54,3	9	24	67	-2,3	38,9
2010	2,1	52,0	9	23 ³	68 ³	-7,5	38,4
2011	2,1	54,0	9	23	68	4,5	38,5
2012	2,0	56,1	8	24	68	3,9	38,3
2013	2,0	58,2	8	24	68	5,6	38,3
2014	2,0	59,1	8	24	68	8,6	38,6
2015	2,0	60,8	8	24	68	7,6	38,3
2016	2,0	61,6	8	24	68	4,7	38,4
2017	2,0	62,9	7	23	70	7,0	38,3

Source: Author's calculations based on data on sources indicated below¹ Labor Force Survey data. 2000-2001 Persons aged 15 and over in 2002, aged 15-74 from 2002.

² From 2008 - Statistical classification of Economic Activities NACE Rev.2

³ Data are recalculated according to the results of the 2011 census. Source: Latvia: Review on Nation Development (page 134).

The biggest problem for the future development of Latvia is decreasing population in rural regions as a result of the decreasing employment in agriculture. The identity of Latvia and many historical and ideological roots of Latvian people are linked with agriculture and local communities in rural regions. Development of agriculture and other related industries in rural regions could be achieved by adequate cultural and educational policy. Agriculture should be linked with services and businesses complementary to agriculture.

7. Lifelong learning

Effective way to overcome the problems in economics is improvement and change of education system (Sloka, 2007). The most interesting for employers could be the possibility to organize adult education together with central and local governments. Involvement of the inhabitants of Latvia in the adult education are included in the table 4.

Table 4

Participation in Adult Education (Participation in Non-formal Education as Percent of Total Population in the Corresponding Group) by Sex, Age, Level of Education and Labour Status in Latvia 2007, 2011, 2016

Population in the Corresponding Group	2007	2011	2016
Total	30.7	30	45.7
Males	24.6	24.3	41.4
Females	36.2	35.4	49.6
25-34 years	35.2	33.1	51.7
35-54 years	32.5	32.9	48.7
55-64 years	20.9	19.3	34
Higher education	53	50.8	63.6
Secondary education	26.1	22.8	37.6
Below secondary or no formal education	11	9.5	25.7
Employed	37.6	37.5	54.2
Unemployed	16.3	19.1	27.7

Inactive	9.6	9.2	15.6
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Source: Author's construction based on CSB database

(http://data1.csb.gov.lv/pxweb/en/sociala/sociala_izgl_pieaug_izgl/PIA60.px/table/tableViewLayout1/)

There are important problems of employment in the age group 55-74 years. Education of this age group is complicated task, but local governments should solve this problem together with employers. Involvement of the inhabitants of Latvia from the age group 55-74 years in the lifelong learning is twice less than average in European Union (Cabinet of Ministers, Republic of Latvia, 2016). Recent data on share of inhabitants involved in life-long learning in Baltic countries and EU average are included in table 5.

Table 5

Share of Inhabitants of Baltic Countries and EU -28 in the Age Group 25-64 years Involved in the Lifelong Learning 2009-2018

GEO/TIME	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
European Union - 28 countries	9,5	9,3	9,1	9,2	10,7	10,8	10,7	10,8	10,9	11,1
Euro area (19 countries)	8,1	8,1	8,3	8,5	10,6	10,9	10,9	11,2	11,3	11,5
Estonia	10,5	11,0	11,9	12,8	12,6	11,6	12,4	15,7	17,2	19,7
Latvia	5,6	5,4	5,4	7,2	6,8	5,6	5,7	7,3	7,5	6,7
Lithuania	4,6	4,4	6,0	5,4	5,9	5,1	5,8	6,0	5,9	6,6
Latvia – males	3,7	3,6	4,1	6,2	5,1	4,9	4,1	6,1	6,0	4,8
Latvia – females	7,3	7,0	6,5	8,1	8,2	6,3	7,2	8,5	8,8	8,4

Source: Author's construction based on EUROSTAT data

Data included in table 5 indicate that in Latvia share of inhabitants involved in life-long learning is almost two times less as in EU-29 and Euro area and almost three times less than in Estonia. In Latvia male persons are almost twice less involved in life-long learning. In average share of inhabitants involved in lifelong learning since 2009 has a positive trend $y=5,3733 + 0,1721*t$, $R^2= 0,3694$; for male persons: $y=3,85333 + 0,183*t$, $R^2= 0,3146$; for female persons $y=6,7 + 0,1691*t$, $R^2= 0,3369$.

Starting from 2011 there is possibility to receive qualification using prior learning and experience (Cabinet of Ministers, Republic of Latvia, 2016). This possibility will help to solve some of the problems of education and employment. Special attention must be paid to the organization of support for the education in rural regions. All inhabitants of rural regions should have possibilities to participate in lifelong learning, using distance education and information technologies.

8. Complex reforms

The changes in all administrative and managerial system are going on continuously. The more important changes should be reviewed and controlled specifically, therefore the word 'reform' could be used for the most important changes. Changes influence not only the system under the action, but also other systems interacting the changing system. Important changes, which are possible to have the name "reforms", should be complex. Before reforms negotiations with all stakeholders are necessary (Udam and Heidmets, 2013). The reforms in state regulations, such as education standards, should be negotiated with local governments, employers, society. A good tool for such negotiations are the Sector expert councils horizontally and VET Conventions at local and regional levels. The main parts of state system, involved in managerial reforms are at least state government, local governments, education system, trade unions and representatives of employers and of society. All levels of administration should be included, but the most important are the lower, basic levels. The sector expert councils are the best tool, the best platform for many discussions. Direct participation of employees is very important for the problem solving in many cases and other forms for negotiations of all interested parties are necessary. The Sector expert councils and VET conventions could serve as a starting point for many forms of cooperation. Special care about the organization of such exchange of opinions within society should be taken by local and central government.

Conclusions, proposals, recommendations

1. Public responsibility and localization of economics should increase. Globalization and the development of knowledge and technologies create fast changes in the social relations. Free market forces cannot stabilize the global market, international relations and social structure. Mobility of labor force, services, products and capital increase the social instability. Local communities and state should cooperate with business to avoid instability. The social structure of the society should be stabilized by support of local economics, education and culture.
2. Direct cooperation between employers and employees, with involvement of all stakeholders, should support the education system. The main way to cope with the increasing diversity and multiculturalism is “internal”: to increase self-regulation and integration of society, to intensify negotiations to avoid conflicts internally, using ethical authority. The “external” way (to increase the amount of legislation acts and to solve conflicts externally, by the legislative power and by the implementation of the regulations, using state authority) can only help to implement the “internal” way faster and more effective.
3. The best, but more complicated way to cope with the future challenges is to create internal mechanisms, to create and change attitudes, to use morality and ethical principles as a tool for the self-regulation and problem solving in the society. Creation of new and strengthening of existing overlapping networks for interaction of people is necessary.
4. Stabilization and integration of the society becomes one of general tasks both for public and for private sector in economics.
5. Employers are interested to create the conditions for effective economic activities, using formal and informal possibilities to improve the environment for business. Number of formal regulations should decrease, but the role of negotiations between all stakeholders should increase.
6. Education is the most important field of cooperation between employers and employees. Different tools could be used to carry out negotiations and other forms of cooperation between stakeholders of education. The Sector expert councils were created to carry out cooperation between state, trade unions and employers in professional education in Latvia. This tool should be improved and could be proposed for use not only in Latvia. Participation of the representatives of local governments should be added and the activities should go further, involving also other kinds and levels of education, such as higher education and interest education.
7. The Sector expert councils and the VET Conventions should be used as a platform for negotiations and changes in education and industry in Latvia. Similar approach could be used in all cases, all states, where interaction between education, employers and government is useful. The development of Sector expert councils and similar organizations should continue. Intensification of interaction between business, state, local communities and all other stakeholders is necessary. Further studies are needed on the subsequent developments of Sector expert councils and VET institution conventions.
8. The co-operation between stakeholders to develop the education system should be established in two main levels: 1) development of specific professional knowledge and skills according to the development of technologies; 2) development of general skills and attitudes according to the changes of the social structure. The first task is continuation of previous development of the specific professional fields, but asks to find new, more effective solutions, more active forms of co-operation. Use of Sector expert councils is one of many possible ways, at the moment rather effective, but other ways also should be looked for. The second task is arising quickly and is a new challenge for the society. Art and humanities could be very useful to find the possibilities and tools for the improvement of the integration of society, cooperation in all fields, increasing the stability of the social structure. Both tasks are important and should be solved together.

9. Promotion of new forms of co-operation and management of education and employment processes - as part of the modern society development, is necessary. Art and philosophy must be included in the education process to create and strengthen motivation and attitudes. Knowledge and skills must be integrated with attitudes, morality and ethics. Further developments in the legal framework and the effectiveness of the actual developments based on the new regulation depend of effective networks of people interaction according to morality and ethics.

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